MANUAL

RAVEN regression tests' description

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1 Introduction

This document has been automatically generated by the script "`raven\developer_tools\`
`createRegressionTestDocumentation.py`" Currently there are 733 regression tests in
the RAVEN framework. The % of tests that are commented is currently equal to 93.31514324693042
%.

2 Documented Tests

Regression tests for the $Python$ RAVEN framework are found in `raven/tests/framework`. There is a hierarchy of folders with tests collected by similar testing. Every test is described in a special XML node ($< TestInfo >$) within the $< Simulation >$ block. An example is reported below:

```xml
<Simulation>
  ...
  <TestInfo>
    <name>framework/path/to/test/label</name>
    <author>AuthorGitLabTag</author>
    <created>YYYY-MM-DD</created>
    <classesTested>Module.Class, Module.Class</classesTested>
    <description>
        Paragraph describing work-flows, modules, classes,
            entities, etc.,
        how they are tested, and any other notes
    </description>
    <requirements>RequirementsLabel</requirements>
    <analytic>paragraph description of analytic test</analytic>
    ...
  </TestInfo>
  ...
</Simulation>
```

The $< requirements >$ and $< analytic >$ nodes are optional, for those tests who satisfy an NQA design requirement and or have an analytic solution documented in the analytic tests document. Other notes on block contents:

- $< name >$: this is the test framework path, as well as the name (label) assigned in the tests file block.This is the path and name that show up when running the tests using the testing harness (`run_tests`)

- $< author >$: this is the GitLab tag of the author who constructed this test originally, i.e. *alfoa for @alfoa*

- $< created >$: this is the date on which the test was originally created, in year-month-day *YYYY-MM-DD* XSD date format

- $< classesTested >$: a list of the classes tested in the python framework, listed as Entity.Class, i.e. *Samplers.MonteCarlo*

- $< description >$: general notes about what work-flows or other methods are tested

- $< requirements >$ (optional): lists the NQA requirement that this test satisfies

- $< analytic >$ (optional): describes the analytic nature of this test and how it is documented in the analytic tests documentation

An additional node is optionally available to demonstrate significant revisions to a test:

```
<Simulation>
  ...
  <TestInfo>
    ...
    <revisions>
      <revision author='AuthorGitLabTag'
         date='YYYY-MM-DD'>paragraph description of
         revision</revision>
      <revision author='AuthorGitLabTag'
         date='YYYY-MM-DD'>paragraph description of
         revision</revision>
    <revisions>
    ...
  </TestInfo>
  ...
</Simulation>
```

The following sub-sections collect all the documented tests.

2.1 Requirement tests' description

This section contains the description of all the requirement tests.

2.1.1 PLUGINS EXAMPLEPLUGIN.TESTPLUGINEXAMPLE

This test can be found at "`./raven/plugins/ExamplePlugin/tests/test_example_plugin.xml`". This test can be called executing the following command:

```
./run_tests --re=plugins/ExamplePlugin.TestPluginExample
```

or

```
./run_framework_tests --re=plugins/ExamplePlugin.TestPluginExample
```

- Test Description:

  - This input tests an example of external developed plugin. In this case it is just a plugin that computes a sum of exponentials: $Xi(t) = \sum\_i = 1^n coef\_i * e^{var\_i*t}$

- Original Author:

  - alfoa

- Creation date:

  - 2017-11-17

- The classes tested in this test are:

  - Models.ExternalModel

- This test fulfills the following requirement:

  - R-SI-2

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2018-10-01
     - description: This is a requirement test now.

2.1.2 PLUGINS EXAMPLEPLUGIN.TESTPLUGINEXAMPLE

This test can be found at "`./raven/plugins/ExamplePlugin/tests/test_raven_running_raven_plugin.xml`". This test can be called executing the following command:

```
./run_tests --re=plugins/ExamplePlugin.TestPluginExample
```

or

```
./run_framework_tests --re=plugins/ExamplePlugin.TestPluginExample
```

- Test Description:

- This test is aimed to check the functionality of the RAVEN code interface (RAVEN running RAVEN) executing an external plugin (ExternalModel) plugin

- Original Author:

  - alfoa

- Creation date:

  - 2017-11-17

- The classes tested in this test are:

  - Models.ExternalModel

- This test fulfills the following requirement:

  - R-SI-2

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2018-10-01
     - description: This is a requirement test now.

2.1.3 FRAMEWORK.SIMPLE FRAMEWORK

This test can be found at "`./raven/tests/framework/test_simple.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.simple_framework
```

or

```
./run_framework_tests --re=framework.simple_framework
```

- Test Description:

  - This test is aimed to check the functionality of RAVEN to perform random sampling (MonteCarlo) generating random numbers that are going to be directly used in RELAP7 for seeding the internal random number generator.

- Original Author:

- cogljj

- Creation date:

  - 2013-07-23

- The classes tested in this test are:

  - Samplers.MonteCarlo, Models.Code

- This test fulfills the following requirement:

  - R-IS-2

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2015-06-18
     - description: Changed Name of all DataObjects
  2. revision info:
     - author : alfoa
     - date : 2016-04-27
     - description: New subdirectories structure
  3. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.1.4 FRAMEWORK.TEST OUTPUT

This test can be found at "`./raven/tests/framework/test_output.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.test_output
```

or

```
./run_framework_tests --re=framework.test_output
```

- Test Description:

- This test is aimed to check the OutStreams system in RAVEN (BOTH TYPE: Plot (all available plot types) and Print(all the available combination of options))

- Original Author:

  - cogljj

- Creation date:

  - 2013-09-24

- The classes tested in this test are:

  - OutStreams.Plot, OutStreams.Print

- This test fulfills the following requirement:

  - R-RA-3
  - R-F-5
  - R-F-6

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : crisr
     - date : 2014-04-03
     - description: new imput stile for the rom and the dummy. SVN r26236
  2. revision info:
     - author : alfoa
     - date : 2014-04-10
     - description: Interactive mode for Steps + moved exec on the fly outside the modules in order to avoid unneeded slowing down. SVN r26340
  3. revision info:
     - author : senrs
     - date : 2015-03-17
     - description: Scatter plot corrected
  4. revision info:
     - author : mandd
     - date : 2015-04-17
     - description: conversion to Database and DataObjects
  5. revision info:

- author : alfoa
- date : 2015-06-18
- description: Changed Name of all DataObjects

6. revision info:

  - author : maljdan
  - date : 2015-06-22
  - description: Adding the outstream manager to the XSD and adjusting some of the input files to play nicely with it.

7. revision info:

  - author : senrs
  - date : 2015-07-08
  - description: Adding subPlot capability

8. revision info:

  - author : cogljj
  - date : 2015-10-08
  - description: Switching from RAVEN model to external model, so RELAP-7 not needed. This is checking raven's output, so it shouldn't depend on RELAP-7. This removes the raven c++ input files. This updates gold files because of changing the model.

9. revision info:

  - author : maljdan
  - date : 2016-05-20
  - description: Updating the test cases to remove references to Point or History.

10. revision info:

  - author : alfoa
  - date : 2016-09-01
  - description: Close #650

11. revision info:

  - author : cogljj
  - date : 2016-10-07
  - description: Having both a color and a colormap doesn't make sense.

12. revision info:

  - author : alfoa
  - date : 2017-01-21
  - description: Adding this test description.

2.1.5 FRAMEWORK.TEST ROM TRAINER

This test can be found at "`./raven/tests/framework/test_rom_trainer.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.test_rom_trainer
```

or

```
./run_framework_tests --re=framework.test_rom_trainer
```

- Test Description:

  - This test is aimed to test the capability of RAVEN to train ROMs based on the data sets constructed by whatever sampling strategy

- Original Author:

  - alfoa

- Creation date:

  - 2013-09-26

- The classes tested in this test are:

  - Steps.RomTrainer, Models.ROM

- This test fulfills the following requirement:

  - R-RA-4
  - R-F-1

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2014-03-06
     - description: changed name of DataBase handling, modified all tests were using it, improved Step output handling etc r25347
  2. revision info:
     - author : alfoa
     - date : 2014-07-15

- description: 2) eliminated redondancy type for distribution specification in samplers... all inputs and tests found in repository have been modified as well r28610

3. revision info:
   - author : cogljj
   - date : 2014-10-06
   - description: Renaming blocks with IODataBase and OutStreamStep to IOStep. The two different steps were combined. r29902

4. revision info:
   - author : alfoa
   - date : 2014-10-22
   - description: added variable samping MC for RAVEN code interface + eliminated need to specify variable type for Functions and ExternalModels r30198

5. revision info:
   - author : alfoa
   - date : 2015-05-19
   - description: Closes #171

6. revision info:
   - author : alfoa
   - date : 2015-06-18
   - description: Changed Name of all DataObjects

7. revision info:
   - author : alfoa
   - date : 2015-09-12
   - description: removed syntax inconsistency with respect standards for Samplers (underscores instead of camelBack) + created conversion script

8. revision info:
   - author : cogljj
   - date : 2015-10-12
   - description: Moving test_rom_trainer to test_rom_trainer_raven.

9. revision info:
   - author : cogljj
   - date : 2015-10-12
   - description: Made a test rom trainer with an external model.

10. revision info:
    - author : cogljj

- date : 2015-11-17
- description: Updating to work with scikit-learn 0.17. In the new version of sklearn the rom can not use a classifier anymore.

11. revision info:
    - author : maljdan
    - date : 2016-05-20
    - description: Updating the test cases to remove references to Point or History.

12. revision info:
    - author : alfoa
    - date : 2017-01-21
    - description: Adding this test description.

2.1.6 FRAMEWORK.TESTGRID

This test can be found at "./raven/tests/framework/test_Grid_Sampler.xml". This test can be called executing the following command:

```
./run_tests --re=framework.testGrid
```

or

```
./run_framework_tests --re=framework.testGrid
```

- Test Description:
    - This test is aimed to check the capability in RAVEN to employ a Grid sampling strategy. Since the goal of the test is to testify that the Grid sampling strategy is functional, a Dummy model is used.

- Original Author:
    - crisr

- Creation date:
    - 2013-10-15

- The classes tested in this test are:
    - Sampler.Grid

- This test fulfills the following requirement:

- R-RE-3

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : mandd
     - date : 2015-04-17
     - description: conversion to Database and DataObjects

  2. revision info:
     - author : talbpaul
     - date : 2015-05-06
     - description: improved verbosity in tests and manual

  3. revision info:
     - author : alfoa
     - date : 2015-05-18
     - description: Closes #167

  4. revision info:
     - author : alfoa
     - date : 2015-05-18
     - description: Closes #169

  5. revision info:
     - author : alfoa
     - date : 2015-05-26
     - description: grid done

  6. revision info:
     - author : alfoa
     - date : 2015-06-18
     - description: Changed Name of all DataObjects

  7. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.

  8. revision info:
     - author : talbpaul
     - date : 2016-04-26
     - description: added check for pre-existing backup files when validating

9. revision info:

   – author : alfoa
   – date : 2017-01-21
   – description: Adding this test description.

2.1.7 FRAMEWORK.TESTRANDOM

This test can be found at "`./raven/tests/framework/test_random.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.testRandom
```

or

```
./run_framework_tests --re=framework.testRandom
```

- Test Description:

  – This test is aimed to check the functionality of RAVEN to perform random sampling (MonteCarlo) on simple 1Dimensional distributions. Since the goal of the test is to check the Sampler only, a Dummy Model is used.

- Original Author:

  – cogljj

- Creation date:

  – 2014-02-18

- The classes tested in this test are:

  – Samplers.MonteCarlo

- This test fulfills the following requirement:

  – R-F-1

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : mandd
     – date : 2015-04-17

- description: conversion to Database and DataObjects

2. revision info:
   - author : alfoa
   - date : 2015-05-18
   - description: Closes #169

3. revision info:
   - author : alfoa
   - date : 2015-06-18
   - description: Changed Name of all DataObjects

4. revision info:
   - author : maljdan
   - date : 2016-04-06
   - description: Updating test cases to reflect the changes to the user input.

5. revision info:
   - author : alfoa
   - date : 2017-01-21
   - description: Adding this test description.

2.1.8 FRAMEWORK.TESTEXTERNALMODEL

This test can be found at "`./raven/tests/framework/test_Lorentz.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.testExternalModel
```

or

```
./run_framework_tests --re=framework.testExternalModel
```

- Test Description:
  - This test is aimed to check the functionality of RAVEN to use ExternalModel entities.

- Original Author:
  - mandd

- Creation date:

- 2013-10-24

- The classes tested in this test are:

  - Models.ExternalModel

- This test fulfills the following requirement:

  - R-IS-4

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : mandd
     - date : 2015-04-17
     - description: conversion to Database and DataObjects
  2. revision info:
     - author : alfoa
     - date : 2015-04-21
     - description: Closes #122
  3. revision info:
     - author : cogljj
     - date : 2015-09-29
     - description: Modifing external modules to use relative to working directory.
  4. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.
  5. revision info:
     - author : talbpaul
     - date : 2018-02-26
     - description: Adding maxQueueSize of 1 for consistency with previous behavior

2.1.9 FRAMEWORK.TEST BISON MC SIMPLE AND ALIAS SYSTEM

This test can be found at "`./raven/tests/framework/test_bison_mc_simple.xml`".
This test can be called executing the following command:

```
./run_tests --re=framework.test_bison_mc_simple_and_alias_system
```

or

```
./run_framework_tests --re=framework.test_bison_mc_simple_and_alias_system
```

- Test Description:

    - This test is aimed to check the functionality of RAVEN to perform random sampling (MonteCarlo) on simple 1Dimensional distributions, when using a MooseBased application (in this case, BISON). In addition, it tests the usage of the alias system with such code.

- Original Author:

    - cogljj

- Creation date:

    - 2013-12-03

- The classes tested in this test are:

    - Samplers.MonteCarlo, Models.Code.MooseBasedApp, Models.AliasSystem

- This test fulfills the following requirement:

    - R-IS-6

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2015-06-18
        - description: Changed Name of all DataObjects
    2. revision info:
        - author : maljdan
        - date : 2016-04-06
        - description: Updating test cases to reflect the changes to the user input.
    3. revision info:
        - author : alfoa
        - date : 2017-01-21
        - description: Adding this test description.

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2.1.10 FRAMEWORK.TEST IOSTEP LOAD

This test can be found at "`./raven/tests/framework/test_iostep_load.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.test_iostep_load
```

or

```
./run_framework_tests --re=framework.test_iostep_load
```

- Test Description:

    - This test is aimed to check the capability of RAVEN to perform IO operation on its own object. This case checks the capability to create DataObjects from a folder containing CSVs and to dump them into HDF5 (and viceversa)

- Original Author:

    - cogljj

- Creation date:

    - 2014-09-29

- The classes tested in this test are:

    - Steps.IOStep, DataObjects.PointSet, DataObjects.HistorySet, Databases.HDF5

- This test fulfills the following requirement:

    - R-RA-2
    - R-F-6

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : cogljj
        - date : 2014-10-06
        - description: Renaming blocks with IODataBase and OutStreamStep to IOStep. The two different steps were combined. SVN r29902
    2. revision info:
        - author : cogljj
        - date : 2014-10-08

- description: Modify input to use its own unique database. SVN r29924

3. revision info:
   - author : cogljj
   - date : 2015-02-27
   - description: Adding documentation to the manual about relative working directory. Also changing one of tests to do this.

4. revision info:
   - author : alfoa
   - date : 2015-03-04
   - description: Modified batch sizes because sometimes, if we run the tests in parallel, the order of values in csv can be different

5. revision info:
   - author : mandd
   - date : 2015-04-17
   - description: conversion to Database and DataObjects

6. revision info:
   - author : cogljj
   - date : 2015-04-23
   - description: Switching to relative directories for working directory and database directory. Switching to default to relative to the xml file, not relative to the run dir. Passing the run info to the DataBases so that the working directory is known.

7. revision info:
   - author : maljdan
   - date : 2015-06-16
   - description: Fixing the input files to pass the validation

8. revision info:
   - author : alfoa
   - date : 2015-06-18
   - description: Changed Name of all DataObjects

9. revision info:
   - author : talbpaul
   - date : 2015-07-07
   - description: updated to restrict partial-node comments

10. revision info:
    - author : maljdan

- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

11. revision info:
- author : maljdan
- date : 2016-05-20
- description: Updating the test cases to remove references to Point or History.

12. revision info:
- author : maljdan
- date : 2016-06-27
- description: Adjusting the inputs and outputs of two test cases to match what the loaded files read.

13. revision info:
- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.1.11 FRAMEWORK.ND EXTERNAL MC

This test can be found at "`./raven/tests/framework/test_simple_ND_external_MC.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.ND_external_MC
```

or

```
./run_framework_tests --re=framework.ND_external_MC
```

- Test Description:

  - This test is aimed to check the capability of RAVEN to handle ND (custom) probability density functions (distributions), when a MonteCarlo sampling strategy is performed.

- Original Author:

  - mandd

- Creation date:

  - 2015-03-04

- The classes tested in this test are:

  - Distributions.NDInverseWeight, Distributions.NDCartesianSpline, Samplers.MonteCarlo

- This test fulfills the following requirement:

  - R-RE-2

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : mandd
     - date : 2015-04-17
     - description: conversion to Database and DataObjects
  2. revision info:
     - author : alfoa
     - date : 2015-06-18
     - description: Changed Name of all DataObjects
  3. revision info:
     - author : cogljj
     - date : 2015-09-29
     - description: Modifing external modules to use relative to working directory.
  4. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.
  5. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.1.12 FRAMEWORK CALCULATE AND TRANSFER

This test can be found at "`./raven/tests/framework/test_calc_and_transfer.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/calculate_and_transfer
```

or

```
./run_framework_tests --re=framework/calculate_and_transfer
```

- Test Description:

  - Creates data with an external model, then creates a rom from that, and then compares the data generated by both with the ComparisonStatistics class.

- Original Author:

  - cogljj

- Creation date:

  - 2015-11-24

- The classes tested in this test are:

  - ComparisonStatistics,IOStep

- This test fulfills the following requirement:

  - R-IS-5

2.1.13 FRAMEWORK CODEINTERFACETESTS.TESTLHSBISONPARALLEL

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_LHS_Sampler_Bison_parallel.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.testLHSBisonParallel
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.testLHSBisonParalle
```

- Test Description:

  - An example of using the MooseBasedApp code interface. This test is designed to ensure the MooseBasedApp interface runs correctly, when used with a Stratified sampling approach.

- Original Author:

– senrs

- Creation date:

  – 2015-10-06

- The classes tested in this test are:

  – Models.Code.MooseBasedApp, Samplers.Grid

- This test fulfills the following requirement:

  – R-IS-1

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : alfoa
     – date : 2015-10-15
     – description: merged devel and resolved conflicts

  2. revision info:
     – author : maljdan
     – date : 2016-04-06
     – description: Updating test cases to reflect the changes to the user input.

  3. revision info:
     – author : talbpaul
     – date : 2016-04-26
     – description: added check for pre-existing backup files when validating

  4. revision info:
     – author : alfoa
     – date : 2016-10-20
     – description: modified XSD and removed dim attribute from all the tests

  5. revision info:
     – author : talbpaul
     – date : 2016-10-25
     – description: removed dim for validation purposes

  6. revision info:
     – author : alfoa
     – date : 2017-01-21
     – description: Adding this test description.

2.1.14   FRAMEWORK CODEINTERFACETESTS.GENERICINTERFACE2

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_generic_interface.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.genericInterface2
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.genericInterface2
```

- Test Description:

    - An example of using the the Model Code of type GenericCode. This test is aimed to show the usage of the GenericCode interface present in RAVEN in order to drive an external code using the wild cards approach

- Original Author:

    - senrs

- Creation date:

    - 2015-10-06

- The classes tested in this test are:

    - Models.Code.GenericCode

- This test fulfills the following requirement:

    - R-IS-6

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : talbpaul
        - date : 2016-01-04
        - description: Re-golded for updated external model variables
    2. revision info:
        - author : maljdan
        - date : 2016-04-06
        - description: Updating test cases to reflect the changes to the user input.

3. revision info:
   - author : alfoa
   - date : 2017-01-21
   - description: Adding this test description.
4. revision info:
   - author : alfoa
   - date : 2018-10-01
   - description: This is a requirement test now.

2.1.15 FRAMEWORK CODEINTERFACETESTS.GENERICINTERFACEPARALLEL

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/generic_parallel.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.genericInterfaceParallel
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.genericInterfacePa
```

- Test Description:
  - Tests using "Files" in an internalParallel run (which tests pickling and unpickling them). This test is also a requirement test where we test the capability of RAVEN to dispatch multiple parallel jobs based on user-defined information (batchSize)

- Original Author:
  - talbpaul

- Creation date:
  - 2017-08-24

- The classes tested in this test are:
  - Models.Code.GenericCode, Files

- This test fulfills the following requirement:
  - R-F-2

- Since the creation of this test, the following main revisions have been performed:

1. revision info:
   - author : talbpaul
   - date : 2017-08-24
   - description: Created

2.1.16 FRAMEWORK CODEINTERFACETESTS.GENERICINTERFACEIOCUSTOMOUTPUT

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_generic_interface_custom_out_file.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.genericInterfaceIOCustomOutpu
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.genericInterfaceIOC
```

- Test Description:

  - An example of using the the Model Code of type GenericCode with a code that produces CSV output file. This test is aimed to test the IO system present in the GenericCode interface. In XML node outputFile the user can specify the specific output file name RAVEN is going to load.

- Original Author:

  - alfoa

- Creation date:

  - 2017-01-24

- The classes tested in this test are:

  - Models.Code.GenericCode

- This test fulfills the following requirement:

  - R-IS-6

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa

28

- date : 2018-01-24
- description: Adding this test description.
2. revision info:
   - author : alfoa
   - date : 2018-10-01
   - description: This is a requirement test now.

2.1.17 FRAMEWORK CODEINTERFACETESTS.RAVEN.ROM

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/RAVEN/rom.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.RAVEN.ROM
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.RAVEN.ROM
```

- Test Description:
  - This test is aimed to check the functionality of the RAVEN code interface (RAVEN running RAVEN). It tests the MPI implementation of the SLAVE RAVEN runs. In this case, 3 simultaneous SLAVE RAVEN (batchSize=3) runs are going to be spawned, each of them using 2 processors (NumMPI=2). The NumMPI XML node MUST BE INPUTTED if the SLAVE RAVEN runs must run in multiple processors!

- Original Author:
  - alfoa

- Creation date:
  - 2017-09-16

- The classes tested in this test are:
  - Models.Code.RAVEN

- This test fulfills the following requirement:
  - R-SI-1

- Since the creation of this test, the following main revisions have been performed:

1. revision info:
   - author : talbpaul
   - date : 2018-08-31
   - description: added VariableGroups to inner/slave input file

2. revision info:
   - author : alfoa
   - date : 2018-10-01
   - description: This is a requirement test now.

2.1.18   FRAMEWORK CODEINTERFACETESTS RELAP5.RELAP5INTERFACETESTNOEXECUTA

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/RELAP5/
test_relap5_code_interface.xml`". This test can be called executing the following
command:

```
./run_tests --re=framework/CodeInterfaceTests/RELAP5.RELAP5interfaceTestNo
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/RELAP5.RELAP5inter
```

- Test Description:

  - An example of using the RELAP5 code interface. This test is aimed to test the mechanics of the interface (no executable).

- Original Author:

  - alfoa

- Creation date:

  - 2015-10-06

- The classes tested in this test are:

  - Models.Code.RELAP5

- This test fulfills the following requirement:

  - R-SI-1

- Since the creation of this test, the following main revisions have been performed:

1. revision info:
   - author : alfoa
   - date : 2016-03-24
   - description: New relap5 test case

2. revision info:
   - author : talbpaul
   - date : 2016-04-26
   - description: Added check for pre-existing backup files when validating

3. revision info:
   - author : alfoa
   - date : 2016-08-02
   - description: Added new gold, since the case has been changed

4. revision info:
   - author : talbpaul
   - date : 2016-09-15
   - description: Test updates

5. revision info:
   - author : alfoa
   - date : 2016-11-17
   - description: Closes #750

6. revision info:
   - author : alfoa
   - date : 2016-11-17
   - description: Added alias for output system

7. revision info:
   - author : alfoa
   - date : 2017-01-21
   - description: Adding this test description.

8. revision info:
   - author : alfoa
   - date : 2018-10-01
   - description: This is a requirement test now.

2.1.19 FRAMEWORK DATABASES.2STEPS SAME DB

This test can be found at "./raven/tests/framework/Databases/test_2steps_
same_db.xml". This test can be called executing the following command:

```
./run_tests --re=framework/Databases.2steps_same_db
```

or

```
./run_framework_tests --re=framework/Databases.2steps_same_db
```

- Test Description:

    - This test is aimed to test the capability of the RAVEN database strucuture to use the
      same database (HDF5) for subsequential analyses in order to collect all the results in
      the same HDF5 container

- Original Author:

    - @alfoa

- Creation date:

    - 2015-05-01

- The classes tested in this test are:

    - Databases.HDF5

- This test fulfills the following requirement:

    - R-IS-3

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : @maljdan
        - date : 2016-05-20
        - description: Updating the test cases to remove references to Point or History
    2. revision info:
        - author : alfoa
        - date : 2019-03-01
        - description: Modified test location

2.1.20 FRAMEWORK DATABASES.LOAD AND PUSH REUSING SAME HDF5

This test can be found at "`./raven/tests/framework/Databases/test_load_and_push_reusing_same_hdf5.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Databases.load_and_push_reusing_same_hdf5
```

or

```
./run_framework_tests --re=framework/Databases.load_and_push_reusing_same_h
```

- Test Description:
    - This test is aimed to check the possiblity in RAVEN to load an HDF5 (pre-generated) and use the same database to store new results.

- Original Author:
    - alfoa

- Creation date:
    - 2016-12-12

- The classes tested in this test are:
    - Databases.HDF5

- This test fulfills the following requirement:
    - R-F-6

- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : alfoa
        - date : 2016-12-12
        - description: Added test
    2. revision info:
        - author : alfoa
        - date : 2017-01-21
        - description: Adding this test description.

3. revision info:

    – author : alfoa
    – date : 2017-12-14
    – description: Modified input since new structure of DataObject

4. revision info:

    – author : alfoa
    – date : 2019-03-01
    – description: Modified test location

2.1.21 FRAMEWORK INTERNALPARALLELTESTS.ROMSCIKIT

This test can be found at "`./raven/tests/framework/InternalParallelTests/test_internal_parallel_ROM_scikit.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/InternalParallelTests.ROMscikit
```

or

```
./run_framework_tests --re=framework/InternalParallelTests.ROMscikit
```

- Test Description:

    – This test is aimed to check the functionality of the RAVEN parallelization scheme for Internal Objects. In this case the functionality of the parallelization is tested for the Model ROM of type SKLearn

- Original Author:

    – alfoa

- Creation date:

    – 2015-10-07

- The classes tested in this test are:

    – JobHandler.ParallelPython, Models.ROM.SKLearn

- This test fulfills the following requirement:

    – R-IS-8

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.

  2. revision info:
     - author : maljdan
     - date : 2016-04-25
     - description: Fixing the internal parallel tests to use support vector regression and making the step sizes look the same in the cluster and local test cases. This creates a more robust test case since the data points will be floating point values.

  3. revision info:
     - author : maljdan
     - date : 2016-04-25
     - description: Switching to a different regressor that yields more consistent results.

  4. revision info:
     - author : maljdan
     - date : 2016-04-25
     - description: Regolding based on 1-nearest neighbor regression. This should effectively report the same information as the training data.

  5. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

  6. revision info:
     - author : maljdan
     - date : 2017-09-19
     - description: Adding a maxQueueSize for testing a new feature.

  7. revision info:
     - author : alfoa
     - date : 2018-10-01
     - description: This is a requirement test now.

2.1.22 FRAMEWORK INTERNALPARALLELTESTS.EXTERNALMODEL

This test can be found at "`./raven/tests/framework/InternalParallelTests/ test_internal_parallel_extModel.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/InternalParallelTests.ExternalModel
```

or

```
./run_framework_tests --re=framework/InternalParallelTests.ExternalModel
```

- Test Description:

    - This test is aimed to check the functionality of the RAVEN parallelization scheme for Internal Objects. In this case the functionality of the parallelization is tested for the Model External Model

- Original Author:

    - alfoa

- Creation date:

    - 2015-10-07

- The classes tested in this test are:

    - JobHandler.ParallelPython, Models.ExternalModel

- This test fulfills the following requirement:

    - R-IS-8

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2015-10-19
        - description: New syntax form samplerInit: from sampler_init -¿ samplerInit
    2. revision info:
        - author : maljdan
        - date : 2016-04-06
        - description: Updating test cases to reflect the changes to the user input.

3. revision info:

   - author : maljdan
   - date : 2016-05-20
   - description: Updating the test cases to remove references to Point or History.

4. revision info:

   - author : alfoa
   - date : 2017-01-21
   - description: Adding this test description.

5. revision info:

   - author : alfoa
   - date : 2018-10-01
   - description: This is a requirement test now.

2.1.23   FRAMEWORK INTERNALPARALLELTESTS.POSTPROCESSOR

This test can be found at "`./raven/tests/framework/InternalParallelTests/`
`test_internal_parallel_PP_LS.xml`". This test can be called executing the following
command:

```
./run_tests --re=framework/InternalParallelTests.PostProcessor
```

or

```
./run_framework_tests --re=framework/InternalParallelTests.PostProcessor
```

- Test Description:

  - This test is aimed to check the functionality of the RAVEN parallelization scheme for
    Internal Objects. In this case the functionality of the parallelization is tested for the
    Model PostProcessor

- Original Author:

  - alfoa

- Creation date:

  - 2015-10-07

- The classes tested in this test are:

- JobHandler.ParallelPython, Models.PostProcessor

- This test fulfills the following requirement:

  - R-IS-8

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2015-10-07
     - description: Made the test faster

  2. revision info:
     - author : alfoa
     - date : 2015-10-19
     - description: New syntax form samplerInit: from sampler_init -¿ samplerInit

  3. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.

  4. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

  5. revision info:
     - author : alfoa
     - date : 2018-01-09
     - description: Modified for new dataobject structure

  6. revision info:
     - author : alfoa
     - date : 2018-10-01
     - description: This is a requirement test now.

  7. revision info:
     - author : alfoa
     - date : 2019-03-07
     - description: Modified syntax in Functions as for issue #934

2.1.24 FRAMEWORK OPTIMIZERS.BEALE

This test can be found at "`./raven/tests/framework/Optimizers/beale.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.Beale
```

or

```
./run_framework_tests --re=framework/Optimizers.Beale
```

- Test Description:

    – This test runs the optimization on Beale's function. It tests analytic optimization values as well as the mechanical operation of the test. Also tests the "gainGrowthFactor" and "gainShrinkFactor" convergence parameters.

      Currently the full optimization path taken for 5 trajectories is printed, and the first two are tested for exact path.

- This test is analytic:

    – This test uses Beale's function, which is documented in the analytic tests documentation under the Optimizer functions section.

- Original Author:

    – talbpaul

- Creation date:

    – 2017-05-03

- The classes tested in this test are:

    – Optimizer

- This test fulfills the following requirement:

    – R-RM-1

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : talbpaul
        – date : 2018-01-04
        – description: added the writeSteps=every option to test default performance

2.1.25 FRAMEWORK POSTPROCESSORS BASICSTATISTICS GENERAL

This test can be found at "`./raven/tests/framework/PostProcessors/BasicStatistics/`
`test_BasicStatistics.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/general
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/general
```

- Test Description:
    - This requirements test checks operation of the basic statistics postprocessor.
- Original Author:
    - alfoa
- Creation date:
    - 2014-05-21
- The classes tested in this test are:
    - PostProcessors.BasicStatistics
- This test fulfills the following requirement:
    - R-RA-5
- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : wangc
        - date : 2017-12-05
        - description: convert test to use the new dataobjects
    2. revision info:
        - author : wangc
        - date : 2018-12-13
        - description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the pointwise metadata, and will be printed out in the output csv files by default. In order to avoid regolding this test, the optional node 'what' with text values 'input, output' is added. In this case, only the user requested variables as specified in the DataObjects are printed out.

3. revision info:
    – author : alfoa
    – date : 2019-03-07
    – description: Modified syntax in Functions as for issue #934

2.1.26 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMEN-SIONALITYREDUCTION EXACTPCA

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces` `DimensionalityReduction/test_dataMiningExactPCA.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimension
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

    – Tests decomposition with PCA model.

- Original Author:

    – senrs

- Creation date:

    – 2015-11-24

- The classes tested in this test are:

    – DataMining

- This test fulfills the following requirement:

    – R-RA-6

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : wangc
        – date : 2018-09-27
        – description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.1.27 FRAMEWORK POSTPROCESSORS LIMITSURFACE.TESTLIMITSURFACEPOSTPROCESS

This test can be found at "`./raven/tests/framework/PostProcessors/LimitSurface/`
`test_LimitSurface.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/LimitSurface.testLimitSurfacePost
```

or

```
./run_framework_tests --re=framework/PostProcessors/LimitSurface.testLimit
```

- Test Description:

    - This test is aimed to check the capability of RAVEN to generate Limit Surfaces from a
      pre-generated data set (in this case, generated with a MonteCarlo sampling), outputting
      the generated Limit Surface in DataObject.PointSet(s) and Databases.HDF5 reporting
      both transition boundaries (-1 1) or just one of them.

- Original Author:

    - alfoa

- Creation date:

    - 2014-07-10

- The classes tested in this test are:

    - Models.PostProcessors.LimitSurface, Functions.External, Databases.HDF5

- This test fulfills the following requirement:

    - R-RA-1
    - R-RA-7

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2014-07-11
        - description: Limit Surface pp fix. SVN r28533
    2. revision info:
        - author : alfoa
        - date : 2014-11-17

- description: restructuring Steps (removed Adaptive and PostProcessor), adding Assembler capability, removed datatype input for Functions and External models, modified all the inputs, added SafestPoint postprocessor and relative regression test, fixed Sampling for descrete distributions, added check for the distributions consistency between framework and RELAP7. SVN r30411

3. revision info:
   - author : alfoa
   - date : 2015-06-18
   - description: Changed Name of all DataObjects

4. revision info:
   - author : talbpaul
   - date : 2015-07-06
   - description: standardization of tests

5. revision info:
   - author : talbpaul
   - date : 2015-07-06
   - description: Revert "standardization of tests". This reverts commit 68099325e8daba0f756179a20k

6. revision info:
   - author : talbpaul
   - date : 2015-07-06
   - description: updated tests, added script

7. revision info:
   - author : talbpaul
   - date : 2015-07-07
   - description: updated to restrict partial-node comments

8. revision info:
   - author : cogljj
   - date : 2015-09-29
   - description: Modifing external modules to use relative to working directory.

9. revision info:
   - author : maljdan
   - date : 2016-04-06
   - description: Updating test cases to reflect the changes to the user input.

10. revision info:
    - author : alfoa

- date : 2017-01-21
- description: Adding this test description.

11. revision info:
    - author : alfoa
    - date : 2017-12-14
    - description: Moved LimitSurface Postprocessor tests in a specific directory (tests/framework/PostProcessors/LimitSurface) and updated for new DataObject structure

12. revision info:
    - author : alfoa
    - date : 2018-09-11
    - description: Added an additional IOStep to check that the limit surface DataObject can be dumped into a Database of type HDF5

13. revision info:
    - author : alfoa
    - date : 2019-03-07
    - description: Modified syntax in Functions as for issue #934

2.1.28 FRAMEWORK POSTPROCESSORS LIMITSURFACE.TESTLIMITSURFACEINTEGRALPP

This test can be found at "`./raven/tests/framework/PostProcessors/LimitSurface/`
`test_LimitSurface_and_integral.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/LimitSurface.testLimitSurfaceInte
```

or

```
./run_framework_tests --re=framework/PostProcessors/LimitSurface.testLimitS
```

- Test Description:
    - This test is aimed to check the capability of RAVEN to generate Limit Surfaces from a pre-generated data set (in this case, generated with a MonteCarlo sampling). In addition, this test is aimed to check the capability of RAVEN to compute the integral of the Limit Surface (e.g. Failure probability) both probability-weighted and not.

- Original Author:

44

- alfoa

- Creation date:

    - 2015-05-08

- The classes tested in this test are:

    - Models.PostProcessors.LimitSurface, Models.PostProcessors.LimitSurfaceIntegral

- This test fulfills the following requirement:

    - R-RA-7

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2015-05-11
        - description: Limit surface integral
    2. revision info:
        - author : alfoa
        - date : 2015-05-12
        - description: Closes #153
    3. revision info:
        - author : alfoa
        - date : 2015-06-17
        - description: Closes #213
    4. revision info:
        - author : alfoa
        - date : 2015-06-18
        - description: Changed Name of all DataObjects
    5. revision info:
        - author : maljdan
        - date : 2016-04-06
        - description: Updating test cases to reflect the changes to the user input.
    6. revision info:
        - author : alfoa
        - date : 2017-01-21
        - description: Adding this test description.

7. revision info:

  – author : alfoa
  – date : 2017-12-14
  – description: Moved LimitSurface Postprocessor tests in a specific directory (tests/framework/PostProcessors/LimitSurface) and updated for new DataObject structure

8. revision info:

  – author : alfoa
  – date : 2018-09-20
  – description: This test is now a requirement test.

9. revision info:

  – author : alfoa
  – date : 2019-03-07
  – description: Modified syntax in Functions as for issue #934

2.1.29 FRAMEWORK ROM TIMESERIES DMD.TRADITIONALDMD

This test can be found at "`./raven/tests/framework/ROM/TimeSeries/DMD/test_traditional_dmd.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/TimeSeries/DMD.traditionalDMD
```

or

```
./run_framework_tests --re=framework/ROM/TimeSeries/DMD.traditionalDMD
```

• Test Description:

  – This test is aimed to check the mechanics of the DMD ROM using the standard SVD-based algorithm. In addition, it tests the capability for the user to export the ROM info in an XML output file (requirement).

• Original Author:

  – alfoa

• Creation date:

  – 2018-04-25

• The classes tested in this test are:

– SupervisedLearning.DynamicModeDecomposition

- This test fulfills the following requirement:

    – R-F-5

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : alfoa
        – date : 2018-04-25
        – description: Adding this test description.

    2. revision info:
        – author : alfoa
        – date : 2018-10-01
        – description: This test is a requirement test now.

    3. revision info:
        – author : talbpaul
        – date : 2019-01-09
        – description: moving from ROM-files to ROM-dataobjects

2.1.30   FRAMEWORK SAMPLERS RESTART.MC

This test can be found at "`./raven/tests/framework/Samplers/Restart/test_restart_MC.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Restart.MC
```

or

```
./run_framework_tests --re=framework/Samplers/Restart.MC
```

- Test Description:

    – Tests restarting a Monte Carlo sampling from restart. `makeCoarse` samples initial data, then `makeRestart` makes additional samples, restarting from the first set of samples. `makeFine` does all the samples without restart for comparison. The model for "coarse" always returns a value of 1, while the model for "restart" returns a value of 2, so you can tell which samples came from which sampling strategy.

- Original Author:

– talbpaul

- Creation date:

    – 2015-07-07

- The classes tested in this test are:

    – Samplers.MonteCarlo

- This test fulfills the following requirement:

    – R-F-4

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : alfoa
        – date : 2018-10-01
        – description: This Test is now a requirement test.

2.1.31 FRAMEWORK SAMPLERS RESTART.CSV

This test can be found at "`./raven/tests/framework/Samplers/Restart/test_restart_csv.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Restart.CSV
```

or

```
./run_framework_tests --re=framework/Samplers/Restart.CSV
```

- Test Description:

    – This test demonstrates that a restart can be performed from a loaded CSV file, not just an internal data object from an earlier step. As with the other restart tests, in output data objects samples from "course" have an output of 1, while samples from "fine" have an output of 2.

- Original Author:

    – talbpaul

- Creation date:

– 2015-07-27

- The classes tested in this test are:

  – Files

- This test fulfills the following requirement:

  – R-F-4

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : alfoa
     – date : 2018-10-01
     – description: This Test is now a requirement test.

2.1.32   FRAMEWORK SAMPLERS RESTART.CONSTANT

This test can be found at "./raven/tests/framework/Samplers/Restart/test_restart_constant.xml". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Restart.Constant
```

or

```
./run_framework_tests --re=framework/Samplers/Restart.Constant
```

- Test Description:

  – The essence of this test is to demonstrate the restart capability with constant variable, i.e. test the scaling factor for constant samples as mentioned in issue #690

- Original Author:

  – wangc

- Creation date:

  – 2018-08-04

- The classes tested in this test are:

  – Samplers.Grid

- This test fulfills the following requirement:

    - R-F-4

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:

        - author : alfoa
        - date : 2018-10-01
        - description: This Test is now a requirement test.

2.1.33 FRAMEWORK.TEST DISTRIBUTIONS

This test can be found at "`./raven/tests/framework/unit_tests/Distributions/ TestDistributions.py`". This test can be called executing the following command:

```
./run_tests --re=framework.test_distributions
```

or

```
./run_framework_tests --re=framework.test_distributions
```

- Test Description:

    - This test is a Unit Test for the Distributions classes. It tests all the distributions and all the methods.

- Original Author:

    - cogljj

- Creation date:

    - 2013-12-10

- The classes tested in this test are:

    -

- This test fulfills the following requirement:

    - R-RE-1

- Since the creation of this test, the following main revisions have been performed:

1. revision info:
   – author : cogljj
   – date : 2013-12-10
   – description: Adding test of all the rest of the distributions except for binomial. r23360

2. revision info:
   – author : senrs
   – date : 2015-01-26
   – description: fixed Bug in Distribution.py the attribute mean is obsolete use untrMean instead

3. revision info:
   – author : senrs
   – date : 2015-01-26
   – description: Fixed bugs in the if statements, etc...and included tests for Distributions.py

4. revision info:
   – author : talbpaul
   – date : 2015-02-05
   – description: added pickle methods and tests for distributionsw

5. revision info:
   – author : alfoa
   – date : 2015-02-10
   – description: finished caching of data

6. revision info:
   – author : talbpaul
   – date : 2015-03-11
   – description: added way to do beta through keywords, still need to test stochcoll, but testdistros is passing

7. revision info:
   – author : cogljj
   – date : 2015-04-29
   – description: Adding test of standard deviation.

8. revision info:
   – author : cogljj
   – date : 2015-05-05

- description: Adding check of std deviation of a binomial.

9. revision info:
   - author : cogljj
   - date : 2015-05-06
   - description: Adding additional checks of the mean and standard deviation.

10. revision info:
    - author : alfoa
    - date : 2015-05-18
    - description: modified test distribution

11. revision info:
    - author : mandd
    - date : 2015-06-16
    - description: fixed testDistributions

12. revision info:
    - author : alfoa
    - date : 2016-03-31
    - description: Closes #478

13. revision info:
    - author : maljdan
    - date : 2016-04-12
    - description: Improving readability of our own code and removing extraneous functions.

14. revision info:
    - author : cogljj
    - date : 2016-04-12
    - description: Converting Distributions to use the new input system. All distributions have been converted.

15. revision info:
    - author : alfoa
    - date : 2017-01-21
    - description: Adding this test description.

16. revision info:
    - author : alfoa
    - date : 2018-05-10
    - description: Added Log Uniform distribution unit test

2.1.34   PLUGINS EXAMPLEPLUGIN.TESTPLUGINEXAMPLE

This test can be found at "`./raven/tests/plugins/ExamplePlugin/test_example_` `plugin.xml`". This test can be called executing the following command:

```
./run_tests --re=plugins/ExamplePlugin.TestPluginExample
```

or

```
./run_framework_tests --re=plugins/ExamplePlugin.TestPluginExample
```

- Test Description:

    - This input tests an example of external developed plugin. In this case it is just a plugin that computes a sum of exponentials: $Xi(t) = \sum\_i = 1^n coef\_i * e^{var\_i*t}$

- Original Author:

    - alfoa

- Creation date:

    - 2017-11-17

- The classes tested in this test are:

    - Models.ExternalModel

- This test fulfills the following requirement:

    - R-SI-2

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2018-10-01
        - description: This is a requirement test now.

2.1.35 PLUGINS EXAMPLEPLUGIN.TESTPLUGINEXAMPLE

This test can be found at "`./raven/tests/plugins/ExamplePlugin/test_raven_running_raven_plugin.xml`". This test can be called executing the following command:

```
./run_tests --re=plugins/ExamplePlugin.TestPluginExample
```

or

```
./run_framework_tests --re=plugins/ExamplePlugin.TestPluginExample
```

- Test Description:
    - This test is aimed to check the functionality of the RAVEN code interface (RAVEN running RAVEN) executing an external plugin (ExternalModel) plugin

- Original Author:
    - alfoa

- Creation date:
    - 2017-11-17

- The classes tested in this test are:
    - Models.ExternalModel

- This test fulfills the following requirement:
    - R-SI-2

- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : alfoa
        - date : 2018-10-01
        - description: This is a requirement test now.

2.2 Analytical tests' description

This section contains the description of all the analytical tests.

2.2.1 FRAMEWORK CODEINTERFACETESTS RAVEN.BASIC

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/RAVEN/`
`basic.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/RAVEN.Basic
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/RAVEN.Basic
```

- Test Description:

    - Basic test of the raven-runs-raven interface. Outer raven runs a grid sampling by changing the upper and lower bounds of the sampledVars distribution on the inner raven. Inner raven runs 100 MC samples, does basic stats, and returns the mean, sigma to the outer raven.

- This test is analytic:

    - Each sample in this test converges towards the analytic solutions discussed in the "changing lower, upper bounds" section of the "attenuate" analytic model documentation.

- Original Author:

    - talbpaul

- Creation date:

    - 2018-01-18

- The classes tested in this test are:

    - Models.Code.RAVEN

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : talbpaul
        - date : 2018-05-02
        - description: added "fully-correlated" variable for innerUpperBound as a test of the mechanic
    2. revision info:

- – author : talbpaul
- – date : 2018-11-06
- – description: modified inner run to use grid for speed, consistent results

2.2.2 FRAMEWORK.MODELS.EXTERNAL.ALL METHODS

This test can be found at "`./raven/tests/framework/Models/External/all_methods.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.Models.External.all_methods
```

or

```
./run_framework_tests --re=framework.Models.External.all_methods
```

- • Test Description:

  - – This test is used to exercise all of the optional ExternalModel methods and assure they behave as expected.

- • This test is analytic:

  - – This test uses the analytic model "attenuate", which is documented in the analytical test documentation. Additionally, values of the "from" variables are exactly determined because they are set in the extmod methods:

    - * fromReadMoreXML: pi (3.14159)
    - * fromInit : sqrt(pi) (1.77245)
    - * fromCNISelf : pi/2 (1.57080)
    - * fromCNIDict : 2*sqrt(pi) (3.54491)

    The exit strength "ans" is analytic with results as follows (Note that for testing purposes, the model always adds 0.05 to $y2$ before calculating the exit strength):

    - * y1, y2, ans
    - * 0.0, 0.0, 0.97531
    - * 0.0, 1.0, 0.59156
    - * 1.0, 0.0, 0.59156
    - * 1.0, 1.0, 0.35880

- • Original Author:

  - – talbpaul

- Creation date:

  - 2018-01-17

- The classes tested in this test are:

  - Models.ExternalModel

2.2.3 FRAMEWORK OPTIMIZERS.BEALE

This test can be found at "`./raven/tests/framework/Optimizers/beale.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.Beale
```

or

```
./run_framework_tests --re=framework/Optimizers.Beale
```

- Test Description:

  - This test runs the optimization on Beale's function. It tests analytic optimization values as well as the mechanical operation of the test. Also tests the "gainGrowthFactor" and "gainShrinkFactor" convergence parameters.

    Currently the full optimization path taken for 5 trajectories is printed, and the first two are tested for exact path.

- This test is analytic:

  - This test uses Beale's function, which is documented in the analytic tests documentation under the Optimizer functions section.

- Original Author:

  - talbpaul

- Creation date:

  - 2017-05-03

- The classes tested in this test are:

  - Optimizer

- This test fulfills the following requirement:

– R-RM-1

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2018-01-04
     - description: added the writeSteps=every option to test default performance

2.2.4   FRAMEWORK OPTIMIZERS.GOLDSTEINPRICE

This test can be found at "`./raven/tests/framework/Optimizers/goldsteinprice.
xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.GoldsteinPrice
```

or

```
./run_framework_tests --re=framework/Optimizers.GoldsteinPrice
```

- Test Description:
  - This test runs the optimization on the Goldstein-Price function. It tests analytic optimization values as well as the mechanical operation of the test. Also covers the Bernoulli stochastic distribution, and convergence nodes iterationLimit, absoluteThreshold, and minStepSize.

- This test is analytic:
  - This test uses the Goldstein-Price function, which is documented in the analytic tests documentation under the Optimizer functions section.

- Original Author:
  - talbpaul

- Creation date:
  - 2017-05-30

- The classes tested in this test are:
  - Optimizer

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2018-01-04
     - description: switched from snapshot to writeSteps final
  2. revision info:
     - author : talbpaul
     - date : 2018-10-23
     - description: limited outputs checked to just the solution

2.2.5 FRAMEWORK OPTIMIZERS.MCCORMICK

This test can be found at "`./raven/tests/framework/Optimizers/mccormick.xml`".
This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.McCormick
```

or

```
./run_framework_tests --re=framework/Optimizers.McCormick
```

- Test Description:

  - This test runs the optimization on the McCormick function. It tests analytic optimization values as well as the mechanical operation of the test.

- This test is analytic:

  - This test uses the McCormick function, which is documented in the analytic tests documentation under the Optimizer functions section.

- Original Author:

  - talbpaul

- Creation date:

  - 2017-05-30

- The classes tested in this test are:

  - Optimizer

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2018-01-04
     - description: switch from snapshot to writeSteps final
  2. revision info:
     - author : talbpaul
     - date : 2018-10-23
     - description: limited outputs checked to just the solution

2.2.6 FRAMEWORK OPTIMIZERS.MAX

This test can be found at "`./raven/tests/framework/Optimizers/max.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.Max
```

or

```
./run_framework_tests --re=framework/Optimizers.Max
```

- Test Description:
  - This test runs the optimization on (-1)*(Beale's function). It tests analytic optimization values as well as the mechanical operation of the test, for maximization operations.

- This test is analytic:
  - This test uses an upside-down Beale's function, which is documented in the analytic tests documentation under the Optimizer functions section.

- Original Author:
  - talbpaul

- Creation date:
  - 2017-06-13

- The classes tested in this test are:
  - Optimizer

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : talbpaul
        - date : 2018-01-04
        - description: switch from snap to writeSteps final
    2. revision info:
        - author : talbpaul
        - date : 2018-10-23
        - description: limited outputs checked to just the solution

2.2.7 FRAMEWORK OPTIMIZERS.STOCHASTIC

This test can be found at "`./raven/tests/framework/Optimizers/stochastic.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.Stochastic
```

or

```
./run_framework_tests --re=framework/Optimizers.Stochastic
```

- Test Description:

    - This test runs the optimization on a inverse parabola with signal-to-noise ratio close to 1.0 using multiple gradient evaluations to denoise the response space. It tests stochastic optimization mechanics. Also tests having other response variables in SolutionExport besides the objective variable.

- This test is analytic:

    - This tests uses the inverse parabola as a basis for the noisy optimization. The inverse parabola is documented in the analytic tests, and has an average optimal max point at $x = 0$.

- Original Author:

    - talbpaul

- Creation date:

    - 2017-06-14

- The classes tested in this test are:

  - Optimizer.SPSA

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2017-05-14
     - description: creation
  2. revision info:
     - author : talbpaul
     - date : 2017-07-11
     - description: changed model for simpler analytic checking
  3. revision info:
     - author : talbpaul
     - date : 2017-07-18
     - description: added additional model output for testing mechanics
  4. revision info:
     - author : talbpaul
     - date : 2018-01-04
     - description: siwtched from snapshot to writeSteps final
  5. revision info:
     - author : talbpaul
     - date : 2018-10-23
     - description: limited outputs checked to just the solution

2.2.8   FRAMEWORK OPTIMIZERS.BOUNDARY

This test can be found at "`./raven/tests/framework/Optimizers/boundary.xml`".
This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.Boundary
```

or

```
./run_framework_tests --re=framework/Optimizers.Boundary
```

- Test Description:

  - This test runs optimization where the preferred solution is past the limits of the input variable. The model is an upside-down parabola $y = -x^2$ with the input constrained to [1,2]. This test checks opearation of solutions on a boundary.

- This test is analytic:

  - This test uses an inverse parabola, whose minimum is outside the domain and expected solution is at the lowest possible input value (1.0).

- Original Author:

  - talbpaul

- Creation date:

  - 2017-06-15

- The classes tested in this test are:

  - Optimizer

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2018-01-04
     - description: switch from snapshot to writeSteps
  2. revision info:
     - author : talbpaul
     - date : 2018-10-23
     - description: limited outputs checked to just the solution

2.2.9 FRAMEWORK OPTIMIZERS.CONSTRAINED

This test can be found at "`./raven/tests/framework/Optimizers/constrained.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.Constrained
```

or

```
./run_framework_tests --re=framework/Optimizers.Constrained
```

- Test Description:

  - This test runs constrained optimization on Mishra's Bird function. The trajectories and seed chosen demonstrate convergence on a plateau (trajectory 0), good convergence (trajecory 1), and attempt to converge outside the constraints (trajectory 2).

- This test is analytic:

  - This test uses Mishra's Bird function, which is documented in the analytic tests documentation under the Optimizer functions section.

- Original Author:

  - talbpaul

- Creation date:

  - 2017-06-26

- The classes tested in this test are:

  - Optimizer

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2018-01-04
     - description: switch from snapshot to writeSteps final
  2. revision info:
     - author : talbpaul
     - date : 2018-10-23
     - description: limited outputs checked to just the solution
  3. revision info:
     - author : alfoa
     - date : 2019-03-07
     - description: Modified syntax in Functions as for issue #934

2.2.10 FRAMEWORK OPTIMIZERS.PERSISTANCE

This test can be found at "`./raven/tests/framework/Optimizers/persistence.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.Persistance
```

or

```
./run_framework_tests --re=framework/Optimizers.Persistance
```

- Test Description:

  - This test runs the optimization on a inverse parabola with a persistance greater than 1 to demonstrate mechanics.

- This test is analytic:

  - This tests uses the inverse parabola for optimization. The inverse parabola is documented in the analytic tests, and has an optimal max point at $x = 0$.

- Original Author:

  - talbpaul

- Creation date:

  - 2017-09-06

- The classes tested in this test are:

  - Optimizer.SPSA

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2018-01-04
     - description: switch from snapshot to writeSteps final
  2. revision info:
     - author : talbpaul
     - date : 2018-10-23
     - description: limited outputs checked to just the solution

2.2.11 FRAMEWORK OPTIMIZERS.VECTOR

This test can be found at "`./raven/tests/framework/Optimizers/vector.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.Vector
```

or

```
./run_framework_tests --re=framework/Optimizers.Vector
```

- Test Description:

  - Tests sampling a vector of variables, treating each element in the vector as an independent sample.

    To compare, originally an identical test but using all scalar variables for "y" instead of the vector variable, and it was assured that both workflows followed the same optimization path, before golding the output csv for this test.

    As a result, before any regolding is performed on this test, a similar test and comparison should be made.

- This test is analytic:

  - This test uses the "time parabola" $f(x, y, t) = x^2 + (t-y)^2 e^(-t)$, which has a minimum at x=0 and y=t for each value of t, with greater impact coming from early values of y (y[0], y[1], etc).

- Original Author:

  - talbpaul

- Creation date:

  - 2018-04-24

- The classes tested in this test are:

  - Optimizer

2.2.12 FRAMEWORK OPTIMIZERS.CUSTOMVECTORINIT

This test can be found at "`./raven/tests/framework/Optimizers/custom_vector_init.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.CustomVectorInit
```

or

```
./run_framework_tests --re=framework/Optimizers.CustomVectorInit
```

- Test Description:

    - Takes values from the CustomSampler to use as initial guess points, including inputs that are vectors. This particular case uses two initial seed points, to test that multiple initial vector points work okay.

        Note that the CustomSampler ONLY samples the variables that the Optimizer needs initial values for. The File from which the initial samples are taken is a trimmed version of the output of framework/Optmizers.Vector test output, taking initial seed points from the 100th and 400th iteration of that test.

- This test is analytic:

    - This test uses the "time parabola" $f(x, y, t) = x^2 + (t-y)^2 e^{(}-t)$, which has a minimum at x=0 and y=t for each value of t, with greater impact coming from early values of y (y[0], y[1], etc).

- Original Author:

    - talbpaul

- Creation date:

    - 2018-04-26

- The classes tested in this test are:

    - Optimizer

2.2.13 FRAMEWORK OPTIMIZERS.BEALEWITHSAMPLER

This test can be found at "`./raven/tests/framework/Optimizers/beale_with_sampler.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.BealeWithSampler
```

or

```
./run_framework_tests --re=framework/Optimizers.BealeWithSampler
```

- Test Description:

  - This test runs the optimization on Beale's function. It tests analytic optimization values as well as the mechanical operation of the test. It tests the possibility to initialize the starting points (For each trajectory) with a Forward Sampler (e.g. Montecarlo, Grid, etc.)

- This test is analytic:

  - This test uses beale function, which is documented in the analytic tests documentation under the Optimizer functions section.

- Original Author:

  - alfoa

- Creation date:

  - 2017-08-29

- The classes tested in this test are:

  - Optimizer

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2018-01-04
     - description: switch from snapshot to writeSteps final
  2. revision info:
     - author : talbpaul
     - date : 2018-10-23
     - description: limited outputs checked to just the solution

2.2.14 FRAMEWORK OPTIMIZERS.TRAJGRID

This test can be found at "`./raven/tests/framework/Optimizers/traj_grid.xml`".
This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.TrajGrid
```

or

```
./run_framework_tests --re=framework/Optimizers.TrajGrid
```

- Test Description:

    - This tests using the Grid sampler as a seeding chooser for the GradientBasedOptimizer class.

- This test is analytic:

    - This test uses an inverted 2-dimensional parabola with maximum at (0,0) of 1.0.

- Original Author:

    - talbpaul

- Creation date:

    - 2017-09-07

- The classes tested in this test are:

    - Optimizer.SPSA,Samplers.Grid

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : talbpaul
        - date : 2018-01-04
        - description: switched from snapshot to writeSteps final
    2. revision info:
        - author : talbpaul
        - date : 2018-10-23
        - description: limited outputs checked to just the solution

2.2.15 FRAMEWORK OPTIMIZERS.BEALEFINITEDIFFERENCE

This test can be found at "`./raven/tests/framework/Optimizers/beale_finite_difference.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.BealeFiniteDifference
```

or

```
./run_framework_tests --re=framework/Optimizers.BealeFiniteDifference
```

- Test Description:

  - This test runs the optimization (Finite difference forward) on Beale's function. It tests analytic optimization values as well as the mechanical operation of the Finite Difference optimizer.

- This test is analytic:

  - This test uses Beale's function, which is documented in the analytic tests documentation under the Optimizer functions section.

- Original Author:

  - alfoa

- Creation date:

  - 2017-09-11

- The classes tested in this test are:

  - Optimizer.FiniteDifference

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2018-01-04
     - description: switch from snapshot to writeSteps final
  2. revision info:
     - author : talbpaul
     - date : 2018-10-23
     - description: limited outputs checked to just the solution

2.2.16 FRAMEWORK OPTIMIZERS.STOCHASTICFINITEDIFFERENCE

This test can be found at "./raven/tests/framework/Optimizers/stochastic_
finite_difference.xml". This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.StochasticFiniteDifference
```

or

```
./run_framework_tests --re=framework/Optimizers.StochasticFiniteDifference
```

- Test Description:

    - This test runs the optimization (Finite difference forward) on a inverse parabola with signal-to-noise ratio close to 1.0 using multiple gradient evaluations to denoise the response space. It tests stochastic optimization mechanics.

- This test is analytic:

    - This tests uses the inverse parabola as a basis for the noisy optimization. The inverse parabola is documented in the analytic tests, and has an average optimal max point at $x = 0$.

- Original Author:

    - alfoa

- Creation date:

    - 2017-09-11

- The classes tested in this test are:

    - Optimizer.FiniteDifference

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : talbpaul
        - date : 2018-01-04
        - description: switched from snapshot to writeSteps final
    2. revision info:
        - author : talbpaul
        - date : 2018-10-23
        - description: limited outputs checked to just the solution

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2.2.17 FRAMEWORK PCA ADAPTIVE SGC TEST ADAPTIVE SGC ATTENUATION

This test can be found at "`./raven/tests/framework/pca_adaptive_sgc/test_`
`adaptive_sgc_attenuation.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_adaptive_sgc/test_adaptive_sgc_attenuation
```

or

```
./run_framework_tests --re=framework/pca_adaptive_sgc/test_adaptive_sgc_at
```

- Test Description:

    - Tests use of the PCA method for adaptive sparse grids on exponential decay models with uncorrelated inputs.

- This test is analytic:

    - Attenuation with Multivariate Normal Distribution

- Original Author:

    - wangc

- Creation date:

    - 2015-11-18

- The classes tested in this test are:

    - Distributions.MultivariateNormal,Samplers.AdaptiveSparseGrid,SupervisedLearning.GaussPolynomi

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : talbpaul
        - date : 2019-01-09
        - description: moving rom ROM-file to ROM-dataobject

2.2.18 FRAMEWORK PCA ADAPTIVE SGC.TEST ADAPTIVE SGC POLY CORRE-LATION

This test can be found at "`./raven/tests/framework/pca_adaptive_sgc/test_adaptive_sgc_poly_correlation.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_adaptive_sgc.test_adaptive_sgc_poly_correlat
```

or

```
./run_framework_tests --re=framework/pca_adaptive_sgc.test_adaptive_sgc_po
```

- Test Description:

    - Tests use of the PCA method for adaptive sparse grids on polynomial models.

- This test is analytic:

    - "Tensor Polynomial (First-Order) with Multivariate Normal Distribution"

- Original Author:

    - wangc

- Creation date:

    - 2015-11-20

- The classes tested in this test are:

    - Distributions.MultivariateNormal,Samplers.AdaptiveSparseGrid,SupervisedLearning.GaussPolynomi

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : talbpaul
        - date : 2019-01-09
        - description: moving from ROM-file to ROM-dataobject

2.2.19 FRAMEWORK PCA ADAPTIVE SGC.TEST ADAPTIVE SGC POLY PCS ANA-LYTIC

This test can be found at "`./raven/tests/framework/pca_adaptive_sgc/test_ adaptive_sgc_poly_pca_analytic.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_adaptive_sgc.test_adaptive_sgc_poly_pcs_ana
```

or

```
./run_framework_tests --re=framework/pca_adaptive_sgc.test_adaptive_sgc_po
```

- Test Description:

  - Tests the SparseGridCollocation sampler combined with input reductions via PCA method, using uncorrelated multivariate normal distributions.

- This test is analytic:

  - This test is analytic in mean and variance using the "tensor polynomial" analytic model documented in the analytic tests.

- Original Author:

  - wangc

- Creation date:

  - 2015-12-01

- The classes tested in this test are:

  - Samplers.AdaptiveSparseGrid,SupervisedLearning.GaussPolynomialROM

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2019-01-09
     - description: moving from ROM-file to ROM-dataobject

2.2.20 FRAMEWORK PCA SOBOL TEST ADAPTIVE SOBOL POLY

This test can be found at "`./raven/tests/framework/pca_sobol/test_adapt_sobol_poly.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_sobol/test_adaptive_sobol_poly
```

or

```
./run_framework_tests --re=framework/pca_sobol/test_adaptive_sobol_poly
```

- Test Description:

    – Tests the Adaptive Sobol sampler combined wit input reductions via PCA method, using uncorrelated multivariate normal distributions.

- This test is analytic:

    – This test is analytic in mean and variance using the "tensor polynomial" analytic model documented in the analytic tests.

- Original Author:

    – wangc

- Creation date:

    – 2016-01-06

- The classes tested in this test are:

    – Samplers.AdaptiveSobol,SupervisedLearning.HDMRRom

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : talbpaul
        – date : 2019-01-09
        – description: moving from ROM-file to ROM-dataobject

2.2.21 FRAMEWORK PCA SOBOL TEST ADAPTIVE SOBOL ATTENUATION

This test can be found at "`./raven/tests/framework/pca_sobol/test_adapt_sobol_ attenu.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_sobol/test_adaptive_sobol_attenuation
```

or

```
./run_framework_tests --re=framework/pca_sobol/test_adaptive_sobol_attenua
```

- Test Description:
    - Tests the Adaptive Sobol sampler combined wit input reductions via PCA method, using uncorrelated multivariate normal distribution.

- This test is analytic:
    - This test is analytic in mean and variance using the "attenuation" analytic model documented in the analytic tests.

- Original Author:
    - wangc

- Creation date:
    - 2016-01-06

- The classes tested in this test are:
    - Samplers.AdaptiveSobol,SupervisedLearning.HDMRRom

- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : talbpaul
        - date : 2019-01-09
        - description: moving from ROM-file to ROM-dataobject

2.2.22 FRAMEWORK PCA SOBOL TEST ADAPTIVE SOBOL ATTENU CORRELA-TION

This test can be found at "`./raven/tests/framework/pca_sobol/test_adapt_sobol_correlation.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_sobol/test_adaptive_sobol_attenu_correlation
```

or

```
./run_framework_tests --re=framework/pca_sobol/test_adaptive_sobol_attenu_
```

- Test Description:
  - Tests the Adaptive Sobol sampler combined wit input reductions via PCA method, using correlated multivariate normal distributions.

- This test is analytic:
  - This test is analytic in mean and variance using the "attenuation" and "tensor polynomial" analytic models documented in the analytic tests.

- Original Author:
  - wangc

- Creation date:
  - 2016-02-17

- The classes tested in this test are:
  - Samplers.AdaptiveSobol,SupervisedLearning.HDMRRom

- Since the creation of this test, the following main revisions have been performed:
  1. revision info:
     - author : talbpaul
     - date : 2019-01-09
     - description: moving from ROM-file to ROM-dataobject

2.2.23 FRAMEWORK PCA SOBOL TEST SOBOL POLY CORRELATION

This test can be found at "`./raven/tests/framework/pca_sobol/test_sobol_correlation.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_sobol/test_sobol_poly_correlation
```

or

```
./run_framework_tests --re=framework/pca_sobol/test_sobol_poly_correlation
```

- Test Description:
    - Tests the Sobol sampler combined wit input reductions via PCA method, using correlated multivariate normal distributions.
- This test is analytic:
    - This test is analytic in mean and variance using the "attenuation" and "tensor polynomial" analytic models documented in the analytic tests.
- Original Author:
    - wangc
- Creation date:
    - 2016-01-06
- The classes tested in this test are:
    - Samplers.Sobol,SupervisedLearning.HDMRRom
- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : talbpaul
        - date : 2019-01-09
        - description: moving from ROM-file to ROM-dataobject

2.2.24 FRAMEWORK PCA SPARSEGRID ATTENUCORRELATION

This test can be found at "`./raven/tests/framework/pca_sparseGridCollocation/`
`test_attenu_correlation.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_sparseGrid/attenuCorrelation
```

or

```
./run_framework_tests --re=framework/pca_sparseGrid/attenuCorrelation
```

- Test Description:
    - Tests the SparseGridCollocation sampler combined wit input reductions via PCA method, using correlated multivariate normal distributions.

- This test is analytic:
    - This test is analytic in mean and variance using the "attenuation" analytic model documented in the analytic tests.

- Original Author:
    - wangc

- Creation date:
    - 2015-11-23

- The classes tested in this test are:
    - Samplers.SparseGridCollocation,SupervisedLearning.GaussPolynomialROM

- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : talbpaul
        - date : 2019-01-09
        - description: moving from ROM-files to ROM-dataobject

2.2.25 FRAMEWORK PCA SPARSEGRID ATTENUCORRELATIONMC

This test can be found at "`./raven/tests/framework/pca_sparseGridCollocation/`
`test_attenu_correlation_mc.xml`". This test can be called executing the following
command:

```
./run_tests --re=framework/pca_sparseGrid/attenuCorrelationMC
```

or

```
./run_framework_tests --re=framework/pca_sparseGrid/attenuCorrelationMC
```

- Test Description:

    - Tests the SparseGridCollocation sampler combined wit input reductions via PCA method,
      using correlated multivariate normal distributions.

- This test is analytic:

    - This test is analytic in mean and variance using the "attenuation" analytic model docu-
      mented in the analytic tests.

- Original Author:

    - wangc

- Creation date:

    - 2015-11-23

- The classes tested in this test are:

    - Samplers.MonteCarlo

2.2.26 FRAMEWORK PCA SPARSEGRID POLYCORRELATION

This test can be found at "`./raven/tests/framework/pca_sparseGridCollocation/`
`test_poly_correlation.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_sparseGrid/polyCorrelation
```

or

```
./run_framework_tests --re=framework/pca_sparseGrid/polyCorrelation
```

- Test Description:

  - Tests the SparseGridCollocation sampler combined wit input reductions via PCA method, using correlated multivariate normal distributions.

- This test is analytic:

  - This test is analytic in mean and variance using the "tensor polynomial" analytic model documented in the analytic tests.

- Original Author:

  - wangc

- Creation date:

  - 2015-11-23

- The classes tested in this test are:

  - Samplers.SparseGridCollocation,SupervisedLearning.GaussPolynomialROM

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2019-01-09
     - description: moving from ROM-file to ROM-dataobject

2.2.27 FRAMEWORK PCA SPARSEGRID POLYCORRELATIONMC

This test can be found at "`./raven/tests/framework/pca_sparseGridCollocation/ test_poly_correlation_mc.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_sparseGrid/polyCorrelationMC
```

or

```
./run_framework_tests --re=framework/pca_sparseGrid/polyCorrelationMC
```

- Test Description:

  - Tests the SparseGridCollocation sampler combined with input reductions via PCA method, using correlated multivariate normal distributions.

- This test is analytic:

  - This test is analytic in mean and variance using the "tensor polynomial" analytic model documented in the analytic tests.

- Original Author:

  - wangc

- Creation date:

  - 2015-11-23

- The classes tested in this test are:

  - Samplers.SparseGridCollocation,SupervisedLearning.GaussPolynomialROM

2.2.28 FRAMEWORK PCA SPARSEGRID POLYANALYTICALTEST

This test can be found at "`./raven/tests/framework/pca_sparseGridCollocation/test_poly.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_sparseGrid/polyAnalyticalTest
```

or

```
./run_framework_tests --re=framework/pca_sparseGrid/polyAnalyticalTest
```

- Test Description:

  - Tests the SparseGridCollocation sampler combined wit input reductions via PCA method, using uncorrelated multivariate normal distributions.

- This test is analytic:

  - This test is analytic in mean and variance using the "tensor polynomial" analytic model documented in the analytic tests.

- Original Author:

  - wangc

- Creation date:

  - 2015-11-23

- The classes tested in this test are:

  - Samplers.SparseGridCollocation,SupervisedLearning.GaussPolynomialROM

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2019-01-09
     - description: moving from ROM-file to ROM-dataobject

2.2.29 FRAMEWORK SAMPLERS ROM VERIFYGAUSSPOLYROM

This test can be found at "`./raven/tests/framework/ROM/verify_time_scgpc.`
`xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/verifyGaussPolyRom
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/verifyGaussPolyRom
```

- Test Description:

  - This tests validates the time-dependent GaussPolynomialROM by sampling it and comparing to the original model.

- This test is analytic:

  - This test uses the "projectile.py" ballistic model and tracks position in time. The evaluations of this model as well as the ROMs should match the results documented there.

- Original Author:

  - talbpaul

- Creation date:

  - 2016-03-09

- The classes tested in this test are:

  - SupervisedLearning.GaussPolynomialROM

- Since the creation of this test, the following main revisions have been performed:

1. revision info:
    - author : wangc
    - date : 2018-08-09
    - description: Add pivotParameter for time dependent ROM

2.2.30 FRAMEWORK SAMPLERS ROM SOBOL SOBOLSUDRETANALYTIC

This test can be found at "`./raven/tests/framework/ROM/Sobol/test_sobol_sudret.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobol/sobolSudretAnalytic
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobol/sobolSudretAnalytic
```

- Test Description:
    - This analytic test checks the performance of HDMRRom against the simple Sudret polynomial.

- This test is analytic:
    - dumprom.xml has analytic mean and variance, and is documented in the analytic test documentation under "Global Sobol Sensitivity: Sudret"

- Original Author:
    - talbpaul

- Creation date:
    - 2016-03-09

- The classes tested in this test are:
    - SupervisedLearning.HDMRRom

- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : talbpaul
        - date : 2018-12-20
        - description: moved ROM metadata writing from direct-to-file to direct-to-dataobject

2.2.31 FRAMEWORK SAMPLERS ROM SOBOL SOBOLISHIGAMIANALYTIC

This test can be found at "`./raven/tests/framework/ROM/Sobol/test_sobol_ishigami.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobol/sobolIshigamiAnalytic
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobol/sobolIshigamiAnalyt
```

- Test Description:

  - This analytic test checks the performance of HDMRRom against the sinusoidal Ishigami function.

- This test is analytic:

  - dumprom.xml has analytic mean and variance, and is documented in the analytic test document under "Global Sobol Sensitivity: Ishigami".

- Original Author:

  - talbpaul

- Creation date:

  - 2016-03-08

- The classes tested in this test are:

  - SupervisedLearning.HDMRRom

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2018-12-20
     - description: moved ROM metadata writing from direct-to-file to direct-to-dataobject

2.2.32 FRAMEWORK SAMPLERS ROM SOBOL SOBOLGFUNCTION

This test can be found at "`./raven/tests/framework/ROM/Sobol/test_sobol_gfunc.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobol/sobolGFunction
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobol/sobolGFunction
```

- Test Description:

  - This analytic test checks the performance of HDMRRom against the discontinuous Sobol G-Function.

- This test is analytic:

  - dumprom.xml has analytic mean and variance, but is poorly converged for this model. It is documented in the analytic test documentation under "Sobol G-Function"

- Original Author:

  - talbpaul

- Creation date:

  - 2016-03-08

- The classes tested in this test are:

  - SupervisedLearning.HDMRRom

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2018-12-20
     - description: moved ROM metadata writing from direct-to-file to direct-to-dataobject

2.2.33 FRAMEWORK SAMPLERS ROM SOBOL ANOVAONCUTHDMR

This test can be found at "`./raven/tests/framework/ROM/Sobol/test_anova_cut.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobol/AnovaOnCutHDMR
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobol/AnovaOnCutHDMR
```

- Test Description:
    - This analytically tests calculating variance using ANOVA on cut-HDMR.

- This test is analytic:
    - This test is analytic in the variance, Sobol sensitivities, and mean of the response. These parameters are documented in the analytic tests documentation under "Second-Order ANOVA of Second-Order Cut-HDMR Expansion of Sudret".

- Original Author:
    - talbpaul

- Creation date:
    - 2016-03-11

- The classes tested in this test are:
    - SupervisedLearning.HDMRRom

- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : talbpaul
        - date : 2018-12-20
        - description: moved ROM metadata writing from direct-to-file to direct-to-dataobject

2.2.34 FRAMEWORK SAMPLERS ROM SOBOL ADAPTIVESOBOL

This test can be found at "`./raven/tests/framework/ROM/Sobol/test_adapt_sobol.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobol/AdaptiveSobol
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobol/AdaptiveSobol
```

- Test Description:
    - This tests using the AdaptiveSobol sampler to construct HDMRRom ROMs.

- This test is analytic:
    - dumprom.xml has analytic results for mean and variance in that are documented in the Attenuation section of the analytic tests manual.

- Original Author:
    - talbpaul

- Creation date:
    - 2016-02-08

- The classes tested in this test are:
    - Samplers.AdaptiveSobol,SupervisedLearning.HDMRRom

- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : talbpaul
        - date : 2018-12-20
        - description: moved ROM metadata writing from direct-to-file to direct-to-dataobject

2.2.35 FRAMEWORK SAMPLERS ROM SOBOL VERIFYHDMRROM

This test can be found at "`./raven/tests/framework/ROM/Sobol/verify_time_dep_sobol.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobol/verifyHDMRRom
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobol/verifyHDMRRom
```

- Test Description:
    - This analytic test checks that the time-dependent HDMRRom performs the same as the model it's representing.

- This test is analytic:
    - This test uses "projectile.py" as documented in the analytic tests document, and makes several evaluations of position based on time.

- Original Author:
    - talbpaul

- Creation date:
    - 2016-11-08

- The classes tested in this test are:
    - SupervisedLearning.HDMRRom

- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : wangc
        - date : 2018-08-09
        - description: Add pivotParameter for time dependent ROM

2.2.36 FRAMEWORK SAMPLERS ROM SOBOL SPARSEGRID SCGPCSUDRETANA-LYTIC

This test can be found at "`./raven/tests/framework/ROM/SparseGrid/test_scgpc_sudret.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobol/SparseGrid/scgpcSudretAnalyt
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobol/SparseGrid/scgpcSu
```

- Test Description:
    - This analytic test checks the performance of HDMRRom against the simple Sudret polynomial

- This test is analytic:
    - dumprom.xml has analytic mean and variance, documented in the analytic tests documentation under "Global Sobol Sensitivity: Sudret".

- Original Author:
    - talbpaul

- Creation date:
    - 2016-03-18

- The classes tested in this test are:
    - SupervisedLearning.GaussPolynomialROM

- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : talbpaul
        - date : 2018-12-20
        - description: moved ROM metadata writing from direct-to-file to direct-to-dataobject

2.2.37 FRAMEWORK SAMPLERS SPARSEGRID.GAMMA LARGE SCALE

This test can be found at "`./raven/tests/framework/Samplers/SparseGrid/test_scgpc_gamma_large_scale.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid.gamma_large_scale
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid.gamma_large_scale
```

- Test Description:

    - This tests using SparseGridCollocation with gamma-distributed inputs with large scale parameters to test the fix for issue #693

- This test is analytic:

    - This test is analytic in mean and variance documented in the analytic tests. Two models are used: ans = x1 + x2 with analytic mean = 4.7, variance = 3.565 ans = x1**2 + x2**2 with analytic mean = 14.655, variance = 215.638125

- Original Author:

    - wangc

- Creation date:

    - 2018-07-26

- The classes tested in this test are:

    - Samplers.SparseGridCollocation

2.3 Verification tests' description

This section contains the description of all the verification tests.

2.3.1 DOC WORKSHOP ADVANCEDRELIABILITY EXERCISES INPUTS.ADAPT

This test can be found at "`./raven/doc/workshop/advancedReliability/exercises/Inputs/1_adaptive_sampling.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/advancedReliability/exercises/Inputs.Adapt
```

or

```
./run_framework_tests --re=doc/workshop/advancedReliability/exercises/Input
```

- Test Description:
  - Workshop test: advanced reliability test using Limit Surface Search
- Original Author:
  - wangc
- Creation date:
  - 2018-09-21
- The classes tested in this test are:
  - Sampler.LimitSurfaceSearch

2.3.2 DOC WORKSHOP ADVANCEDRELIABILITY EXERCISES INPUTS.LS

This test can be found at "`./raven/doc/workshop/advancedReliability/exercises/Inputs/2_ls_probability_computation.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/advancedReliability/exercises/Inputs.LS
```

or

```
./run_framework_tests --re=doc/workshop/advancedReliability/exercises/Input
```

- Test Description:
  - Workshop test: advanced reliability test using Limit Surface Integral PostProcessor

- Original Author:

    - wangc

- Creation date:

    - 2018-09-21

- The classes tested in this test are:

    - PostProcessor.LimitSurfaceIntegral

2.3.3 DOC WORKSHOP ADVANCEDRELIABILITY INPUTS.DPRA

This test can be found at "`./raven/doc/workshop/advancedReliability/inputs/dynamicPRA.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/advancedReliability/inputs.dPRA
```

or

```
./run_framework_tests --re=doc/workshop/advancedReliability/inputs.dPRA
```

- Test Description:

    - Workshop test: advanced reliability test using dynamic PRA

- Original Author:

    - wangc

- Creation date:

    - 2018-09-21

- The classes tested in this test are:

    - None

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2018-12-18

– description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the pointwised metadata, and will be printed out in the output csv files by default. In order to avoid regolding this test, the optional node 'what' with text values 'input, output' is added. In this case, only the user requested variables as specified in the DataObjects are printed out.

2.3.4 DOC WORKSHOP ADVANCEDRELIABILITY INPUTS.RUNLS

This test can be found at "`./raven/doc/workshop/advancedReliability/inputs/runLS.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/advancedReliability/inputs.runLS
```

or

```
./run_framework_tests --re=doc/workshop/advancedReliability/inputs.runLS
```

- Test Description:

    – Workshop test: advanced reliability test with Limit surface search

- Original Author:

    – wangc

- Creation date:

    – 2018-09-21

- The classes tested in this test are:

    – None

2.3.5 DOC WORKSHOP ADVANCEDRELIABILITY INPUTS.RUNLS

This test can be found at "`./raven/doc/workshop/advancedReliability/inputs/pbFromLS.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/advancedReliability/inputs.runLS
```

or

```
./run_framework_tests --re=doc/workshop/advancedReliability/inputs.runLS
```

- Test Description:

  - Workshop test: advanced reliability test with Limit surface integral postprocessor

- Original Author:

  - wangc

- Creation date:

  - 2018-09-21

- The classes tested in this test are:

  - None

2.3.6 DOC WORKSHOP CODECOUPLING EXERCISES.CODEINTERFACE

This test can be found at "`./raven/doc/workshop/codeCoupling/exercises/sample_new_code_interface.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/codeCoupling/exercises.codeInterface
```

or

```
./run_framework_tests --re=doc/workshop/codeCoupling/exercises.codeInterface
```

- Test Description:

  - Workshop test: test code coupling with projectile model

- Original Author:

  - wangc

- Creation date:

  - 2018-09-21

- The classes tested in this test are:

  - Models.Code

2.3.7 DOC WORKSHOP CODECOUPLING INPUT.GENERICINTERFACE

This test can be found at "`./raven/doc/workshop/codeCoupling/inputs/example_using_generic_interface.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/codeCoupling/input.genericInterface
```

or

```
./run_framework_tests --re=doc/workshop/codeCoupling/input.genericInterface
```

- Test Description:
    - Workshop test: test code coupling with Bateman model using generic code interface

- Original Author:
    - wangc

- Creation date:
    - 2018-09-21

- The classes tested in this test are:
    - Models.Code

2.3.8 DOC WORKSHOP CODECOUPLING INPUT.BATEMANINTERFACE

This test can be found at "`./raven/doc/workshop/codeCoupling/inputs/example_using_new_interface.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/codeCoupling/input.batemanInterface
```

or

```
./run_framework_tests --re=doc/workshop/codeCoupling/input.batemanInterface
```

- Test Description:
    - Workshop test: test code coupling with Bateman model using bateman code interface

- Original Author:

    - wangc

- Creation date:

    - 2018-09-21

- The classes tested in this test are:

    - Models.Code

2.3.9 DOC WORKSHOP ENSEMBLEMODELS INPUTS ENSEMBLEEXAMPLE.ENSEMBLE

This test can be found at "`./raven/doc/workshop/ensembleModels/inputs/ensembleExample/`
`1_ensemble_model.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/ensembleModels/inputs/ensembleExample.ensembl
```

or

```
./run_framework_tests --re=doc/workshop/ensembleModels/inputs/ensembleExamp
```

- Test Description:

    - Workshop test: test EnsembleModel Capability

- Original Author:

    - wangc

- Creation date:

    - 2018-09-21

- The classes tested in this test are:

    - Models.EnsembleModel

2.3.10 DOC WORKSHOP ENSEMBLEMODELS INPUTS HYBRIDEXAMPLE.HYBRID

This test can be found at "`./raven/doc/workshop/ensembleModels/inputs/hybridExample/test_hybrid_model.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/ensembleModels/inputs/hybridExample.hybrid
```

or

```
./run_framework_tests --re=doc/workshop/ensembleModels/inputs/hybridExample
```

- Test Description:
    - Workshop test: test HybridModel Capability
- Original Author:
    - wangc
- Creation date:
    - 2018-09-21
- The classes tested in this test are:
    - Models.HybridModel

2.3.11 DOC WORKSHOP FORWARDSAMPLING INPUTS.FW1

This test can be found at "`./raven/doc/workshop/forwardSampling/inputs/1_sample_and_plot.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/forwardSampling/Inputs.FW1
```

or

```
./run_framework_tests --re=doc/workshop/forwardSampling/Inputs.FW1
```

- Test Description:
    - Workshop test: test Forward Sampling Capabilities
- Original Author:

– wangc

- Creation date:

  – 2018-09-21

- The classes tested in this test are:

  – Samplers.MonteCarlo OutStreams.Plot

2.3.12 DOC WORKSHOP FORWARDSAMPLING INPUTS.FW2

This test can be found at "`./raven/doc/workshop/forwardSampling/inputs/2_normal_distribution.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/forwardSampling/Inputs.FW2
```

or

```
./run_framework_tests --re=doc/workshop/forwardSampling/Inputs.FW2
```

- Test Description:

  – Workshop test: test Forward Sampling Capabilities

- Original Author:

  – wangc

- Creation date:

  – 2018-09-21

- The classes tested in this test are:

  – Distributions.Normal

2.3.13 DOC WORKSHOP FORWARDSAMPLING INPUTS.FW3

This test can be found at "`./raven/doc/workshop/forwardSampling/inputs/3_initial_height.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/forwardSampling/Inputs.FW3
```

or

```
./run_framework_tests --re=doc/workshop/forwardSampling/Inputs.FW3
```

- Test Description:

    - Workshop test: test Forward Sampling Capabilities

- Original Author:

    - wangc

- Creation date:

    - 2018-09-21

- The classes tested in this test are:

    - Distributions.Normal

2.3.14   DOC WORKSHOP FORWARDSAMPLING INPUTS.FW4

This test can be found at "`./raven/doc/workshop/forwardSampling/inputs/4_grid_sampler.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/forwardSampling/Inputs.FW4
```

or

```
./run_framework_tests --re=doc/workshop/forwardSampling/Inputs.FW4
```

- Test Description:

    - Workshop test: test Forward Sampling Capabilities

- Original Author:

    - wangc

- Creation date:

    - 2018-09-21

- The classes tested in this test are:

    - Samplers.Grid

2.3.15 DOC WORKSHOP FORWARDSAMPLING INPUTS.FW5

This test can be found at "`./raven/doc/workshop/forwardSampling/inputs/5_basic_stats.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/forwardSampling/Inputs.FW5
```

or

```
./run_framework_tests --re=doc/workshop/forwardSampling/Inputs.FW5
```

- Test Description:

    - Workshop test: test Forward Sampling Capabilities

- Original Author:

    - wangc

- Creation date:

    - 2018-09-21

- The classes tested in this test are:

    - PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2018-12-13
        - description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the pointwised metadata, and will be printed out in the output csv files by default. In order to avoid regolding this test, the optional node 'what' with text values 'input, output' is added. In this case, only the user requested variables as specified in the DataObjects are printed out.

2.3.16 DOC WORKSHOP FORWARDSAMPLING INPUTS.FW6

This test can be found at "`./raven/doc/workshop/forwardSampling/inputs/6_point_sets.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/forwardSampling/Inputs.FW6
```

or

```
./run_framework_tests --re=doc/workshop/forwardSampling/Inputs.FW6
```

- Test Description:
    - Workshop test: test Forward Sampling Capabilities

- Original Author:
    - wangc

- Creation date:
    - 2018-09-21

- The classes tested in this test are:
    - DataObjects.PointSet

2.3.17 DOC WORKSHOP FORWARDSAMPLING INPUTS.FW7

This test can be found at "`./raven/doc/workshop/forwardSampling/inputs/7_ history_sets.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/forwardSampling/Inputs.FW7
```

or

```
./run_framework_tests --re=doc/workshop/forwardSampling/Inputs.FW7
```

- Test Description:
    - Workshop test: test Forward Sampling Capabilities

- Original Author:
    - wangc

- Creation date:

– 2018-09-21

- The classes tested in this test are:

    – DataObjects.HistorySet

2.3.18 DOC WORKSHOP FORWARDSAMPLING INPUTS.FW8

This test can be found at "`./raven/doc/workshop/forwardSampling/inputs/8_history_sync.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/forwardSampling/Inputs.FW8
```

or

```
./run_framework_tests --re=doc/workshop/forwardSampling/Inputs.FW8
```

- Test Description:

    – Workshop test: test Forward Sampling Capabilities

- Original Author:

    – wangc

- Creation date:

    – 2018-09-21

- The classes tested in this test are:

    – PostProcessors.InterfacePostProcessor

2.3.19 DOC WORKSHOP FORWARDSAMPLING INPUTS.FW9

This test can be found at "`./raven/doc/workshop/forwardSampling/inputs/9_time_stats.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/forwardSampling/Inputs.FW9
```

or

```
./run_framework_tests --re=doc/workshop/forwardSampling/Inputs.FW9
```

- Test Description:

  - Workshop test: test Forward Sampling Capabilities, i.e. Time dependent basic statistics

- Original Author:

  - wangc

- Creation date:

  - 2018-09-21

- The classes tested in this test are:

  - PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-12-18
     - description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the point-wise metadata, and will be printed out in the output csv files by default. In order to avoid regolding this test, the optional node 'what' with text values 'input, output' is added. In this case, only the user requested variables as specified in the DataObjects are printed out.

2.3.20 DOC WORKSHOP FORWARDSAMPLING INPUTS PREVIOUS.FS1

This test can be found at "`./raven/doc/workshop/forwardSampling/inputs/previous/ForwardSampling1.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/forwardSampling/Inputs/previous.FS1
```

or

```
./run_framework_tests --re=doc/workshop/forwardSampling/Inputs/previous.FS1
```

- Test Description:

  - Workshop test: test Forward Sampling Capabilities

- Original Author:

– wangc

- Creation date:

  – 2018-09-21

- The classes tested in this test are:

  – Samplers.MonteCarlo OutStreams.Plot

2.3.21 DOC WORKSHOP FORWARDSAMPLING INPUTS PREVIOUS.FS2

This test can be found at "`./raven/doc/workshop/forwardSampling/inputs/previous/`
`ForwardSampling2.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/forwardSampling/Inputs/previous.FS2
```

or

```
./run_framework_tests --re=doc/workshop/forwardSampling/Inputs/previous.FS2
```

- Test Description:

  – Workshop test: test Forward Sampling Capabilities

- Original Author:

  – wangc

- Creation date:

  – 2018-09-21

- The classes tested in this test are:

  – Samplers.MonteCarlo OutStreams.Plot

2.3.22 DOC WORKSHOP FORWARDSAMPLING INPUTS PREVIOUS.FS3

This test can be found at "`./raven/doc/workshop/forwardSampling/inputs/previous/`
`ForwardSampling3.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/forwardSampling/Inputs/previous.FS3
```

or

```
./run_framework_tests --re=doc/workshop/forwardSampling/Inputs/previous.FS
```

- Test Description:
    - Workshop test: test Forward Sampling Capabilities
- Original Author:
    - wangc
- Creation date:
    - 2018-09-21
- The classes tested in this test are:
    - Samplers.Stratified OutStreams.Plot

2.3.23 DOC WORKSHOP FORWARDSAMPLING INPUTS PREVIOUS.FS4

This test can be found at "`./raven/doc/workshop/forwardSampling/inputs/previous/`
`ForwardSampling4.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/forwardSampling/Inputs/previous.FS4
```

or

```
./run_framework_tests --re=doc/workshop/forwardSampling/Inputs/previous.FS
```

- Test Description:
    - Workshop test: test Forward Sampling Capabilities
- Original Author:
    - wangc
- Creation date:
    - 2018-09-21
- The classes tested in this test are:
    - Samplers.EnsembleForward OutStreams.Plot

2.3.24 DOC WORKSHOP FORWARDSAMPLING INPUTS PREVIOUS.FS5

This test can be found at "`./raven/doc/workshop/forwardSampling/inputs/previous/`
`ForwardSampling5.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/forwardSampling/Inputs/previous.FS5
```

or

```
./run_framework_tests --re=doc/workshop/forwardSampling/Inputs/previous.FS5
```

- Test Description:

    - Workshop test: test Forward Sampling Capabilities

- Original Author:

    - wangc

- Creation date:

    - 2018-09-21

- The classes tested in this test are:

    - PostProcessors.BasicStatistics

2.3.25 DOC WORKSHOP FORWARDSAMPLING INPUTS PREVIOUS.FS6

This test can be found at "`./raven/doc/workshop/forwardSampling/inputs/previous/`
`ForwardSampling6.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/forwardSampling/Inputs/previous.FS6
```

or

```
./run_framework_tests --re=doc/workshop/forwardSampling/Inputs/previous.FS6
```

- Test Description:

    - Workshop test: test Forward Sampling Capabilities

- Original Author:

- – wangc

- Creation date:

  - – 2018-09-21

- The classes tested in this test are:

  - – PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - – author : wangc
     - – date : None
     - – description: Clean up input files, remove duplication calculations in BasicStatistics, regold due to #PR777
  2. revision info:
     - – author : wangc
     - – date : 2018-12-18
     - – description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the pointwised metadata, and will be printed out in the output csv files by default. In order to avoid regolding this test, the optional node 'what' with text values 'input, output' is added. In this case, only the user requested variables as specified in the DataObjects are printed out.

2.3.26 DOC WORKSHOP OPTIMIZER INPUTS.OPTIMIZER

This test can be found at "`./raven/doc/workshop/optimizer/Inputs/1_optimize.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/optimizer/Inputs.optimizer
```

or

```
./run_framework_tests --re=doc/workshop/optimizer/Inputs.optimizer
```

- Test Description:

  - – Workshop test: test Optimizer capability

- Original Author:

– wangc

- Creation date:

    – 2018-09-21

- The classes tested in this test are:

    – Samplers.Optimizer

2.3.27 DOC WORKSHOP REDUCEDORDERMODELING INPUTS EXAMPLES.SAMPLE

This test can be found at "`./raven/doc/workshop/reducedOrderModeling/inputs/`
`examples/1_sample_Function.xml`". This test can be called executing the following
command:

```
./run_tests --re=doc/workshop/reducedOrderModeling/inputs/examples.sample
```

or

```
./run_framework_tests --re=doc/workshop/reducedOrderModeling/inputs/example
```

- Test Description:

    – Workshop test: simple sampler test

- Original Author:

    – wangc

- Creation date:

    – 2018-09-21

- The classes tested in this test are:

    – None

2.3.28 DOC WORKSHOP REDUCEDORDERMODELING INPUTS EXAMPLES.TRAIN

This test can be found at "`./raven/doc/workshop/reducedOrderModeling/inputs/`
`examples/2_train_rom.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/reducedOrderModeling/inputs/examples.train
```

or

```
./run_framework_tests --re=doc/workshop/reducedOrderModeling/inputs/example
```

- Test Description:

  - Workshop test: train a ROM

- Original Author:

  - wangc

- Creation date:

  - 2018-09-21

- The classes tested in this test are:

  - Models.ROM

2.3.29 DOC WORKSHOP REDUCEDORDERMODELING INPUTS EXAMPLES.PICKLE

This test can be found at "`./raven/doc/workshop/reducedOrderModeling/inputs/examples/3_pickle_rom.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/reducedOrderModeling/inputs/examples.pickle
```

or

```
./run_framework_tests --re=doc/workshop/reducedOrderModeling/inputs/example
```

- Test Description:

  - Workshop test: pickle a ROM

- Original Author:

  - wangc

- Creation date:

  - 2018-09-21

- The classes tested in this test are:

  - Models.ROM

2.3.30 DOC WORKSHOP REDUCEDORDERMODELING INPUTS EXAMPLES.LOAD

This test can be found at "`./raven/doc/workshop/reducedOrderModeling/inputs/`
`examples/4_load_rom.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/reducedOrderModeling/inputs/examples.load
```

or

```
./run_framework_tests --re=doc/workshop/reducedOrderModeling/inputs/example
```

- Test Description:
    - Workshop test: load a pickled ROM
- Original Author:
    - wangc
- Creation date:
    - 2018-09-21
- The classes tested in this test are:
    - Models.ROM

2.3.31 DOC WORKSHOP REDUCEDORDERMODELING INPUTS EXAMPLES.SROM

This test can be found at "`./raven/doc/workshop/reducedOrderModeling/inputs/`
`examples/5_sample_rom.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/reducedOrderModeling/inputs/examples.srom
```

or

```
./run_framework_tests --re=doc/workshop/reducedOrderModeling/inputs/example
```

- Test Description:
    - Workshop test: sample a trained rom
- Original Author:

– wangc

- Creation date:

    – 2018-09-21

- The classes tested in this test are:

    – Models.ROM

2.3.32 DOC WORKSHOP REDUCEDORDERMODELING INPUTS EXAMPLES.SPROM

This test can be found at "`./raven/doc/workshop/reducedOrderModeling/inputs/`
`examples/6_sample_prom.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/reducedOrderModeling/inputs/examples.sprom
```

or

```
./run_framework_tests --re=doc/workshop/reducedOrderModeling/inputs/example
```

- Test Description:

    – Workshop test: sample a pickled rom

- Original Author:

    – wangc

- Creation date:

    – 2018-09-21

- The classes tested in this test are:

    – Models.ROM

2.3.33 DOC WORKSHOP REDUCEDORDERMODELING INPUTS EXAMPLES.EVAL

This test can be found at "`./raven/doc/workshop/reducedOrderModeling/inputs/`
`examples/7_evaluate_rom.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/reducedOrderModeling/inputs/examples.eval
```

or

```
./run_framework_tests --re=doc/workshop/reducedOrderModeling/inputs/example
```

- Test Description:

    - Workshop test: use rom for prediction

- Original Author:

    - wangc

- Creation date:

    - 2018-09-21

- The classes tested in this test are:

    - Models.ROM

2.3.34 DOC WORKSHOP REDUCEDORDERMODELING INPUTS EXAMPLES.SC

This test can be found at "`./raven/doc/workshop/reducedOrderModeling/inputs/examples/9_sc_gpc.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/reducedOrderModeling/inputs/examples.sc
```

or

```
./run_framework_tests --re=doc/workshop/reducedOrderModeling/inputs/example
```

- Test Description:

    - Workshop test: Using Stochastic Collocation to train a Gaussian Polynomial ROM

- Original Author:

    - wangc

- Creation date:

– 2018-09-21

- The classes tested in this test are:

    – Models.ROM

2.3.35 DOC WORKSHOP STATICDATAANALYSIS INPUTS.DMGM1

This test can be found at "`./raven/doc/workshop/staticDataAnalysis/inputs/`
`t.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/staticDataAnalysis/inputs.dmGM1
```

or

```
./run_framework_tests --re=doc/workshop/staticDataAnalysis/inputs.dmGM1
```

- Test Description:

    – Workshop test: DataMining with Gaussian Process

- Original Author:

    – wangc

- Creation date:

    – 2018-09-21

- The classes tested in this test are:

    – PostProcessors.DataMining

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : wangc
        – date : 2018-09-27
        – description: As reported in issue #805, RAVEN will not allow input DataObject
          of PostProcessor to be output DataObject, the output data object will be renamed,
          and the variable name of labels will be explicitly defined.

2.3.36 DOC WORKSHOP STATICDATAANALYSIS INPUTS.DMICA

This test can be found at "`./raven/doc/workshop/staticDataAnalysis/inputs/`
`test_dataMiningExactICA.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/staticDataAnalysis/inputs.dmICA
```

or

```
./run_framework_tests --re=doc/workshop/staticDataAnalysis/inputs.dmICA
```

- Test Description:

    - Workshop test: DataMining with ICA method

- Original Author:

    - wangc

- Creation date:

    - 2018-09-21

- The classes tested in this test are:

    - PostProcessors.DataMining

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2018-09-27
        - description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.37 DOC WORKSHOP STATICDATAANALYSIS INPUTS.DMICA

This test can be found at "`./raven/doc/workshop/staticDataAnalysis/inputs/`
`test_dataMiningExactPCA.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/staticDataAnalysis/inputs.dmICA
```

or

```
./run_framework_tests --re=doc/workshop/staticDataAnalysis/inputs.dmICA
```

- Test Description:
    - Workshop test: DataMining with ICA method
- Original Author:
    - wangc
- Creation date:
    - 2018-09-21
- The classes tested in this test are:
    - PostProcessors.DataMining
- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : wangc
        - date : 2018-09-27
        - description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.38 DOC WORKSHOP STATICDATAANALYSIS INPUTS.DMGM2

This test can be found at "./raven/doc/workshop/staticDataAnalysis/inputs/
test_dataMiningGaussianMixture.xml". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/staticDataAnalysis/inputs.dmGM2
```

or

```
./run_framework_tests --re=doc/workshop/staticDataAnalysis/inputs.dmGM2
```

- Test Description:

    – Workshop test: DataMining with Gaussian Mixture method

- Original Author:

    – wangc

- Creation date:

    – 2018-09-21

- The classes tested in this test are:

    – PostProcessors.DataMining

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : wangc
        – date : 2018-09-27
        – description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.39 DOC WORKSHOP STATICDATAANALYSIS INPUTS.KMEANS

This test can be found at "`./raven/doc/workshop/staticDataAnalysis/inputs/test_dataMiningKMeans.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/staticDataAnalysis/inputs.KMeans
```

or

```
./run_framework_tests --re=doc/workshop/staticDataAnalysis/inputs.KMeans
```

- Test Description:

    – Workshop test: DataMining with KMeans method

- Original Author:

    – wangc

- Creation date:

- – 2018-09-21

- The classes tested in this test are:

  - – PostProcessors.DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - – author : wangc
     - – date : 2018-09-27
     - – description: As reported in issue #805, RAVEN will not allow input DataObject
       of PostProcessor to be output DataObject, the output data object will be renamed,
       and the variable name of labels will be explicitly defined.

2.3.40 DOC WORKSHOP STATICDATAANALYSIS INPUTS.MEANSHIFT

This test can be found at "`./raven/doc/workshop/staticDataAnalysis/inputs/
test_dataMiningMeanShift_complete.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/staticDataAnalysis/inputs.MeanShift
```

or

```
./run_framework_tests --re=doc/workshop/staticDataAnalysis/inputs.MeanShift
```

- Test Description:

  - – Workshop test: DataMining with MeanShift method

- Original Author:

  - – wangc

- Creation date:

  - – 2018-09-21

- The classes tested in this test are:

  - – PostProcessors.DataMining

- Since the creation of this test, the following main revisions have been performed:

118

1. revision info:
   - author : wangc
   - date : 2018-09-27
   - description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.41 DOC WORKSHOP STOCHASTICCOLLOCATION INPUTS.SCTRAIN1

This test can be found at "`./raven/doc/workshop/stochasticCollocation/inputs/ scgpc_trainer_1.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/stochasticCollocation/inputs.scTrain1
```

or

```
./run_framework_tests --re=doc/workshop/stochasticCollocation/inputs.scTra
```

- Test Description:
  - Workshop test: using sthochastic collocation sampler to train and evaluate a Gaussian Polynomial ROM

- Original Author:
  - wangc

- Creation date:
  - 2018-09-21

- The classes tested in this test are:
  - Models.ROM

- Since the creation of this test, the following main revisions have been performed:
  1. revision info:
     - author : talbpaul
     - date : 2019-01-08
     - description: moved from ROM-¿XML to ROM-¿DataObject

2.3.42 DOC WORKSHOP STOCHASTICCOLLOCATION INPUTS.SCTRAIN2

This test can be found at "`./raven/doc/workshop/stochasticCollocation/inputs/scgpc_trainer_2.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/stochasticCollocation/inputs.scTrain2
```

or

```
./run_framework_tests --re=doc/workshop/stochasticCollocation/inputs.scTra
```

- Test Description:
    - Workshop test: using sthochastic collocation sampler to train and evaluate a Gaussian Polynomial ROM
- Original Author:
    - wangc
- Creation date:
    - 2018-09-21
- The classes tested in this test are:
    - Models.ROM
- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : talbpaul
        - date : 2019-01-08
        - description: moved from ROM-¿XML to ROM-¿DataObject

2.3.43 DOC WORKSHOP STOCHASTICCOLLOCATION INPUTS.SCTRAIN3

This test can be found at "`./raven/doc/workshop/stochasticCollocation/inputs/scgpc_trainer_3.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/stochasticCollocation/inputs.scTrain3
```

or

```
./run_framework_tests --re=doc/workshop/stochasticCollocation/inputs.scTra
```

- Test Description:

  - Workshop test: using sthochastic collocation sampler to train and evaluate a Gaussian Polynomial ROM

- Original Author:

  - wangc

- Creation date:

  - 2018-09-21

- The classes tested in this test are:

  - Models.ROM

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2019-01-08
     - description: moved from ROM-¿XML to ROM-¿DataObject

2.3.44 DOC WORKSHOP TIMEDEPDATAMINING INPUTS.BSTATT

This test can be found at "./raven/doc/workshop/timeDepDataMining/inputs/
time_dep.xml". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/timeDepDataMining/inputs.bstatT
```

or

```
./run_framework_tests --re=doc/workshop/timeDepDataMining/inputs.bstatT
```

- Test Description:

  - Workshop test: Time dependent basic statistics analysis

- Original Author:

– wangc

- Creation date:

    – 2018-09-21

- The classes tested in this test are:

    – PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : wangc
        – date : 2018-12-18
        – description: In PR #882, the standard errors on statistics moments are imple-
          mented, these quantities are stored in the pointwised metadata, and will be printed
          out in the output csv files by default. In order to avoid regolding this test, the op-
          tional node 'what' with text values 'input, output' is added. In this case, only the
          user requested variables as specified in the DataObjects are printed out.

2.3.45   DOC WORKSHOP TIMEDEPDATAMINING INPUTS.KMEANST

This test can be found at "`./raven/doc/workshop/timeDepDataMining/inputs/`
`timeSliceKMeans.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/timeDepDataMining/inputs.KMeansT
```

or

```
./run_framework_tests --re=doc/workshop/timeDepDataMining/inputs.KMeansT
```

- Test Description:

    – Workshop test: Time dependent data mining with KMeans analysis

- Original Author:

    – wangc

- Creation date:

    – 2018-09-21

- The classes tested in this test are:

  - PostProcessors.DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-09-27
     - description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.46 DOC WORKSHOP TIMEDEPDATAMINING INPUTS.DTW

This test can be found at "`./raven/doc/workshop/timeDepDataMining/inputs/TD_hierarchical_dtw.xml`". This test can be called executing the following command:

```
./run_tests --re=doc/workshop/timeDepDataMining/inputs.DTW
```

or

```
./run_framework_tests --re=doc/workshop/timeDepDataMining/inputs.DTW
```

- Test Description:

  - Workshop test: Time dependent data mining with DTW metric analysis

- Original Author:

  - wangc

- Creation date:

  - 2018-09-21

- The classes tested in this test are:

  - PostProcessors.DataMining, Metrics.DTW

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc

- date : 2018-09-27
- description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.47   CASHFLOW TEST PI

This test can be found at "`./raven/plugins/CashFlow/tests/CashFlow_test_PI.xml`". This test can be called executing the following command:

```
./run_tests --re=CashFlow_test_PI
```

or

```
./run_framework_tests --re=CashFlow_test_PI
```

- Test Description:

  - This input tests the RAVEN plugin CashFlow. The tested functionality is called PI.

- Original Author:

  - A. Epiney

- Creation date:

  - 2017-10-25

- The classes tested in this test are:

  - Models.ExternalModel.CashFlow

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2018-12-13
     - description: Added classTested node

124

2.3.48 CASHFLOW TEST NPV

This test can be found at "`./raven/plugins/CashFlow/tests/CashFlow_test_NPV.xml`". This test can be called executing the following command:

```
./run_tests --re=CashFlow_test_NPV
```

or

```
./run_framework_tests --re=CashFlow_test_NPV
```

- Test Description:
    - This input tests the RAVEN plugin CashFlow. The tested functionality is called NPV.
- Original Author:
    - A. Epiney
- Creation date:
    - 2017-10-25
- The classes tested in this test are:
    - Models.ExternalModel.CashFlow
- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : alfoa
        - date : 2018-12-13
        - description: Added classTested node

2.3.49 CASHFLOW TEST NPVSEARCH

This test can be found at "`./raven/plugins/CashFlow/tests/CashFlow_test_NPVsearch.xml`". This test can be called executing the following command:

```
./run_tests --re=CashFlow_test_NPVsearch
```

or

```
./run_framework_tests --re=CashFlow_test_NPVsearch
```

- Test Description:

  - This input tests the RAVEN plugin CashFlow. The tested functionality is called NPV search.

- Original Author:

  - A. Epiney

- Creation date:

  - 2017-10-25

- The classes tested in this test are:

  - Models.ExternalModel.CashFlow

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2018-12-13
     - description: Added classTested node

2.3.50 CASHFLOW TEST IRR

This test can be found at "`./raven/plugins/CashFlow/tests/CashFlow_test_IRR.xml`". This test can be called executing the following command:

```
./run_tests --re=CashFlow_test_IRR
```

or

```
./run_framework_tests --re=CashFlow_test_IRR
```

- Test Description:

  - This input tests the RAVEN plugin CashFlow. The tested functionality is called IRR.

- Original Author:

  - A. Epiney

- Creation date:

126

– 2017-10-25

- The classes tested in this test are:

  – Models.ExternalModel.CashFlow

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : alfoa
     – date : 2018-12-13
     – description: Added classTested node

2.3.51 CASHFLOW TEST NPV MULTIPLY

This test can be found at "`./raven/plugins/CashFlow/tests/CashFlow_test_NPV_`
`multiplier.xml`". This test can be called executing the following command:

```
./run_tests --re=CashFlow_test_NPV_multiply
```

or

```
./run_framework_tests --re=CashFlow_test_NPV_multiply
```

- Test Description:

  – This input tests the RAVEN plugin CashFlow. The tested functionality is called NPV. This test uses the "Multiplier" functionality of CashFlow.

- Original Author:

  – A. Epiney

- Creation date:

  – 2018-03-22

- The classes tested in this test are:

  – Models.ExternalModel.CashFlow

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : alfoa
     – date : 2018-12-13
     – description: Added classTested node

2.3.52 CASHFLOW TEST NPV

This test can be found at "`./raven/plugins/CashFlow/tests/CashFlow_test_NPV_expandedDriver.xml`". This test can be called executing the following command:

```
./run_tests --re=CashFlow_test_NPV
```

or

```
./run_framework_tests --re=CashFlow_test_NPV
```

- Test Description:

    - This input tests the RAVEN plugin CashFlow. The tested functionality is called NPV. The BOP revenue is an expanded driver, i.e. values for every year are provided instead of just one value that is repeated for all years.

- Original Author:

    - A. Epiney

- Creation date:

    - 2018-03-23

- The classes tested in this test are:

    - Models.ExternalModel.CashFlow

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2018-12-13
        - description: Added classTested node

2.3.53 CASHFLOW TEST NPV

This test can be found at "`./raven/plugins/CashFlow/tests/CashFlow_test_NPV_componentTax.xml`". This test can be called executing the following command:

```
./run_tests --re=CashFlow_test_NPV
```

or

```
./run_framework_tests --re=CashFlow_test_NPV
```

- Test Description:

  - This input tests the RAVEN plugin CashFlow. The tested functionality is called NPV. The functionality of different tax and inflation reates for different components is tested here.

- Original Author:

  - A. Epiney

- Creation date:

  - 2018-03-23

- The classes tested in this test are:

  - Models.ExternalModel.CashFlow

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2018-12-13
     - description: Added classTested node

2.3.54   CASHFLOW TEST NPV

This test can be found at "`./raven/plugins/CashFlow/tests/CashFlow_test_NPV_customTime.xml`". This test can be called executing the following command:

```
./run_tests --re=CashFlow_test_NPV
```

or

```
./run_framework_tests --re=CashFlow_test_NPV
```

- Test Description:

– This input tests the RAVEN plugin CashFlow. The tested functionality is called NPV. Tests the ProjectTime, StartTime and Repetition functionalities. All sub-projects, i.e. components lifetimes (including repetition) finish before the ProjectTime finishes.

- Original Author:

  – A. Epiney

- Creation date:

  – 2018-04-06

- The classes tested in this test are:

  – Models.ExternalModel.CashFlow

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : alfoa
     – date : 2018-12-13
     – description: Added classTested node

2.3.55 CASHFLOW TEST NPV

This test can be found at "`./raven/plugins/CashFlow/tests/CashFlow_test_NPV_customTime2.xml`". This test can be called executing the following command:

```
./run_tests --re=CashFlow_test_NPV
```

or

```
./run_framework_tests --re=CashFlow_test_NPV
```

- Test Description:

  – This input tests the RAVEN plugin CashFlow. The tested functionality is called NPV. Tests the ProjectTime, StartTime and Repetition functionalities. No sub-project, i.e. component lifetime (including repetition) finish before the ProjectTime finishes.

- Original Author:

  – A. Epiney

- Creation date:

    - 2018-04-06

- The classes tested in this test are:

    - Models.ExternalModel.CashFlow

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2018-12-13
        - description: Added classTested node

2.3.56 CROW.TEST IMPORT

This test can be found at "`./raven/tests/crow/test_import.py`". This test can be called executing the following command:

```
./run_tests --re=crow.test_import
```

or

```
./run_framework_tests --re=crow.test_import
```

- Test Description:

    - This test is a Unit Test for the crow swig classes. It tests the import of the crow library

- Original Author:

    - cogljj

- Creation date:

    - 2017-03-24

- The classes tested in this test are:

    - crow

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:

- – author : alfoa
- – date : 2018-05-15
- – description: Adding this test description.

2.3.57 CROW.TEST UTILS

This test can be found at "`./raven/tests/crow/test_utils.py`". This test can be called executing the following command:

```
./run_tests --re=crow.test_utils
```

or

```
./run_framework_tests --re=crow.test_utils
```

- Test Description:

  - – This test is a Unit Test for the crow swig classes. It tests that the classes that are swigged in CROW are accessable by Python

- Original Author:

  - – cogljj

- Creation date:

  - – 2017-03-24

- The classes tested in this test are:

  - – crow

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - – author : alfoa
     - – date : 2018-05-15
     - – description: Adding this test description.

2.3.58 CROW.TEST NORMAL

This test can be found at "`./raven/tests/crow/test_normal.py`". This test can be called executing the following command:

```
./run_tests --re=crow.test_normal
```

or

```
./run_framework_tests --re=crow.test_normal
```

- Test Description:

    - This test is a Unit Test for the crow swig classes. It tests that the normal distribution is accessable by Python

- Original Author:

    - cogljj

- Creation date:

    - 2017-03-24

- The classes tested in this test are:

    - crow

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2018-05-15
        - description: Adding this test description.

2.3.59 CROW.TEST LAPLACE

This test can be found at "`./raven/tests/crow/test_laplace.py`". This test can be called executing the following command:

```
./run_tests --re=crow.test_laplace
```

or

```
./run_framework_tests --re=crow.test_laplace
```

- Test Description:

    - This test is a Unit Test for the crow swig classes. It tests that the laplace distribution is accessable by Python

- Original Author:

    - cogljj

- Creation date:

    - 2017-03-24

- The classes tested in this test are:

    - crow

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2018-05-15
        - description: Adding this test description.

2.3.60 CROW.TEST GEOMETRIC

This test can be found at "`./raven/tests/crow/test_geometric.py`". This test can be called executing the following command:

```
./run_tests --re=crow.test_geometric
```

or

```
./run_framework_tests --re=crow.test_geometric
```

- Test Description:

    - This test is a Unit Test for the crow swig classes. It tests that the geometric distribution is accessable by Python

- Original Author:

  – cogljj

- Creation date:

  – 2017-03-24

- The classes tested in this test are:

  – crow

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : alfoa
     – date : 2018-05-15
     – description: Adding this test description.

2.3.61 CROW.TEST SVD

This test can be found at "`./raven/tests/crow/test_eigen_svd.py`". This test can be called executing the following command:

```
./run_tests --re=crow.test_svd
```

or

```
./run_framework_tests --re=crow.test_svd
```

- Test Description:

  – This test is a Unit Test for the crow swig classes. It tests that the MultiVariate Normal distribution is accessable by Python and that the SVD on the covariance is performable in Python

- Original Author:

  – cogljj

- Creation date:

  – 2017-03-24

- The classes tested in this test are:

135

– crow

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2018-05-15
        - description: Adding this test description.

2.3.62 CROW.TEST REDUCTION

This test can be found at "`./raven/tests/crow/test_reduction.py`". This test can be called executing the following command:

```
./run_tests --re=crow.test_reduction
```

or

```
./run_framework_tests --re=crow.test_reduction
```

- Test Description:

    – This test is a Unit Test for the crow swig classes. It tests that the MultiVariate Normal distribution is accessable by Python and that the dimensionality reduction based on the covariance is correctly performed.

- Original Author:

    – cogljj

- Creation date:

    – 2017-03-24

- The classes tested in this test are:

    – crow

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2018-05-15
        - description: Adding this test description.

2.3.63 CROW.TEST PCA INDEX

This test can be found at "`./raven/tests/crow/test_pca_index.py`". This test can be called executing the following command:

```
./run_tests --re=crow.test_pca_index
```

or

```
./run_framework_tests --re=crow.test_pca_index
```

- Test Description:

    - This test is a Unit Test for the crow swig classes. It tests that the MultiVariate Normal distribution is accessable by Python and that PCA back transformation is correctly implemented

- Original Author:

    - cogljj

- Creation date:

    - 2017-03-24

- The classes tested in this test are:

    - crow

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2018-05-15
        - description: Adding this test description.

2.3.64 CROW.TEST MVN PCA

This test can be found at "`./raven/tests/crow/test_mvn_pca.py`". This test can be called executing the following command:

```
./run_tests --re=crow.test_mvn_pca
```

or

```
./run_framework_tests --re=crow.test_mvn_pca
```

- Test Description:

  - This test is a Unit Test for the crow swig classes. It tests that the MultiVariate Normal distribution is accessable by Python and that PCA is correctly performed and that the back transformation is correctly implemented

- Original Author:

  - cogljj

- Creation date:

  - 2017-03-24

- The classes tested in this test are:

  - crow

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2018-05-15
     - description: Adding this test description.

2.3.65 CROW.TEST INVERSEMARGINALFORPCA

This test can be found at "./raven/tests/crow/test_inverseMarginalForPCA.
py". This test can be called executing the following command:

```
./run_tests --re=crow.test_inverseMarginalforPCA
```

or

```
./run_framework_tests --re=crow.test_inverseMarginalforPCA
```

- Test Description:

- This test is a Unit Test for the crow swig classes. It tests that the MultiVariate Normal distribution is accessible by Python and that PCA is correctly performed and that the inverse marginal distribution is computable in the transformed space

- Original Author:

    - cogljj

- Creation date:

    - 2017-03-24

- The classes tested in this test are:

    - crow

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2018-05-15
        - description: Adding this test description.

2.3.66 CROW.TEST CELLPROBABILITYWEIGHT

This test can be found at "`./raven/tests/crow/test_cellProbabilityWeight.py`". This test can be called executing the following command:

```
./run_tests --re=crow.test_cellProbabilityWeight
```

or

```
./run_framework_tests --re=crow.test_cellProbabilityWeight
```

- Test Description:

    - This test is a Unit Test for the crow swig classes. It tests that the MultiVariate Normal distribution is accessible by Python and that the probability weights (cell probability) is correctly computed.

- Original Author:

    - cogljj

- Creation date:

    - 2017-03-24

- The classes tested in this test are:

    - crow

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2018-05-15
        - description: Adding this test description.

2.3.67 CROW.TEST MARGINALCDFFORPCA

This test can be found at "`./raven/tests/crow/test_marginalCdfForPCA.py`". This test can be called executing the following command:

```
./run_tests --re=crow.test_marginalCdfForPCA
```

or

```
./run_framework_tests --re=crow.test_marginalCdfForPCA
```

- Test Description:

    - This test is a Unit Test for the crow swig classes. It tests that the MultiVariate Normal distribution is accessable by Python and that PCA is correctly performed and that the CDF marginal distribution is computable in the transformed space

- Original Author:

    - cogljj

- Creation date:

    - 2017-03-24

- The classes tested in this test are:

    - crow

- Since the creation of this test, the following main revisions have been performed:

1. revision info:
    - author : alfoa
    - date : 2018-05-15
    - description: Adding this test description.

2.3.68 CROW.TEST TRANSFORMATIONMATRIX

This test can be found at "`./raven/tests/crow/test_transformationMatrix.py`".
This test can be called executing the following command:

```
./run_tests --re=crow.test_transformationMatrix
```

or

```
./run_framework_tests --re=crow.test_transformationMatrix
```

- Test Description:

    - This test is a Unit Test for the crow swig classes. It tests that the MultiVariate Normal distribution is accessable by Python and that transformation matrix is accessable and correctly computed.

- Original Author:

    - cogljj

- Creation date:

    - 2017-03-24

- The classes tested in this test are:

    - crow

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2018-05-15
        - description: Adding this test description.

2.3.69 CROW.TEST SVD INDEX

This test can be found at "`./raven/tests/crow/test_svd_index.py`". This test can be called executing the following command:

```
./run_tests --re=crow.test_svd_index
```

or

```
./run_framework_tests --re=crow.test_svd_index
```

- Test Description:

    - This test is a Unit Test for the crow swig classes. It tests that the MultiVariate Normal distribution is accessable by Python and that the SVD indexes are accessable

- Original Author:

    - cogljj

- Creation date:

    - 2017-03-24

- The classes tested in this test are:

    - crow

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2018-05-15
        - description: Adding this test description.

2.3.70 CROW.TEST TRANSFORMATIONMATRIX INDEX

This test can be found at "`./raven/tests/crow/test_transformationMatrix_index.py`". This test can be called executing the following command:

```
./run_tests --re=crow.test_transformationMatrix_index
```

or

```
./run_framework_tests --re=crow.test_transformationMatrix_index
```

- Test Description:

    - This test is a Unit Test for the crow swig classes. It tests that the MultiVariate Normal distribution is accessable by Python and that transformation matrix indexes are accessable and correctly reported.

- Original Author:

    - cogljj

- Creation date:

    - 2017-03-24

- The classes tested in this test are:

    - crow

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2018-05-15
        - description: Adding this test description.

2.3.71 CROW.TEST INVERSE TRANSFORMATIONMATRIX

This test can be found at "`./raven/tests/crow/test_inverse_transformation_matrix.py`". This test can be called executing the following command:

```
./run_tests --re=crow.test_inverse_transformationMatrix
```

or

```
./run_framework_tests --re=crow.test_inverse_transformationMatrix
```

- Test Description:

    - This test is a Unit Test for the crow swig classes. It tests that the MultiVariate Normal distribution is accessable by Python and that the inverse transformation matrix is correctly computed.

- Original Author:

    - cogljj

- Creation date:

    - 2017-03-24

- The classes tested in this test are:

    - crow

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2018-05-15
        - description: Adding this test description.

2.3.72 CROW.TEST INVERSE TRANSFORMATIONMATRIX

This test can be found at "`./raven/tests/crow/test_symmetric_psd.py`". This test can be called executing the following command:

```
./run_tests --re=crow.test_inverse_transformationMatrix
```

or

```
./run_framework_tests --re=crow.test_inverse_transformationMatrix
```

- Test Description:

    - This test is a Unit Test for the crow swig classes. It tests that the MultiVariate Normal distribution is accessable by Python and that the lef singular vectors are correctly reported

- Original Author:

    - cogljj

- Creation date:

    - 2017-03-24

- The classes tested in this test are:

- crow

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2018-05-15
     - description: Adding this test description.

2.3.73 FRAMEWORK PCARESPONSESURFACE

This test can be found at "`./raven/tests/framework/test_pca_responseSurface.`
`xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pcaResponseSurface
```

or

```
./run_framework_tests --re=framework/pcaResponseSurface
```

- Test Description:

  - Tests responseSurface sampler in connection with PCA.

- Original Author:

  - wangc

- Creation date:

  - 2015-12-16

- The classes tested in this test are:

  - Samplers.responseSurface

2.3.74 FRAMEWORK.EXTERNAL XML

This test can be found at "`./raven/tests/framework/test_External_XML.xml`".
This test can be called executing the following command:

```
./run_tests --re=framework.external_xml
```

or

```
./run_framework_tests --re=framework.external_xml
```

- Test Description:

  - This test is aimed to check the capability in RAVEN to load external XML files as part of the input file. Indeed, allows the user to inject in the input files XML blocks defined in external files

- Original Author:

  - wangc

- Creation date:

  - 2015-07-22

- The classes tested in this test are:

  - Simulation.ExternalXML

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.
  2. revision info:
     - author : talbpaul
     - date : 2016-04-26
     - description: added check for pre-existing backup files when validating
  3. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.
  4. revision info:
     - author : talbpaul
     - date : 2018-03-26
     - description: Nested ExternalXML nodes in OutStream

2.3.75   FRAMEWORK.TEST ROM TRAINER RAVEN

This test can be found at "`./raven/tests/framework/test_rom_trainer_raven.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.test_rom_trainer_raven
```

or

```
./run_framework_tests --re=framework.test_rom_trainer_raven
```

- Test Description:

    - This test is aimed to check the functionality of the Step RomTrainer, for training ROM (external library imported and internal ones)

- Original Author:

    - cogljj

- Creation date:

    - 2015-10-12

- The classes tested in this test are:

    - Models.ROM.SKLearn, Models.ROM.NDinvDistWeight, Steps.RomTrainer

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2015-10-15
        - description: Modified test rom trainer for XSD validation
    2. revision info:
        - author : senrs
        - date : 2015-10-15
        - description: Converted input test file
    3. revision info:
        - author : maljdan
        - date : 2016-04-06
        - description: Updating test cases to reflect the changes to the user input.

4. revision info:

    – author : talbpaul
    – date : 2016-04-26
    – description: added check for pre existing backup files when validating

5. revision info:

    – author : alfoa
    – date : 2016-04-27
    – description: New subdirectories structure

6. revision info:

    – author : maljdan
    – date : 2016-05-23
    – description: Fixing the failed XSD validation cases.

7. revision info:

    – author : alfoa
    – date : 2017-01-21
    – description: Adding this test description.

2.3.76 FRAMEWORK.TEST MULTI TARGET ROM

This test can be found at "`./raven/tests/framework/test_multi_target_rom.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.test_multi_target_rom
```

or

```
./run_framework_tests --re=framework.test_multi_target_rom
```

- Test Description:

    – This test is aimed to test the capability of RAVEN to train ROMs that can predict multiple targets at the same time (multiple FOMs)

- Original Author:

    – alfoa

- Creation date:

- 2014-11-30

- The classes tested in this test are:

  - Steps.RomTrainer, Models.ROM

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : mandd
     - date : 2015-04-17
     - description: conversion to Database and DataObjects

  2. revision info:
     - author : mandd
     - date : 2015-04-20
     - description: Merge remote-tracking branch 'origin/devel' into mandd/DataRename

  3. revision info:
     - author : alfoa
     - date : 2015-06-18
     - description: Changed Name of all DataObjects

  4. revision info:
     - author : alfoa
     - date : 2015-06-21
     - description: modified Names + added new capabilities and flexibility in DataObjects + added options block. Modified XSD schema and manual to reflect the modifications

  5. revision info:
     - author : alfoa
     - date : 2015-09-12
     - description: removed syntax inconsistency with respect standards for Samplers (underscores instead of camelBack) + created conversion script

  6. revision info:
     - author : cogljj
     - date : 2015-10-13
     - description: Updating test_multi_target_rom to use external models.

  7. revision info:
     - author : cogljj
     - date : 2015-11-17

- description: Updating to work with scikit-learn 0.17. In the new version of sklearn the rom can not use a classifier anymore.

8. revision info:

    - author : maljdan
    - date : 2016-05-20
    - description: Updating the test cases to remove references to Point or History.

9. revision info:

    - author : alfoa
    - date : 2017-01-21
    - description: Adding this test description.

10. revision info:

    - author : alfoa
    - date : 2017-12-17
    - description: Modified for adapting to new DataObject structure

2.3.77 FRAMEWORK.TEST ROM TRAIN FROM ALREADY DUMPED HDF5

This test can be found at "`./raven/tests/framework/test_rom_train_from_already_dumped_HDF5.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.test_rom_train_from_already_dumped_HDF5
```

or

```
./run_framework_tests --re=framework.test_rom_train_from_already_dumped_HD
```

- Test Description:

    - This test is aimed to test the capability of RAVEN to train ROMs based on the pregerenated data sets (HDF5)

- Original Author:

    - alfoa

- Creation date:

    - 2014-02-26

- The classes tested in this test are:

– Steps.RomTrainer, Models.ROM, Databases.HDF5

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2014-03-06
     - description: changed name of DataBase handling, modified all tests were using it, improved Step output handling etc r25347

  2. revision info:
     - author : maljdan
     - date : 2015-06-16
     - description: Adding steps to the XSD, and fixing the input files to pass the validation. Currently, using sequences.

  3. revision info:
     - author : alfoa
     - date : 2015-06-18
     - description: Changed Name of all DataObjects

  4. revision info:
     - author : alfoa
     - date : 2015-06-21
     - description: modified Names + added new capabilities and flexibility in DataObjects + added options block. Modified XSD schema and manual to reflect the modifications

  5. revision info:
     - author : cogljj
     - date : 2015-10-13
     - description: Converting test_rom_train_from_already_dumped_HDF5 to use external model.

  6. revision info:
     - author : cogljj
     - date : 2015-11-17
     - description: Updating to work with scikit-learn 0.17. In the new version of sklearn the rom can not use a classifier anymore.

  7. revision info:
     - author : maljdan
     - date : 2016-04-06

- description: Updating test cases to reflect the changes to the user input.

8. revision info:
   - author : alfoa
   - date : 2017-01-21
   - description: Adding this test description.

9. revision info:
   - author : talbpaul
   - date : 2017-07-10
   - description: Fixed location of database to be specified relative to working directory

10. revision info:
    - author : alfoa
    - date : 2017-12-18
    - description: Adapted for new DataObject structure

2.3.78 FRAMEWORK.TESTFACTORIALS

This test can be found at "`./raven/tests/framework/test_FullFactorial_Sampler.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.testFactorials
```

or

```
./run_framework_tests --re=framework.testFactorials
```

- Test Description:
  - This test is aimed to check the mechanics of the FactorialDesign Samping strategy.

- Original Author:
  - alfoa

- Creation date:
  - 2014-12-05

- The classes tested in this test are:
  - Samplers.FactorialDesign

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2015-02-04
     - description: Added algorithm_type in tests and fixed a bug

  2. revision info:
     - author : cogljj
     - date : 2015-03-04
     - description: Switching two tests to batch size 1 because they fail sometimes.

  3. revision info:
     - author : mandd
     - date : 2015-04-17
     - description: Conversion to Database and DataObjects

  4. revision info:
     - author : alfoa
     - date : 2015-05-18
     - description: Closes #167

  5. revision info:
     - author : alfoa
     - date : 2015-05-18
     - description: Closes #169

  6. revision info:
     - author : alfoa
     - date : 2015-06-18
     - description: Changed Name of all DataObjects

  7. revision info:
     - author : alfoa
     - date : 2015-09-12
     - description: Removed syntax inconsistency with respect standards for Samplers (underscores instead of camelBack) + created conversion script

  8. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.

9. revision info:

   – author : talbpaul
   – date : 2016-04-26
   – description: Added check for pre-existing backup files when validating

10. revision info:

   – author : alfoa
   – date : 2017-01-21
   – description: Adding this test description.

2.3.79 FRAMEWORK.TESTRESPONSESURFACEDESIGNS

This test can be found at "`./raven/tests/framework/test_ResponseSurfaceDesign_Sampler.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.testResponseSurfaceDesigns
```

or

```
./run_framework_tests --re=framework.testResponseSurfaceDesigns
```

- Test Description:

  – This test is aimed to check the capability in RAVEN to employ a ResponseSurfaceDesign sampling strategy. Since the goal of the test is to testify that the Grid sampling strategy is functional, a Dummy model is used. Both available Response Surface design strategies are tested (BoxBehnken, CentralComposite)

- Original Author:

  – alfoa

- Creation date:

  – 2014-12-06

- The classes tested in this test are:

  – Sampler.ResponseSurfaceDesign

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:

- – author : alfoa
- – date : 2015-02-04
- – description: added algorithm_type in tests and fixed a bug

2. revision info:
   - – author : mandd
   - – date : 2015-04-17
   - – description: conversion to Database and DataObjects

3. revision info:
   - – author : alfoa
   - – date : 2015-05-18
   - – description: Closes #167

4. revision info:
   - – author : alfoa
   - – date : 2015-05-18
   - – description: Closes #169

5. revision info:
   - – author : alfoa
   - – date : 2015-05-29
   - – description: finalized all the samplers

6. revision info:
   - – author : alfoa
   - – date : 2015-06-18
   - – description: Changed Name of all DataObjects

7. revision info:
   - – author : maljdan
   - – date : 2016-04-06
   - – description: Updating test cases to reflect the changes to the user input.

8. revision info:
   - – author : talbpaul
   - – date : 2016-04-26
   - – description: added check for pre-existing backup files when validating

9. revision info:
   - – author : alfoa
   - – date : 2017-01-21
   - – description: Adding this test description.

2.3.80 FRAMEWORK.TESTGRIDWITHCONSTANTS

This test can be found at "`./raven/tests/framework/test_Grid_Sampler_with_constants.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.testGridWithConstants
```

or

```
./run_framework_tests --re=framework.testGridWithConstants
```

- Test Description:

    - This test is aimed to check the capability of RAVEN to input constant variables values. This test is valid to demonstrate this capability for any Sampler in RAVEN. In addition, it shows how the constant variables can be used in conjunction with a function.

- Original Author:

    - alfoa

- Creation date:

    - 2017-04-05

- The classes tested in this test are:

    - Sampler.Grid

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2017-04-24
        - description: added a function to show how the constant variables can be used in conjunction with a function
    2. revision info:
        - author : alfoa
        - date : 2019-03-07
        - description: Modified syntax in Functions as for issue #934

2.3.81 FRAMEWORK.TESTLHS

This test can be found at "`./raven/tests/framework/test_LHS_Sampler.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.testLHS
```

or

```
./run_framework_tests --re=framework.testLHS
```

- Test Description:

    - This test is aimed to check the functionality of the Stratified sampling. In order to check this sampling strategy a Model of type Dummy.

- Original Author:

    - crisr

- Creation date:

    - 2013-10-15

- The classes tested in this test are:

    - Samplers.Stratified, Models.Dummy, Steps.MultiRun

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2014-01-21
        - description: fixed tests, added new capability in OutStreamPrint + modified check_output test, bug fixes in Datas.py and Steps... Deletede Plotting Step... Not needed SVN r24086
    2. revision info:
        - author : alfoa
        - date : 2015-03-04
        - description: modified batch sizes because sometimes, if we run the tests in parallel, the order of values in csv can be different
    3. revision info:

- author : mandd
- date : 2015-04-17
- description: conversion to Database and DataObjects

4. revision info:

  - author : alfoa
  - date : 2015-04-24
  - description: From LHS to Stratified. Closes #130

5. revision info:

  - author : alfoa
  - date : 2015-05-18
  - description: Closes #167

6. revision info:

  - author : alfoa
  - date : 2015-05-18
  - description: Closes #169

7. revision info:

  - author : alfoa
  - date : 2015-06-18
  - description: Changed Name of all DataObjects

8. revision info:

  - author : maljdan
  - date : 2015-08-20
  - description: Fixing a bug associated with the grid construction used by the LHS sampler. (See issue #266)

9. revision info:

  - author : wangc
  - date : 2015-09-10
  - description: update validate_xml.sh, convert some test inputs into something mostly RAVEN-preferred

10. revision info:

  - author : alfoa
  - date : 2015-09-12
  - description: removed syntax inconsistency with respect standards for Samplers (underscores instead of camelBack) + created conversion script

11. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

12. revision info:
    - author : alfoa
    - date : 2017-01-21
    - description: Adding this test description.

2.3.82 FRAMEWORK.TESTLHS RELAP7

This test can be found at "`./raven/tests/framework/test_LHS_Sampler_Raven.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.testLHS_RELAP7
```

or

```
./run_framework_tests --re=framework.testLHS_RELAP7
```

- Test Description:

    - This test is aimed to check the capability in RAVEN to employ a Stratified sampling strategy, using as driven code RELAP7.

- Original Author:

    - cogljj

- Creation date:

    - 2014-03-05

- The classes tested in this test are:

    - Sampler.Stratified

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2014-03-31

- description: modified executable syntax plus improved stability of outstream system when adaptive is on... r26112

2. revision info:
   - author : mandd
   - date : 2015-04-17
   - description: conversion to Database and DataObjects

3. revision info:
   - author : alfoa
   - date : 2015-04-24
   - description: From LHS to Stratified. Closes #130

4. revision info:
   - author : alfoa
   - date : 2015-05-18
   - description: Closes #167

5. revision info:
   - author : alfoa
   - date : 2015-06-18
   - description: Changed Name of all DataObjects

6. revision info:
   - author : alfoa
   - date : 2015-09-12
   - description: removed syntax inconsistency with respect standards for Samplers (underscores instead of camelBack) + created conversion script

7. revision info:
   - author : cogljj
   - date : 2016-03-22
   - description: Updating samplers to new RELAP-7 inputs.

8. revision info:
   - author : alfoa
   - date : 2016-03-24
   - description: removed controlled variable pipe_Dh since was not set in the input file and consequentially was getting garbage from the memory. In addition, set the raven_init to false in order to avoid to have the init csv into the GridRaven folder that is used to construct a data with the pp LoadIntoInternlaDataObject

9. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

10. revision info:

- author : talbpaul
- date : 2016-04-26
- description: Added check for pre-existing backup files when validating

11. revision info:

- author : alfoa
- date : 2016-04-27
- description: New subdirectories structure

12. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.83   FRAMEWORK.TESTGRID RELAP7

This test can be found at "`./raven/tests/framework/test_Grid_Sampler_Raven.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.testGrid_RELAP7
```

or

```
./run_framework_tests --re=framework.testGrid_RELAP7
```

- Test Description:

    - This test is aimed to check the capability in RAVEN to employ a Grid sampling strategy, using as driven code RELAP7.

- Original Author:

    - cogljj

- Creation date:

    - 2014-03-05

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- The classes tested in this test are:
    - Sampler.Grid

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2014-03-25
        - description: fixed test_Grid_sampler for raven. SVN r25883

    2. revision info:
        - author : alfoa
        - date : 2014-03-31
        - description: modified executable syntax plus improved stability of outstream system when adaptive is on... r26112

    3. revision info:
        - author : mandd
        - date : 2015-04-17
        - description: conversion to Database and DataObjects

    4. revision info:
        - author : alfoa
        - date : 2015-05-18
        - description: Closes #167

    5. revision info:
        - author : alfoa
        - date : 2015-06-18
        - description: Changed Name of all DataObjects

    6. revision info:
        - author : alfoa
        - date : 2015-09-12
        - description: removed syntax inconsistency with respect standards for Samplers (underscores instead of camelBack) + created conversion script

    7. revision info:
        - author : alfoa
        - date : 2015-10-01
        - description: Modified a test to make it parallel

    8. revision info:

- author : cogljj
- date : 2016-03-22
- description: Updating samplers to new RELAP-7 inputs.

9. revision info:

- author : alfoa
- date : 2016-03-24
- description: removed controlled variable pipe_Dh since was not set in the input file and consequentially was getting garbage from the memory. In addition, set the raven_init to false in order to avoid to have the init csv into the GridRaven folder that is used to construct a data with the pp LoadIntoInternlaDataObject

10. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

11. revision info:

- author : alfoa
- date : 2016-04-27
- description: New subdirectories structure

12. revision info:

- author : alfoa
- date : 2016-11-16
- description: Closes #751

13. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.84 FRAMEWORK.TESTEXTERNALMODELRESEED

This test can be found at "`./raven/tests/framework/test_external_reseed.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.testExternalModelReseed
```

or

```
./run_framework_tests --re=framework.testExternalModelReseed
```

- Test Description:

  - This test is aimed to test the capability of the random-based sampling strategies (e.g.MonteCarlo, Stratified, etc.) to change the seeding of the random number generator every time a new realization is requested.

- Original Author:

  - alfoa

- Creation date:

  - 2015-01-26

- The classes tested in this test are:

  - Sampler.MonteCarlo

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : mandd
     - date : 2015-04-17
     - description: conversion to Database and DataObjects
  2. revision info:
     - author : alfoa
     - date : 2015-04-21
     - description: Closes #122
  3. revision info:
     - author : alfoa
     - date : 2015-06-18
     - description: Changed Name of all DataObjects
  4. revision info:
     - author : alfoa
     - date : 2015-09-12
     - description: removed syntax inconsistency with respect standards for Samplers (underscores instead of camelBack) + created conversion script
  5. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.

6. revision info:

    – author : talbpaul
    – date : 2016-04-26
    – description: added check for pre-existing backup files when validating

7. revision info:

    – author : maljdan
    – date : 2016-05-20
    – description: Updating the test cases to remove references to Point or History.

8. revision info:

    – author : alfoa
    – date : 2017-01-21
    – description: Adding this test description.

2.3.85 FRAMEWORK.TEST CUSTOM MODE

This test can be found at "`./raven/tests/framework/test_custom_mode.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.test_custom_mode
```

or

```
./run_framework_tests --re=framework.test_custom_mode
```

- Test Description:

    – This test is aimed to check the capability of RAVEN to load external Custom dispatching recepies. RunInfo.CustomMode.

- Original Author:

    – cogljj

- Creation date:

    – 2014-04-02

- The classes tested in this test are:

    – JobHandler.ExternalRunner

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : mandd
        - date : 2015-04-17
        - description: conversion to Database and DataObjects

    2. revision info:
        - author : alfoa
        - date : 2015-05-18
        - description: Closes #167

    3. revision info:
        - author : alfoa
        - date : 2015-06-18
        - description: Changed Name of all DataObjects

    4. revision info:
        - author : alfoa
        - date : 2016-04-27
        - description: New subdirectories structure

    5. revision info:
        - author : alfoa
        - date : 2017-01-21
        - description: Adding this test description.

2.3.86   FRAMEWORK.TEST XML DIFFER

This test can be found at "`./raven/tests/framework/TestDiffer/TestXMLDiffer.py`". This test can be called executing the following command:

```
./run_tests --re=framework.test_xml_differ
```

or

```
./run_framework_tests --re=framework.test_xml_differ
```

- Test Description:

    - This test is aimed to check the xml differ program

- Original Author:

  – coglJJ

- Creation date:

  – 2016-10-21

- The classes tested in this test are:

  – None

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : alfoa
     – date : 2017-01-21
     – description: Adding this test description.

2.3.87   FRAMEWORK STOCHPOLYINTERPTEST

This test can be found at "`./raven/tests/framework/test_stochpoly_interp.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/stochPolyInterpTest
```

or

```
./run_framework_tests --re=framework/stochPolyInterpTest
```

- Test Description:

  – This test checks the use of the "interpolation" blocks for the SCgPC methodology.

- Original Author:

  – talbpaul

- Creation date:

  – 2015-07-07

- The classes tested in this test are:

  – Samplers.SparseGridCollocation,SupervisedLearning.GaussPolynomialROM

2.3.88 FRAMEWORK.ND EXTERNAL LHS

This test can be found at "./raven/tests/framework/test_simple_ND_external_LHS.xml". This test can be called executing the following command:

```
./run_tests --re=framework.ND_external_LHS
```

or

```
./run_framework_tests --re=framework.ND_external_LHS
```

- Test Description:

  - This test is aimed to check the capability of RAVEN to handle ND probability density functions (distributions), when a Stratified sampling strategy is performed. In this case, the capability to use a globalGrid specification, when the discretization is performed in CDF.

- Original Author:

  - mandd

- Creation date:

  - 2015-03-04

- The classes tested in this test are:

  - Distributions.NDInverseWeight, Distrubtions.NDCartesianSpline, Samplers.Stratified

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : mandd
     - date : 2015-04-17
     - description: conversion to Database and DataObjects
  2. revision info:
     - author : alfoa
     - date : 2015-04-24
     - description: From LHS to Stratified. Closes #130
  3. revision info:
     - author : alfoa

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- date : 2015-05-28
- description: fixed Stratified Sampler bug (=¿ regolding) +

4. revision info:
    - author : alfoa
    - date : 2015-06-18
    - description: Changed Name of all DataObjects

5. revision info:
    - author : alfoa
    - date : 2015-09-12
    - description: removed syntax inconsistency with respect standards for Samplers (underscores instead of camelBack) + created conversion script

6. revision info:
    - author : cogljj
    - date : 2015-09-29
    - description: Modifing external modules to use relative to working directory.

7. revision info:
    - author : wangc
    - date : 2015-10-22
    - description: fix several bugs inside stratified sampler, a test is added to prevent the bugs, and xml output file is added for the testing to prevent the bugs

8. revision info:
    - author : maljdan
    - date : 2016-04-06
    - description: Updating test cases to reflect the changes to the user input.

9. revision info:
    - author : alfoa
    - date : 2017-01-21
    - description: Adding this test description.

2.3.89   FRAMEWORK.ND EXTERNAL GRID VALUE

This test can be found at "`./raven/tests/framework/test_simple_ND_external_grid_value.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.ND_external_grid_value
```

or

```
./run_framework_tests --re=framework.ND_external_grid_value
```

- Test Description:

  - This test is aimed to check the capability of RAVEN to handle ND probability density functions (distributions), when a Grid sampling strategy is performed. In this case, the capability to construct marginal distributions (for each uncertanties of the ND distribution domain), when the discretization is performed in VALUE.

- Original Author:

  - mandd

- Creation date:

  - 2015-03-04

- The classes tested in this test are:

  - Distributions.NDInverseWeight, Distrubtions.NDCartesianSpline, Samplers.Grid

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : mandd
     - date : 2015-04-17
     - description: conversion to Database and DataObjects
  2. revision info:
     - author : alfoa
     - date : 2015-06-18
     - description: Changed Name of all DataObjects
  3. revision info:
     - author : cogljj
     - date : 2015-09-29
     - description: Modifing external modules to use relative to working directory.
  4. revision info:
     - author : wangc
     - date : 2015-09-30
     - description: improve efficiency when calculate the SampledVarsPb with N-Dimensional PDF, fix the issue #298

5. revision info:

   – author : maljdan
   – date : 2016-04-06
   – description: Updating test cases to reflect the changes to the user input.

6. revision info:

   – author : alfoa
   – date : 2017-01-21
   – description: Adding this test description.

2.3.90 FRAMEWORK.ND EXTERNAL GRID CDF

This test can be found at "`./raven/tests/framework/test_simple_ND_external_grid_cdf.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.ND_external_grid_cdf
```

or

```
./run_framework_tests --re=framework.ND_external_grid_cdf
```

- Test Description:

  – This test is aimed to check the capability of RAVEN to handle ND probability density functions (distributions), when a Grid sampling strategy is performed. In this case, the capability to construct marginal distributions (for each uncertanties of the ND distribution domain), when the discretization is performed in CDF.

- Original Author:

  – mandd

- Creation date:

  – 2015-03-04

- The classes tested in this test are:

  – Distributions.NDInverseWeight, Distrubtions.NDCartesianSpline, Samplers.Grid

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:

- author : mandd
- date : 2015-03-09
- description: test fixes

2. revision info:

  - author : mandd
  - date : 2015-03-09
  - description: test fixes

3. revision info:

  - author : mandd
  - date : 2015-03-09
  - description: fix tests

4. revision info:

  - author : mandd
  - date : 2015-04-17
  - description: conversion to Database and DataObjects

5. revision info:

  - author : senrs
  - date : 2015-05-18
  - description: update the test cases

6. revision info:

  - author : alfoa
  - date : 2015-06-18
  - description: Changed Name of all DataObjects

7. revision info:

  - author : talbpaul
  - date : 2015-07-06
  - description: standardization of tests

8. revision info:

  - author : talbpaul
  - date : 2015-07-06
  - description: Revert "standardization of tests" This reverts commit 68099325e8daba0f756179a20b

9. revision info:

  - author : talbpaul
  - date : 2015-07-06

- description: updated tests, added script

10. revision info:
    - author : talbpaul
    - date : 2015-07-07
    - description: updated to restrict partial-node comments

11. revision info:
    - author : talbpaul
    - date : 2015-07-07
    - description: standardized tests

12. revision info:
    - author : talbpaul
    - date : 2015-07-09
    - description: tests pass, except LSIntegral needs regolding

13. revision info:
    - author : cogljj
    - date : 2015-09-29
    - description: Modifing external modules to use relative to working directory.

14. revision info:
    - author : wangc
    - date : 2015-09-30
    - description: improve efficiency when calculate the SampledVarsPb with N-Dimensional PDF, fix the issue #298

15. revision info:
    - author : wangc
    - date : 2015-09-30
    - description: add new tests for the issue #298

16. revision info:
    - author : alfoa
    - date : 2015-10-06
    - description: modified all the other files

17. revision info:
    - author : alfoa
    - date : 2015-10-06
    - description: final modifications

18. revision info:

- author : alfoa
- date : 2015-10-06
- description: Merge branch 'devel' of hpcgitlab.inl.gov:idaholab/raven into wangc/-fix_bug

19. revision info:
    - author : alfoa
    - date : 2015-10-15
    - description: merged devel and resolved conflicts

20. revision info:
    - author : mandd
    - date : 2015-11-04
    - description: edits

21. revision info:
    - author : mandd
    - date : 2015-11-06
    - description: edits

22. revision info:
    - author : mandd
    - date : 2015-11-17
    - description: final merging with devel

23. revision info:
    - author : talbpaul
    - date : 2016-02-08
    - description: first update, looking for more failing tests to add

24. revision info:
    - author : mandd
    - date : 2016-02-11
    - description: merged with devel

25. revision info:
    - author : maljdan
    - date : 2016-04-06
    - description: Updating test cases to reflect the changes to the user input.

26. revision info:
    - author : alfoa
    - date : 2017-01-21
    - description: Adding this test description.

2.3.91 FRAMEWORK.ND TEST MC MVN

This test can be found at "./raven/tests/framework/test_simple_ND_external_MC_MVN.xml". This test can be called executing the following command:

```
./run_tests --re=framework.ND_test_MC_MVN
```

or

```
./run_framework_tests --re=framework.ND_test_MC_MVN
```

- Test Description:

  - This test is aimed to check the capability of RAVEN to handle MultivariateNormal probability density functions (distributions), when a MonteCarlo sampling strategy is performed.

- Original Author:

  - mandd

- Creation date:

  - 2015-04-15

- The classes tested in this test are:

  - Distributions.MultivariateNormal, Samplers.MonteCarlo

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2015-06-18
     - description: Changed Name of all DataObjects
  2. revision info:
     - author : wangc
     - date : 2015-07-02
     - description: nd multivariate distribution improvement
  3. revision info:
     - author : maljdan
     - date : 2016-04-06

- description: Updating test cases to reflect the changes to the user input.

4. revision info:
   - author : alfoa
   - date : 2017-01-21
   - description: Adding this test description.

5. revision info:
   - author : wangc
   - date : 2017-12-20
   - description: convert test to use the new DataObjects with the new structure of basic statistic

2.3.92 FRAMEWORK.DISTS VARS

This test can be found at "`./raven/tests/framework/test_distribution_combination.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.dists_vars
```

or

```
./run_framework_tests --re=framework.dists_vars
```

- Test Description:
  - This test is aimed to check the capability in RAVEN to combine 1Dimensional and NDimensional probability density functions in the same sampling strategy. In this test a NDimensional distribution (Custom) is used in conjunction with 3 1Dimensional Exponential distributions, in a MonteCarlo sampling strategy.

- Original Author:
  - mandd

- Creation date:
  - 2015-05-13

- The classes tested in this test are:
  - Distributions.Exponential, Distributions.NDCartesianSpline, Sampler.MonteCarlo

- Since the creation of this test, the following main revisions have been performed:

1. revision info:
   - author : alfoa
   - date : 2015-06-18
   - description: Changed Name of all DataObjects

2. revision info:
   - author : maljdan
   - date : 2015-06-24
   - description: Adding DataObjects and fixing Distributions in the XSD.

3. revision info:
   - author : alfoa
   - date : 2015-09-12
   - description: removed syntax inconsistency with respect standards for Samplers (underscores instead of camelBack) + created conversion script

4. revision info:
   - author : cogljj
   - date : 2015-09-29
   - description: Modifing external modules to use relative to working directory.

5. revision info:
   - author : maljdan
   - date : 2016-04-06
   - description: Updating test cases to reflect the changes to the user input.

6. revision info:
   - author : maljdan
   - date : 2016-05-20
   - description: Updating the test cases to remove references to Point or History.

7. revision info:
   - author : alfoa
   - date : 2017-01-21
   - description: Adding this test description.

8. revision info:
   - author : alfoa
   - date : 2017-12-20
   - description: Added seed and added additional ND distribution.

2.3.93 FRAMEWORK.REDUNDANTINPUTS

This test can be found at "`./raven/tests/framework/test_redundant_inputs.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.redundantInputs
```

or

```
./run_framework_tests --re=framework.redundantInputs
```

- Test Description:

  - This test is aimed to check the capability of RAVEN to treat redundant input variables. This test shows how some of the variables defined in the Samplers, can be associated to Functions (External) instead of Distributions. In this way, the user can "sample" the variable as combination of the other variables.

- Original Author:

  - talbpaul

- Creation date:

  - 2015-06-25

- The classes tested in this test are:

  - Samplers.Sampler, Functions.External

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2015-09-22
     - description: fix the bug #296
  2. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.
  3. revision info:
     - author : alfoa

- date : 2017-01-21
- description: Adding this test description.

4. revision info:
- author : alfoa
- date : 2019-03-07
- description: Modified syntax in Functions as for issue #934

2.3.94 FRAMEWORK.REDUNDANTINPUTSSCGPC

This test can be found at "`./raven/tests/framework/test_redundant_scgpc.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.redundantInputsSCgPC
```

or

```
./run_framework_tests --re=framework.redundantInputsSCgPC
```

- Test Description:
  - This test is aimed to check the capability of RAVEN to treat redundant input variables, when the Sampler of type "SparseGridCollocation" is used. This test shows how some of the variables defined in the Sampler, can be associated to Functions (External) instead of Distributions. In this way, the user can "sample" the variable as combination of the other variables.

- Original Author:
  - talbpaul

- Creation date:
  - 2016-01-07

- The classes tested in this test are:
  - Samplers.SparseGridCollocation, Functions.External

- Since the creation of this test, the following main revisions have been performed:
  1. revision info:
     - author : talbpaul

- date : 2016-01-07
- description: Tests updated

2. revision info:

   - author : maljdan
   - date : 2016-04-06
   - description: Updating test cases to reflect the changes to the user input.

3. revision info:

   - author : alfoa
   - date : 2017-01-21
   - description: Adding this test description.

4. revision info:

   - author : alfoa
   - date : 2019-03-07
   - description: Modified syntax in Functions as for issue #934

2.3.95   FRAMEWORK.REDUNDANTINPUTSSOBOL

This test can be found at "`./raven/tests/framework/test_redundant_sobol.xml`".
This test can be called executing the following command:

```
./run_tests --re=framework.redundantInputsSobol
```

or

```
./run_framework_tests --re=framework.redundantInputsSobol
```

- Test Description:

  - This test is aimed to check the capability of RAVEN to treat redundant input variables, when the Sampler of type "Sobol" is used. This test shows how some of the variables defined in the Sampler, can be associated to Functions (External) instead of Distributions. In this way, the user can "sample" the variable as combination of the other variables.

- Original Author:

  - talbpaul

- Creation date:

- 2016-01-07

- The classes tested in this test are:

  - Samplers.Sobol, Functions.External

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : cogljj
     - date : 2016-01-15
     - description: Rename step in sobol test to avoid directry name collision. Closes #400. Both test_redundant_scgpc and test_redundant_sobol were using the directory RedundantInputs/sim_py_SC which could cause test failures. This renames the one that redundant_sobol uses.

  2. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.

  3. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

  4. revision info:
     - author : alfoa
     - date : 2019-03-07
     - description: Modified syntax in Functions as for issue #934

2.3.96 FRAMEWORK.FAILRUNSMC

This test can be found at "`./raven/tests/framework/test_failruns_MC.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.failrunsMC
```

or

```
./run_framework_tests --re=framework.failrunsMC
```

- Test Description:

    - This test is aimed to check the capability of RAVEN to identify failures (Model crashes in some realizations) when a sampling strategy is employed.

- Original Author:

    - talbpaul

- Creation date:

    - 2015-08-25

- The classes tested in this test are:

    - Steps.MultiRun

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2015-09-12
        - description: removed syntax inconsistency with respect standards for Samplers (underscores instead of camelBack) + created conversion script

    2. revision info:
        - author : cogljj
        - date : 2015-09-29
        - description: Modifing external modules to use relative to working directory.

    3. revision info:
        - author : maljdan
        - date : 2016-04-06
        - description: Updating test cases to reflect the changes to the user input.

    4. revision info:
        - author : alfoa
        - date : 2017-01-21
        - description: Adding this test description.

2.3.97 FRAMEWORK.NDGRIDPROBABILITYWEIGHTCDF

This test can be found at "./raven/tests/framework/test_simple_ND_grid_probabilityWeig
cdf.xml". This test can be called executing the following command:

```
./run_tests --re=framework.NDGridProbabilityWeightCDF
```

or

```
./run_framework_tests --re=framework.NDGridProbabilityWeightCDF
```

- Test Description:

  - This test is aimed to check the capability of RAVEN to handle ND probability density functions (distributions), when a Grid sampling strategy is performed. In this case, the capability to construct marginal distributions (for each uncertanties of the ND distribution domain), when the discretization is performed in CDF.

- Original Author:

  - wangc

- Creation date:

  - 2015-09-30

- The classes tested in this test are:

  - Distributions.NDInverseWeight, Distrubtions.NDCartesianSpline, Samplers.Grid

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2015-10-15
     - description: merged devel and resolved conflicts
  2. revision info:
     - author : mandd
     - date : 2015-11-06
     - description: edits
  3. revision info:
     - author : mandd

- date : 2015-11-17
  - description: final merging with devel
4. revision info:
  - author : talbpaul
  - date : 2016-02-08
  - description: first update, looking for more failing tests to add
5. revision info:
  - author : mandd
  - date : 2016-02-11
  - description: merged with devel
6. revision info:
  - author : maljdan
  - date : 2016-04-06
  - description: Updating test cases to reflect the changes to the user input.
7. revision info:
  - author : alfoa
  - date : 2017-01-21
  - description: Adding this test description.

2.3.98 FRAMEWORK.NDGRIDPROBABILITYWEIGHTVALUE

This test can be found at "`./raven/tests/framework/test_simple_ND_grid_probabilityWeig`
`value.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.NDGridProbabilityWeightValue
```

or

```
./run_framework_tests --re=framework.NDGridProbabilityWeightValue
```

- Test Description:
  - This test is aimed to check the capability of RAVEN to handle ND probability density functions (distributions), when a Grid sampling strategy is performed. In this case, the capability to construct marginal distributions (for each uncertanties of the ND distribution domain), when the discretization is performed in VALUE.
- Original Author:

- wangc

- Creation date:

  - 2015-09-30

- The classes tested in this test are:

  - Distributions.NDInverseWeight, Distrubtions.NDCartesianSpline, Samplers.Grid

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: first update, looking for more failing tests to add
  2. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.
  3. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.99 FRAMEWORK.LHSVARIABLES

This test can be found at "`./raven/tests/framework/test_LHS_variables.xml`".
This test can be called executing the following command:

```
./run_tests --re=framework.LHSVariables
```

or

```
./run_framework_tests --re=framework.LHSVariables
```

- Test Description:

  - This test is aimed to check the capability in RAVEN to employ a Stratified sampling strategy (LHS- equally spaced in CDF). Since the goal of the test is to testify that the Stratified sampling strategy is functional, a Dummy model is used.

- Original Author:

  - wangc

- Creation date:

  - 2015-10-22

- The classes tested in this test are:

  - Sampler.Stratified

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : cogljj
     - date : 2015-10-29
     - description: Moving comment to third line and removing #
  2. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: first update, looking for more failing tests to add
  3. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.
  4. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.100 FRAMEWORK FAIL CSV

This test can be found at "`./raven/tests/framework/test_simple_fail_csv.xml`".
This test can be called executing the following command:

```
./run_tests --re=framework/fail_csv
```

or

```
./run_framework_tests --re=framework/fail_csv
```

- Test Description:

    – Tests the test harness by checking that differences in the csv file cause the test to fail (but it passes because expected_fail is used in the tests file). If the CSV check passes, then this will fail the test.

- Original Author:

    – cogljj

- Creation date:

    – 2016-04-14

- The classes tested in this test are:

    – TestHarness.testers.RavenFramework

2.3.101 FRAMEWORK FAIL XML

This test can be found at "`./raven/tests/framework/test_simple_fail_xml.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/fail_xml
```

or

```
./run_framework_tests --re=framework/fail_xml
```

- Test Description:

    – Tests the test harness by checking that differences in the xml file cause the test to fail (but it passes because expected_fail is used in the tests file). If the XML check passes, then this will fail the test.

- Original Author:

    – cogljj

- Creation date:

    – 2016-04-14

- The classes tested in this test are:

    – TestHarness.testers.XMLDiff,TestHarness.testers.RavenFramework

2.3.102   FRAMEWORK.SIMULATIONTAGS

This test can be found at "`./raven/tests/framework/test_sim_tags.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.SimulationTags
```

or

```
./run_framework_tests --re=framework.SimulationTags
```

- Test Description:
    - This test is aimed to check the functionality of the options that can be defined in the Simulation block (attributes), such as "color", "printTimeStamps" and "verbosity".

- Original Author:
    - talbpaul

- Creation date:
    - 2016-02-18

- The classes tested in this test are:
    - Simulation

- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : maljdan
        - date : 2016-04-06
        - description: Updating test cases to reflect the changes to the user input.
    2. revision info:
        - author : alfoa
        - date : 2017-01-21
        - description: Adding this test description.

2.3.103 FRAMEWORK.TESTSTRATIFIEDLARGESIZE

This test can be found at "`./raven/tests/framework/test_stratified_dummy_model_large_grid_size.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.testStratifiedLargeSize
```

or

```
./run_framework_tests --re=framework.testStratifiedLargeSize
```

- Test Description:

  - This test is aimed to check the capability of RAVEN to perform a Stratified Sampling strategy of large size [(16 uncertanties and 2 nodes each) and (16 uncertanties and 161 nodes each)]. An external model is used, the results are stored the results into a Database of type HDF5 and Dataobjects of type PointSet. In addition, it prints the results (contained in the DataObjects) in a CSV file (OutStreams of type Print)

- Original Author:

  - alfoa

- Creation date:

  - 2016-04-11

- The classes tested in this test are:

  - OutStreams.Print, DataObjects.PointSet, Databases.HDF5, Steps.MultiRun, Samplers.Stratified

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2016-04-13
     - description: new syntax for OutStreamManger -¿ OutStreams
  2. revision info:
     - author : talbpaul
     - date : 2016-04-26
     - description: added check for pre-existing backup files when validating
  3. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.104 FRAMEWORK.CUSTOM1D

This test can be found at "`./raven/tests/framework/test_distributionCustom1D.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.custom1D
```

or

```
./run_framework_tests --re=framework.custom1D
```

- Test Description:

  - This test is aimed to check the capability of RAVEN to handle custom probability density functions (distributions).

- Original Author:

  - mandd

- Creation date:

  - 2016-08-08

- The classes tested in this test are:

  - Distributions.Custom1D

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.105 FRAMEWORK ALIASSYSTEMTESTS.TESTROMALIASED

This test can be found at "`./raven/tests/framework/aliasSystemTests/test_rom_aliased.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/aliasSystemTests.testROMAliased
```

or

```
./run_framework_tests --re=framework/aliasSystemTests.testROMAliased
```

- Test Description:

    - An example of using the the alias system in RAVEN with a ROM Model. This capability allows the user to alias Models variables within the RAVEN framework

- Original Author:

    - alfoa

- Creation date:

    - 2016-11-18

- The classes tested in this test are:

    - Models.ROM, Models.AliasSystem

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2016-11-22
        - description: Closes #754
    2. revision info:
        - author : alfoa
        - date : 2017-01-21
        - description: Adding this test description.

2.3.106 FRAMEWORK ALIASSYSTEMTESTS.TESTEXTERNALMODELALIASED

This test can be found at "`./raven/tests/framework/aliasSystemTests/test_external_model_aliased.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/aliasSystemTests.testExternalModelAliased
```

or

```
./run_framework_tests --re=framework/aliasSystemTests.testExternalModelAlia
```

- Test Description:

  - An example of using the the alias system in RAVEN with an External Model. This capability allows the user to alias Models variables within the RAVEN framework

- Original Author:

  - alfoa

- Creation date:

  - 2016-11-18

- The classes tested in this test are:

  - Models.ExternalModel, Models.AliasSystem

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2016-11-22
     - description: Closes #754
  2. revision info:
     - author : alfoa
     - date : 2016-11-28
     - description: Added XSD schema and Closes #756
  3. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.
  4. revision info:
     - author : talbpaul
     - date : 2018-04-04
     - description: added awful.variable+name for hard-testing input alias

2.3.107 FRAMEWORK ALIASSYSTEMTESTS.TESTENSEMBLEMODELALIASED

This test can be found at "`./raven/tests/framework/aliasSystemTests/test_ensemble_model_aliased.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/aliasSystemTests.testEnsembleModelAliased
```

or

```
./run_framework_tests --re=framework/aliasSystemTests.testEnsembleModelAli
```

- Test Description:
  - An example of using the the alias system in RAVEN with an Ensemble Model. This capability allows the user to alias Models variables within the RAVEN framework

- Original Author:
  - alfoa

- Creation date:
  - 2016-11-30

- The classes tested in this test are:
  - Models.EnsembleModel, Models.AliasSystem

- Since the creation of this test, the following main revisions have been performed:
  1. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.108   FRAMEWORK CODEINTERFACETESTS.TESTMCMAMMOTH BISONRELAP7

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_perturb_mammoth_exe_bison_relap7.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.testMCMammoth_BisonRelap7
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.testMCMammoth_Bison
```

- Test Description:

    - An example of using the MAMMOTH code interface. It runs Bison and RELAP7. This
      test is designed to ensure the MAMMOTH interface mechanics is correctly functional.

- Original Author:

    - tompjame

- Creation date:

    - 2016-08-29

- The classes tested in this test are:

    - Models.Code.MAMMOTH

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:

        - author : talbpaul
        - date : 2016-09-15
        - description: Test updates

    2. revision info:

        - author : alfoa
        - date : 2017-01-21
        - description: Adding this test description.

2.3.109 FRAMEWORK CODEINTERFACETESTS.TESTMCMAMMOTHNOEXECUTABLE BISONRELAP7

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_`
`perturb_mammoth_bison_relap7.xml`". This test can be called executing the following
command:

```
./run_tests --re=framework/CodeInterfaceTests.testMCMammothNoExecutable_Bi
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.testMCMammothNoExec
```

- Test Description:

- An example of using the MAMMOTH code interface (no executable). It checks Bison and RELAP7. This test is designed to ensure the MAMMOTH interface mechanics is correctly functional. In addition it used the RAVEN alias system.

- Original Author:

  - tompjame

- Creation date:

  - 2016-08-29

- The classes tested in this test are:

  - Models.Code.MAMMOTH, Models.AliasSystem

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: Test updates
  2. revision info:
     - author : alfoa
     - date : 2016-11-30
     - description: Added alias for MAMMOTH just to test the new system
  3. revision info:
     - author : alfoa
     - date : 2016-12-12
     - description: Added type for alias system in mammoth test
  4. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.110   FRAMEWORK CODEINTERFACETESTS.TESTMCMAMMOTHNOEXECUTABLEBISONR

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_mammoth_r7_bison_no_exe_hdf5_restart.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.testMCMammothNoExecutableBiso
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.testMCMammothNoExec
```

- Test Description:
  - An example of using the MAMMOTH code interface (no executable). This test is designed to ensure the MAMMOTH interface mechanics is correctly functional. In addition, the alias system is used

- Original Author:
  - alfoa

- Creation date:
  - 2016-12-15

- The classes tested in this test are:
  - Models.Code.MAMMOTH, Model.AliasSystem

- Since the creation of this test, the following main revisions have been performed:
  1. revision info:
     - author : alfoa
     - date : 2016-12-15
     - description: modified test in order to be validable by XSD schema
  2. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.111 FRAMEWORK CODEINTERFACETESTS.TESTMCMAMMOTHNOEXECUTABLE RATTLESNAKEBISON

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_perturb_all_rattlesnake_bison.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.testMCMAMMOTHNoExecutable_Rat
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.testMCMAMMOTHNoExec
```

- Test Description:

  - An example of using the MAMMOTH code interface (no executable). It checks Bison
    and RattleSnake. This test is designed to ensure the MAMMOTH interface mechanics
    is correctly functional, overal for Neutron Cross section perturbation.

- Original Author:

  - tompjame

- Creation date:

  - 2016-08-29

- The classes tested in this test are:

  - Models.Code.MAMMOTH

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  2. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.112 FRAMEWORK CODEINTERFACETESTS.TESTPERTURBMAMMOTHNOEXECUTABLE RATTLESNAKEBISON

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_perturb_mammoth_rattlesnake_bison.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.testPerturbMAMMOTHNoExecutab
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.testPerturbMAMMOTH
```

- Test Description:
    - An example of using the MAMMOTH code interface. This test is designed to ensure the MAMMOTH interface runs correctly. It runs BISON and RattleSnake.

- Original Author:
    - tompjame

- Creation date:
    - 2016-08-29

- The classes tested in this test are:
    - Models.Code.MAMMOTH

- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : talbpaul
        - date : 2016-09-15
        - description: Test updates
    2. revision info:
        - author : alfoa
        - date : 2017-01-21
        - description: Adding this test description.

2.3.113 FRAMEWORK CODEINTERFACETESTS.TESTGRIDBISON

This test can be found at "./raven/tests/framework/CodeInterfaceTests/test_Grid_Sampler_Bison.xml". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.testGridBison
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.testGridBison
```

- Test Description:

  - An example of using the MooseBasedApp code interface. This test is designed to ensure the MooseBasedApp interface runs correctly, when used with a Grid sampling approach.

- Original Author:

  - senrs

- Creation date:

  - 2015-10-06

- The classes tested in this test are:

  - Models.Code.MooseBasedApp, Samplers.Grid

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.
  2. revision info:
     - author : talbpaul
     - date : 2016-04-26
     - description: Added check for pre-existing backup files when validating
  3. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.114 FRAMEWORK CODEINTERFACETESTS.TESTGRIDRATTLESNAKE

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_`
`Grid_Sampler_rattlesnake.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.testGridRattlesnake
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.testGridRattlesnake
```

- Test Description:

  - An example of using the code interface of type MooseBasedApp for perturbing a Rat-
    tleSnake input (when XS are not needed to be perturbed)

- Original Author:

  - wangc

- Creation date:

  - 2016-04-20

- The classes tested in this test are:

  - Models.Code.MooseBasedApp

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2016-04-20
     - description: Update the input file, because OutStreamManager is changed to Out-
       Streams
  2. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.115 FRAMEWORK CODEINTERFACETESTS.TESTLHSBISON

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_LHS_Sampler_Bison.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.testLHSBison
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.testLHSBison
```

- Test Description:

    - An example of using the the Model Code of type MooseBasedApp. This test is aimed to show the usage of the code interface MooseBasedApp in order to test its mechanics

- Original Author:

    - senrs

- Creation date:

    - 2015-10-06

- The classes tested in this test are:

    - Models.Code.MooseBasedApp

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : maljdan
        - date : 2016-04-06
        - description: Updating test cases to reflect the changes to the user input.
    2. revision info:
        - author : talbpaul
        - date : 2016-10-25
        - description: Removed dim in OutStream Plot for validation purposes
    3. revision info:
        - author : alfoa
        - date : 2017-01-21
        - description: Adding this test description.

2.3.116 FRAMEWORK CODEINTERFACETESTS.TESTLHSFERRET

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_LHS_Sampler_ferret.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.testLHSFerret
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.testLHSFerret
```

- Test Description:

    - An example of using the the Model Code of type MooseBasedApp for Ferret code. This test is aimed to show the usage of the code interface MooseBasedApp in order to test its mechanics

- Original Author:

    - senrs

- Creation date:

    - 2015-10-06

- The classes tested in this test are:

    - Models.Code.MooseBasedApp

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : talbpaul
        - date : 2016-04-26
        - description: Added check for pre-existing backup files when validating
    2. revision info:
        - author : alfoa
        - date : 2017-01-21
        - description: Adding this test description.

2.3.117 FRAMEWORK CODEINTERFACETESTS.TESTMC

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_mc_rattlesnake.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.testMC
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.testMC
```

- Test Description:

  - An example of using the Rattlesnake code interface. This test is aimed to test the mechanics of the interface (no executable)..

- Original Author:

  - wangc

- Creation date:

  - 2016-05-09

- The classes tested in this test are:

  - Models.Code.Rattlesnake

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: Test updates
  2. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.118 FRAMEWORK CODEINTERFACETESTS OPENMODELICAINTERFACETEST-NOEXECUTABLE

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_OpenModelica_code_interface.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/OpenModelicaInterfaceTestNoE
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/OpenModelicaInterfa
```

- Test Description:

    - The purpose of this test is to exercise the OpenModelica external code interface without needing to have a built executable. It is directly modeled on the test_relap5_code_interface.xml test and works by making sure that 1) The input files are perturbed correctly 2) That the raw output CSV files are properly processed for reading by RAVEN

- Original Author:

    - @bobk

- Creation date:

    - 2015-06-11

- The classes tested in this test are:

    - CodeInterfaces.OpenModelica

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : @talbpaul
        - date : 2016-04-26
        - description: Added check for pre-existing HDF5 backup files when validating

2.3.119 FRAMEWORK CODEINTERFACETESTS DYMOLAINTERFACETESTNOEX-ECUTABLE

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_Dymola_code_interface.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/DymolaInterfaceTestNoExecutab
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/DymolaInterfaceTest
```

- Test Description:

    - The purpose of this test is to exercise the Dymola external code interface without need-
      ing to have a built executable. It is directly modeled on the test_relap5_code_interface.xml
      test and works by making sure that 1) The input files are perturbed correctly 2) The raw
      output MAT files are properly processed for reading by RAVEN

- Original Author:

    - @kimj

- Creation date:

    - 2015-11-11

- The classes tested in this test are:

    - CodeInterfaces.Dymola

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : @talbpaul
        - date : 2016-04-26
        - description: Added check for pre-existing HDF5 backup files when validating

2.3.120 FRAMEWORK CODEINTERFACETESTS.DYMOLATESTLOADSOMEVARSNOEXECUTAB

This test can be found at "./raven/tests/framework/CodeInterfaceTests/test_
Dymola_code_interface_load_some_vars.xml". This test can be called executing the
following command:

```
./run_tests --re=framework/CodeInterfaceTests.DymolaTestLoadSomeVarsNoExecu
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.DymolaTestLoadSomeV
```

- Test Description:

  - The purpose of this test is to exercise the Dymola external code interface without needing to have a built executable. This special case shows how to load just few output varibles from the Dymola outputs (e.g. .mat files). In this case only the variables e,g and h will be loaded

- Original Author:

  - @alfoa

- Creation date:

  - 2017-09-16

- The classes tested in this test are:

  - CodeInterfaces.Dymola

2.3.121   FRAMEWORK CODEINTERFACETESTS.DYMOLATESTTIMEDEPNOEXECUTABLEENSI

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_Dymola_code_interface_timedep.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.DymolaTestTimeDepNoExecutable
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.DymolaTestTimeDepNo
```

- Test Description:

  - The purpose of this test is to ensure that the Dyola external code interface functions properly with the new ensemble model functionality. Since the output files have been pre-generated, a Dymola executable is not necessary to run this test.

- Original Author:

  - alfoa

- Creation date:

  - 2016-11-11

- The classes tested in this test are:

  - Models.EnsembleModel,CodeInterfaces.OpenModelica

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2016-12-01
     - description: Fixed order of test inputs to respect XSD schema
  2. revision info:
     - author : alfoa
     - date : 2018-02-04
     - description: Modified test in order to work with the new DataObject structure (Usage of DataSet)

2.3.122   FRAMEWORK CODEINTERFACETESTS.GENERICINTERFACEIO

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_generic_IO.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.genericInterfaceIO
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.genericInterfaceIO
```

- Test Description:

  - An example of using the the Model Code of type GenericCode. This test is aimed to test the IO system present in the GenericCode interface.

- Original Author:

  - senrs

- Creation date:

  - 2015-10-06

- The classes tested in this test are:

  - Models.Code.GenericCode

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.
  2. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.123 FRAMEWORK CODEINTERFACETESTS.CUBITMOOSEINTERFACE

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_CUBIT_MOOSE.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.CubitMooseInterface
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.CubitMooseInterface
```

- Test Description:

  - An example of using the CubitMoose code interface. This test is designed to ensure the CubitMoose interface runs correctly (using the RAVEN alias system as well) It will only run if a cubit executable is found. At this time, the cubit executable directory is specified only for INL HPC machines, thus the test will not run on machines where cubit is not installed in the hpc-common apps local cubit 13.2 bin directory. This will need to change to accomodate variations in the exeucutable's location across platforms. Two variables are sampled in this test: one boundary condition value and one geometric property (length) that will be sent to the MOOSE input file and Cubit journal file respectively. Variables are sampled in a grid with specified values for each parameter. The test checks for generated exodus meshes and diffs the generated csv with the gold one.

- Original Author:

  - senrs

- Creation date:

- – 2015-10-06

- • The classes tested in this test are:

    - – Models.Code.CubitMoose, Models.AliasSystem

- • Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - – author : maljdan
        - – date : 2016-04-06
        - – description: Updating test cases to reflect the changes to the user input.
    2. revision info:
        - – author : tompjame
        - – date : 2016-08-29
        - – description: ref #668 Added tests for Bison and relap mammoth interaction, re-organized Mammoth Interface test folder, updated syntax in mammoth and mesh interface tests, added conversion scripts for new cubit and mammoth input file syntax. Ref #668 Updated mammoth interface for additional extensibility and individual entries for input file variables. Ref #668 Had to edit the method of checking correct files in Rattlesnake interface and add more test files for no executable test. Ref #668 Removed whitespace from test inputs. Ref #668 Updated documentation. Ref #668 Removing more whitespace. Ref #668 Edited test files. Ref #668 Removed unnecessary files from test folder for interface.
    3. revision info:
        - – author : alfoa
        - – date : 2016-12-15
        - – description: Closes #769
    4. revision info:
        - – author : alfoa
        - – date : 2017-01-21
        - – description: Adding this test description.

2.3.124   FRAMEWORK CODEINTERFACETESTS.BISONANDMESHINTERFACE

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_BISON_and_MESH.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.BisonAndMeshInterface
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.BisonAndMeshInterfa
```

- Test Description:

  - An example of using the BisonAndMesh code interface. This test is designed to ensure the BisonAndMesh interface runs correctly. It will only run if a BISON executable is found. At this time, a check is not performed to verify a Cubit executable is found due to variations in the executable's location across platforms. The cubit bin directory must be on the PYTHONPATH for BISON's mesh script to run. Four variables are sampled in this test: two material properties (fuel thermal conductivity and cladding thermal conductivity) and two geometric properties (fuel pellet radius and cladding thickness) that will be sent to the BISON input file and Bison Mesh Script input respectively. Variables are sampled in a grid with specified values for each parameter. The test checks for generated exodus files and diffs the generated csv with the gold one.

- Original Author:

  - senrs

- Creation date:

  - 2015-10-06

- The classes tested in this test are:

  - Models.Code.BisonAndMesh

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.
  2. revision info:
     - author : tompjame
     - date : 2016-08-29
     - description: Ref #668 Added tests for Bison and relap mammoth interaction, reorganized Mammoth Interface test folder, updated syntax in mammoth and mesh interface tests, added conversion scripts for new cubit and mammoth input file syntax. Ref #668 Updated mammoth interface for additional extensibility and individual entries for input file variables. Ref #668 Had to edit the method of checking

correct files in Rattlesnake interface and add more test files for no executable test.
Ref #668 Removed whitespace from test inputs. Ref #668 Updated documentation. Ref #668 Removing more whitespace. Ref #668 Edited test files. Ref #668
Removed unnecessary files from test folder for interface.

3. revision info:

 – author : alfoa
 – date : 2016-12-15
 – description: Closes #769

4. revision info:

 – author : alfoa
 – date : 2017-01-21
 – description: Adding this test description.

2.3.125 FRAMEWORK CODEINTERFACETESTS.MOOSEVPPINTERFACE

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_`
`MOOSE_VPP.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.MooseVPPInterface
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.MooseVPPInterface
```

- Test Description:

  – An example of using the MooseBasedApp code interface. This test is designed to
    ensure the MooseBasedApp interface is able to process vectorial data (sample vectors)

- Original Author:

  – senrs

- Creation date:

  – 2015-10-06

- The classes tested in this test are:

  – Models.Code.MooseBasedApp

- Since the creation of this test, the following main revisions have been performed:

1. revision info:

   – author : alfoa
   – date : 2015-10-09
   – description: Changing batch size in RAVEN test

2. revision info:

   – author : senrs
   – date : 2015-10-09
   – description: Moved the VPP outfilename as an input parameter

3. revision info:

   – author : maljdan
   – date : 2016-04-06
   – description: Updating test cases to reflect the changes to the user input.

4. revision info:

   – author : alfoa
   – date : 2016-12-15
   – description: Closes #769

5. revision info:

   – author : alfoa
   – date : 2017-01-21
   – description: Adding this test description.

2.3.126   FRAMEWORK CODEINTERFACETESTS.MAAP5INTERFACEFORWARDSAMPLING

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_
maap5_code_interface_forward.xml`". This test can be called executing the following
command:

```
./run_tests --re=framework/CodeInterfaceTests.MAAP5interfaceForwardSampling
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.MAAP5interfaceForwa
```


- Test Description:

   – An example of using the the Model Code of type MAAP5, with Forward Sampling
     (e.g. MonteCarlo)

- Original Author:

  - alfoa

- Creation date:

  - 2016-06-27

- The classes tested in this test are:

  - Models.Code.MAAP5

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2016-07-01
     - description: Addressed Dan's comments on interface (By Claudia Picoco)
  2. revision info:
     - author : alfoa
     - date : 2016-09-01
     - description: Close #650
  3. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: Test updates
  4. revision info:
     - author : talbpaul
     - date : 2016-10-25
     - description: removed dim in OutStreams Plot for validation purposes
  5. revision info:
     - author : alfoa
     - date : 2016-11-15
     - description: Updated input files
  6. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.127 FRAMEWORK CODEINTERFACETESTS.MAAP5INTERFACEDETSAMPLING

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_maap5_code_interface_det.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.MAAP5interfaceDETSampling
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.MAAP5interfaceDETSa
```

- Test Description:

    - An example of using the the Model Code of type MAAP5. This test is aimed to test the mechanics of the MAAP5 interface when used with the Dynamic Event Tree methodology.

- Original Author:

    - alfoa

- Creation date:

    - 2016-06-27

- The classes tested in this test are:

    - Models.Code.MAAP5, Samplers.DynamicEventTree

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2016-07-01
        - description: Addressed Dan's comments on interface (By Claudia Picoco)
    2. revision info:
        - author : bobk
        - date : 2016-07-07
        - description: Changes file mode on two XML test file from 775 to 664 so that they will not be flagged as modified after validate_xml is run.
    3. revision info:

- – author : alfoa
- – date : 2016-09-01
- – description: Close #650

4. revision info:

- – author : talbpaul
- – date : 2016-09-15
- – description: Test updates

5. revision info:

- – author : talbpaul
- – date : 2016-10-25
- – description: removed dim in OutStream Plot for validation purposes

6. revision info:

- – author : alfoa
- – date : 2016-11-15
- – description: Updated input files

7. revision info:

- – author : alfoa
- – date : 2017-01-21
- – description: Adding this test description.

2.3.128 FRAMEWORK CODEINTERFACETESTS.MAAP5INTERFACEHYBRIDDETSAMPLING

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_ maap5_code_interface_hybrid_det.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.MAAP5interfaceHybridDETSampli
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.MAAP5interfaceHybri
```

- • Test Description:

  - – An example of using the the Model Code of type MAAP5. This test is aimed to test the mechanics of the MAAP5 interface when used with the Dynamic Event Tree (Hybrid Dynamic Event Tree) methodology.

- Original Author:

  - alfoa

- Creation date:

  - 2016-07-01

- The classes tested in this test are:

  - Models.Code.MAAP5, Samplers.DynamicEventTree

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2016-07-05
     - description: Fixing XSD and user manual to match XSD and code.
  2. revision info:
     - author : alfoa
     - date : 2016-09-01
     - description: Close #650
  3. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: Test updates
  4. revision info:
     - author : talbpaul
     - date : 2016-10-25
     - description: removed dim in OutStream Plot for validation purposes
  5. revision info:
     - author : alfoa
     - date : 2016-11-15
     - description: Updated input files
  6. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.129 FRAMEWORK CODEINTERFACETESTS.MAAP5INTERFACEADETSAMPLING

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_maap5_code_interface_adaptive_det.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.MAAP5interfaceADETSampling
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.MAAP5interfaceADET
```

- Test Description:

  - An example of using the the Model Code of type MAAP5. This test is aimed to test the mechanics of the MAAP5 interface when used with the Adaptive Dynamic Event Tree methodology.

- Original Author:

  - alfoa

- Creation date:

  - 2016-07-11

- The classes tested in this test are:

  - Models.Code.MAAP5, Samplers.AdaptiveDynamicEventTree

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2016-07-21
     - description: Fixed XSD
  2. revision info:
     - author : alfoa
     - date : 2016-07-27
     - description: modified xml input tests for MAAP5
  3. revision info:
     - author : alfoa

- date : 2017-01-21
- description: Adding this test description.

4. revision info:
   - author : maljdan
   - date : 2017-05-03
   - description: Reducing batch size to ensure consistent execution path

5. revision info:
   - author : alfoa
   - date : 2019-03-07
   - description: Modified syntax in Functions as for issue #934

2.3.130 FRAMEWORK CODEINTERFACETESTS.MAAP5INTERFACEAHDETSAMPLING

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_maap5_code_interface_adaptive_hybrid_det.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.MAAP5interfaceAHDETSampling
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.MAAP5interfaceAHDET
```

- Test Description:

  - An example of using the the Model Code of type MAAP5. This test is aimed to test the mechanics of the MAAP5 interface when used with the Adaptive Dynamic Event Tree methodology (Adaptive Hybrid Dynamic Event Tree).

- Original Author:

  - alfoa

- Creation date:

  - 2016-07-11

- The classes tested in this test are:

  - Models.Code.MAAP5, Samplers.AdaptiveDynamicEventTree

- Since the creation of this test, the following main revisions have been performed:

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1. revision info:
   - author : alfoa
   - date : 2016-07-21
   - description: Fixed XSD

2. revision info:
   - author : alfoa
   - date : 2016-07-27
   - description: Modified xml input tests for MAAP5

3. revision info:
   - author : alfoa
   - date : 2017-01-21
   - description: Adding this test description.

4. revision info:
   - author : maljdan
   - date : 2017-05-03
   - description: Reducing batch size to ensure consistent execution path

5. revision info:
   - author : alfoa
   - date : 2019-03-07
   - description: Modified syntax in Functions as for issue #934

2.3.131 FRAMEWORK CODEINTERFACETESTS.MAAP5INTERFACEDETSAMPLINGMULTIBRA

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_maap5_code_interface_det_multibranch.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.MAAP5interfaceDETSamplingMult
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.MAAP5interfaceDETSa
```

- Test Description:
  - An example of using the the Model Code of type MAAP5. This test is aimed to test the mechanics of the MAAP5 interface when used with the Dynamic Event Tree methodology, characterized my a Multi-Branch sampling approach.

- Original Author:

  - alfoa

- Creation date:

  - 2016-12-16

- The classes tested in this test are:

  - Models.Code.MAAP5, Samplers.DynamicEventTree

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.132 FRAMEWORK CODEINTERFACETESTS.MELCORINTERFACEFORWARDSAMPLINGNO

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/test_melcor_interface.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.melcorInterfaceForwardSamplin
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.melcorInterfaceForw
```

- Test Description:

  - An example of using the Melcor 2.1/2.2 code interface. This test is aimed to test the mechanics of the interface (no executable).

- Original Author:

  - alfoa

- Creation date:

  - 2017-04-27

- The classes tested in this test are:

220

– Models.Code.Melcor

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : alfoa
        – date : 2017-04-27
        – description: Adding this test description.

2.3.133 FRAMEWORK CODEINTERFACETESTS COBRATF.TEST1

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/CobraTF/test1_cobratf_code_interface.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/CobraTF.test1
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/CobraTF.test1
```

- Test Description:

    – An example of using the CobraTF code interface. This test is aimed to test the mechanics of the interface using a MonteCarlo sampling strategy.

- Original Author:

    – jyoo,alptezbasaran

- Creation date:

    – 2018-04-03

- The classes tested in this test are:

    – Models.Code.CobraTF

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : jyoo
        – date : 2018-04-03

– description: New CobraTF test case

2. revision info:

– author : alptezbasaran
– date : 2018-08-15
– description: Modification for new sampling method (generic)

2.3.134 FRAMEWORK CODEINTERFACETESTS COBRATF.TEST2

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/CobraTF/`
`test2_cobratf_code_interface.xml`". This test can be called executing the following
command:

```
./run_tests --re=framework/CodeInterfaceTests/CobraTF.test2
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/CobraTF.test2
```

- Test Description:

  – An example of using the CobraTF code interface. This test is aimed to test the mechan-
    ics of the interface using two sampling strategies in cascade (Monte Carlo and Grid
    sampling).

- Original Author:

  – jyoo,alptezbasaran

- Creation date:

  – 2018-04-03

- The classes tested in this test are:

  – Models.Code.CobraTF

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:

     – author : jyoo
     – date : 2018-04-03
     – description: New CobraTF test case

2. revision info:

    – author : alptezbasaran

    – date : 2018-08-15

    – description: Modification for new sampling method (generic)

2.3.135 FRAMEWORK CODEINTERFACETESTS COBRATF.TEST3

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/CobraTF/ test3_cobratf_code_interface.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/CobraTF.test3
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/CobraTF.test3
```

- Test Description:

    – An example of using the CobraTF code interface. This test is aimed to test the mechanics of the interface using two supplementary input files (vuq_params.txt and vuq_mult.txt). All input files are to be perturbed

- Original Author:

    – alptezbasaran

- Creation date:

    – 2018-07-22

- The classes tested in this test are:

    – Models.Code.CobraTF

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:

        – author : alptezbasaran

        – date : 2018-07-22

        – description: New CobraTF test case

2.3.136 FRAMEWORK CODEINTERFACETESTS COBRATF.TEST4

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/CobraTF/test4_cobratf_code_interface.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/CobraTF.test4
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/CobraTF.test4
```

- Test Description:

    - An example of using the CobraTF code interface. This test is aimed to test the mechanics of the interface using a supplementary input file (vuq_params.txt). All input files are to be perturbed. Newly added heat slab output parser capabilities are tested.

- Original Author:

    - alptezbasaran

- Creation date:

    - 2018-07-24

- The classes tested in this test are:

    - Models.Code.CobraTF

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alptezbasaran
        - date : 2018-07-24
        - description: New CobraTF test case

2.3.137 FRAMEWORK CODEINTERFACETESTS COBRATF.TEST5

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/CobraTF/test5_cobratf_code_interface.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/CobraTF.test5
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/CobraTF.test5
```

- Test Description:

    - An example of using the CobraTF code interface. This test is aimed to test the output
      conversion if input file name is 'deck.inp'

- Original Author:

    - alptezbasaran

- Creation date:

    - 2018-07-26

- The classes tested in this test are:

    - Models.Code.CobraTF

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alptezbasaran
        - date : 2018-07-26
        - description: New CobraTF test case

2.3.138 FRAMEWORK CODEINTERFACETESTS INSTANT.TESTINSTANT MC

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/Instant/
test_mc_instant.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/Instant.testInstant_MC
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/Instant.testInstant
```

- Test Description:

- An example of using the code interface RattleSnake when the INSTANT solver is employed (noexecutable). This test is aimed to check the mechanics of the code interface when a XS library needs to be perturbed (IAEA2D benchmark), with a MonteCarlo sampling strategy

- Original Author:

  - wangc

- Creation date:

  - 2016-05-08

- The classes tested in this test are:

  - Models.Code.Rattlesnake, Sampler.MonteCarlo

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  2. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.139 FRAMEWORK CODEINTERFACETESTS INSTANT.TEST DIFFCOEFF

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/Instant/ test_diffusioncoefficient.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/Instant.test_diffCoeff
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/Instant.test_diffCo
```

- Test Description:

- An example of using the code interface RattleSnake when the INSTANT solver is employed. This test is aimed to check the mechanics of the code interface when the diffusion coefficient in the XS library needs to be perturbed.

- Original Author:

  - wangc

- Creation date:

  - 2016-08-09

- The classes tested in this test are:

  - Models.Code.Rattlesnake

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: Test updates
  2. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.140 FRAMEWORK CODEINTERFACETESTS INSTANT.TESTINSTANT NOEXEC

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/Instant/test_instant_noexec.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/Instant.testInstant_noexec
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/Instant.testInstant
```

- Test Description:

  - An example of using the code interface RattleSnake when the INSTANT solver is employed (noexecutable). This test is aimed to check the mechanics of the code interface when a XS library needs to be perturbed (IAEA2D benchmark).

- Original Author:

  - wangc

- Creation date:

  - 2016-07-14

- The classes tested in this test are:

  - Models.Code.Rattlesnake

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  2. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.141   FRAMEWORK CODEINTERFACETESTS.MOOSEPARSER

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/MOOSEparser/ test_MOOSE_parser.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests.MOOSEparser
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests.MOOSEparser
```

- Test Description:

  - A check to make sure the Raven produced input file is the same as the original parsed MOOSE input file.

- Original Author:

  - zabrax

- Creation date:
  - 2018-09-21

- The classes tested in this test are:
  - Models.Code.MooseBasedApp

2.3.142 FRAMEWORK CODEINTERFACETESTS PHISICS.MRTAU

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/PHISICS/test_mrtau_standalone.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/PHISICS.mrtau
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/PHISICS.mrtau
```

- Test Description:
  - This test is aimed to test the mechanics of the interface between RAVEN and PHISICS, using the burnup code MRTAU. The decay constant of the PU241 is perturbed and the mass of the NP237. NOTE: The input files and data have been epurated from nuclear data; consequentially the case is not runable for real with PHISICS (MRTAU). The code will error out.

- Original Author:
  - rouxpn

- Creation date:
  - 2018-04-23

- The classes tested in this test are:
  - Models.Code.Phisics

- Since the creation of this test, the following main revisions have been performed:
  1. revision info:
     - author : alfoa
     - date : 2018-07-08
     - description: modified to make it work and to remove nuclear data

2.3.143 FRAMEWORK CODEINTERFACETESTS PHISICS.PHISICS

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/PHISICS/
test_phisics_interface.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/PHISICS.phisics
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/PHISICS.phisics
```

- Test Description:

    - This test is aimed to test the mechanics of the interface between RAVEN and PHISICS, using the full-blonde PHISICS executable. Qvalues, decay constants, initial densities and cross sections get perturbed. NOTE: The input files and data have been epurated from nuclear data; consequentially the case is not runable for real with PHISICS. The code will error out.

- Original Author:

    - rouxpn

- Creation date:

    - 2018-04-23

- The classes tested in this test are:

    - Models.Code.Phisics

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2018-07-08
        - description: modified to make it work and to remove nuclear data

2.3.144 FRAMEWORK CODEINTERFACETESTS PHISICS.PHISICSRELAP5

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/PHISICS/
test_relapPhisics_interface.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/PHISICS.phisicsRelap5
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/PHISICS.phisicsRela
```

- Test Description:
  - This test is aimed to test the mechanics of the combined interface PHISICS/RELAP5 using the RELAP5 (coupled with PHISICS) executable. The density of the I135 (PHISICS side) and the initial temperature for time-dep volume 201 are perturbed. NOTE: The input files and data have been epurated from nuclear data; consequentially the case is not runable for real with PHISICS and RELAP5-3D coupled. The coupled suite will error out.

- Original Author:
  - rouxpn

- Creation date:
  - 2018-04-25

- The classes tested in this test are:
  - Models.Code.PhisicsRelap5

- Since the creation of this test, the following main revisions have been performed:
  1. revision info:
     - author : rouxpn
     - date : 2018-08-08
     - description: PHISICS RELAP suite test case added

2.3.145 FRAMEWORK CODEINTERFACETESTS RATTLESNAKEINTERFACE.TESTGRIDRATTL

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/RattlesnakeInter test_grid_rattlesnake.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/RattlesnakeInterface.testGri
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/RattlesnakeInterfac
```

- Test Description:

  - An example of using the code interface RattleSnake when XS need to be perturbed.
    This test is aimed to check the functionality (running the code) of the Rattlesnake in-
    terface when a Grid sampling approach is used.

- Original Author:

  - wangc

- Creation date:

  - 2016-04-21

- The classes tested in this test are:

  - Models.Code.Rattlesnake, Sampler.Grid

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: Test updates
  2. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.146 FRAMEWORK CODEINTERFACETESTS RATTLESNAKEINTERFACE.TESTMC

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/RattlesnakeInter`
`test_mc_rattlesnake.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/RattlesnakeInterface.testMC
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/RattlesnakeInterfac
```

- Test Description:

  - An example of using the code interface RattleSnake when XS need to be perturbed. This test is aimed to check the functionality (running the code) of the Rattlesnake interface when a MonteCarlo sampling approach is used.

- Original Author:

  - wangc

- Creation date:

  - 2016-04-21

- The classes tested in this test are:

  - Models.Code.Rattlesnake, Sampler.MonteCarlo

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2016-08-04
     - description: Modify test to perturb transport XS and regold the tests
  2. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: Test updates
  3. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.147 FRAMEWORK CODEINTERFACETESTS RATTLESNAKEINTERFACE.TESTMCRATTLES

This test can be found at "./raven/tests/framework/CodeInterfaceTests/RattlesnakeInter
test_perturb_rattlesnake_only.xml". This test can be called executing the following
command:

```
./run_tests --re=framework/CodeInterfaceTests/RattlesnakeInterface.testMCRa
```

or

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```
./run_framework_tests --re=framework/CodeInterfaceTests/RattlesnakeInterfa
```

- Test Description:

    – An example of using the code interface RattleSnake. This test is aimed to check
      the functionality (running the code) of the Rattlesnake interface (perturbing only Rat-
      tleSnake and not the YAK library) when a MonteCarlo sampling approach is used.

- Original Author:

    – wangc

- Creation date:

    – 2016-04-21

- The classes tested in this test are:

    – Models.Code.Rattlesnake, Sampler.MonteCarlo

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : talbpaul
        – date : 2016-09-15
        – description: other test updates
    2. revision info:
        – author : alfoa
        – date : 2017-01-21
        – description: Adding this test description.

2.3.148 FRAMEWORK CODEINTERFACETESTS RATTLESNAKEINTERFACE.TESTMCYAK

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/RattlesnakeInter
test_perturb_yak_only.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/RattlesnakeInterface.testMCYa
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/RattlesnakeInterfac
```

- Test Description:

  - An example of using the code interface RattleSnake when XS need to be perturbed. This test is aimed to check the functionality (running the code) of the Rattlesnake interface (perturbing only YAK library) when a MonteCarlo sampling approach is used.

- Original Author:

  - wangc

- Creation date:

  - 2016-04-21

- The classes tested in this test are:

  - Models.Code.Rattlesnake, Sampler.MonteCarlo

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2016-08-04
     - description: Modify test to perturb transport XS and regold the tests
  2. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: Test updates
  3. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.149 FRAMEWORK CODEINTERFACETESTS RELAP5.RELAP5INTERFACETESTSINGLERUN

This test can be found at "./raven/tests/framework/CodeInterfaceTests/RELAP5/
test_relap5_code_interface_single_run.xml". This test can be called executing
the following command:

```
./run_tests --re=framework/CodeInterfaceTests/RELAP5.RELAP5interfaceTestSi
```

or

235

```
./run_framework_tests --re=framework/CodeInterfaceTests/RELAP5.RELAP5inter
```

- Test Description:

  - An example of using the RELAP5 code interface with a SingleRun step. This test is aimed to test the mechanics of the interface (no executable).

- Original Author:

  - alfoa

- Creation date:

  - 2017-04-01

- The classes tested in this test are:

  - Models.Code.RELAP5

2.3.150   FRAMEWORK CODEINTERFACETESTS RELAP5.RELAP5INTERFACETESTALIASALIAS

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/RELAP5/ test_relap5_code_interface_alias.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/RELAP5.RELAP5interfaceTestAl
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/RELAP5.RELAP5inter
```

- Test Description:

  - An example of using the RELAP5 code interface. This test is aimed to test the mechanics of the interface (no executable), when the RAVEN alias system is used.

- Original Author:

  - alfoa

- Creation date:

  - 2016-11-28

- The classes tested in this test are:

  - Models.Code.RELAP5

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.151 FRAMEWORK CODEINTERFACETESTS RELAP5.RELAP5INTERFACEMULTDECKTEST

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/RELAP5/`
`test_relap5_code_interface_multideck.xml`". This test can be called executing the
following command:

```
./run_tests --re=framework/CodeInterfaceTests/RELAP5.RELAP5interfaceMultDe
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/RELAP5.RELAP5inter
```

- Test Description:

  - An example of using the Relap5 code interface. This test is aimed to test the mechanics
    of the interface (no executable) when a multi-deck type of input needs to be perturbed.

- Original Author:

  - alfoa

- Creation date:

  - 2016-05-03

- The classes tested in this test are:

  - Models.Code.Relap5

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul

237

- date : 2016-09-15
- description: Test updates

2. revision info:
- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.152 FRAMEWORK CODEINTERFACETESTS RELAP5.RELAP5INTERFACEMULTDECKTEST

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/RELAP5/`
`test_relap5_code_interface_multideck_choosing_deck_output.xml`". This
test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/RELAP5.RELAP5interfaceMultDec
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/RELAP5.RELAP5inter
```

- Test Description:

  - An example of using the RELAP5 code interface. This test is aimed to test the mechanics of the interface (no executable), when a multi deck input is used (and needs to be perturbed).

- Original Author:

  - alfoa

- Creation date:

  - 2016-07-07

- The classes tested in this test are:

  - Models.Code.Relap5

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15

238

- – description: Test updates

2. revision info:
    - – author : alfoa
    - – date : 2017-01-21
    - – description: Adding this test description.

2.3.153 FRAMEWORK CODEINTERFACETESTS RELAP5.RELAP5INTERFACETESTALIASANDM

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/RELAP5/`
`test_relap5_code_ensemble_alias_metadata.xml`". This test can be called execut-
ing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/RELAP5.RELAP5interfaceTestAl
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/RELAP5.RELAP5inter
```

- • Test Description:

    - – An example of using the RELAP5 code interface. This test is aimed to test the mechan-
      ics of the interface (no executable), when the RAVEN alias system is used and some
      metadata (i.e. restart prefix) needs to be passed in. This test executes 2 relap5 runs for
      each realization: the first one establishes the steady state, the second one restarts the
      calculation and runs a transient.

- • Original Author:

    - – alfoa

- • Creation date:

    - – 2017-02-19

- • The classes tested in this test are:

    - – Models.Code.RELAP5

- • Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - – author : alfoa

- date : 2017-01-21
- description: Adding this test description.

2. revision info:

- author : alfoa
- date : 2019-02-13
- description: Modified description

2.3.154 FRAMEWORK CODEINTERFACETESTS RELAP5.RELAP5INTERFACEOPERATORXMLN

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/RELAP5/ test_relap5_code_interface_operator.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/RELAP5.RELAP5interfaceOperato
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/RELAP5.RELAP5inter
```

- Test Description:

  - An example of using the RELAP5 code interface. This test is aimed to test the mechanics of the interface (no executable).

- Original Author:

  - alfoa

- Creation date:

  - 2019-02-04

- The classes tested in this test are:

  - Models.Code.RELAP5

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:

     - author : alfoa
     - date : 2019-02-04
     - description: Adding this test description.

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2.3.155 FRAMEWORK CODEINTERFACETESTS RELAP5.INSSRELAP5JAPANINTERFACESAMPI

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/RELAP5/
test_relap5_code_inss.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/RELAP5.INSSrelap5JapanInterfa
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/RELAP5.INSSrelap5Ja
```

- Test Description:

    - An example of using the RELAP5 code interface (modified version of INSS (Japan)).
      This test is aimed to test the mechanics of the interface (no executable), that perturbs
      the RELAP5 input deck and the auxiliary file that the RELAP5 version by INSS reads.

- Original Author:

    - alfoa

- Creation date:

    - 2016-07-21

- The classes tested in this test are:

    - Models.Code.Relap5inssJp

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2016-10-24
        - description: finalized branch

    2. revision info:
        - author : alfoa
        - date : 2016-10-25
        - description: added xsd

    3. revision info:
        - author : alfoa
        - date : 2016-10-25

- description: ok

4. revision info:
   - author : alfoa
   - date : 2017-01-21
   - description: Adding this test description.

2.3.156 SAPHIRE

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/SaphireInterface`
`test_saphire.xml`". This test can be called executing the following command:

```
./run_tests --re=saphire
```

or

```
./run_framework_tests --re=saphire
```

- Test Description:
  - This test is aimed to show the extension of the GenericCode interface for SAPHIRE

- Original Author:
  - wangc

- Creation date:
  - 2018-07-03

- The classes tested in this test are:
  - CodeInterface

2.3.157 FRAMEWORK CODEINTERFACETESTS SCALE.SCALEORIGEN

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/Scale/`
`test_scale_origen_forward.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/Scale.ScaleOrigen
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/Scale.ScaleOrigen
```

- Test Description:

  - An example of using the the Model Code of type Scale, with Forward Sampling and driving the ORIGEN sequence

- Original Author:

  - alfoa

- Creation date:

  - 2018-04-04

- The classes tested in this test are:

  - Models.Code.Scale

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2018-04-04
     - description: Test created

2.3.158 FRAMEWORK CODEINTERFACETESTS SCALE.SCALEORIGEN

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/Scale/ test_scale_triton_forward.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/CodeInterfaceTests/Scale.ScaleOrigen
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/Scale.ScaleOrigen
```

- Test Description:

  - An example of using the the Model Code of type Scale, with Forward Sampling and driving the TRITON (t- dpl) sequence

- Original Author:

  - alfoa

- Creation date:

  - 2018-04-04

- The classes tested in this test are:

  - Models.Code.Scale

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2018-04-04
     - description: Test created

2.3.159   FRAMEWORK CODEINTERFACETESTS SCALE.SCALETRITONORIGENCOMBINED

This test can be found at "`./raven/tests/framework/CodeInterfaceTests/Scale/`
`test_scale_combined_forward.xml`". This test can be called executing the following
command:

```
./run_tests --re=framework/CodeInterfaceTests/Scale.ScaleTritonOrigenCombi
```

or

```
./run_framework_tests --re=framework/CodeInterfaceTests/Scale.ScaleTritonO
```

- Test Description:

  - An example of using the the Model Code of type Scale, with Forward Sampling and combined calcolation (Triton to Origen)

- Original Author:

  - alfoa

- Creation date:

  - 2018-04-04

- The classes tested in this test are:

- Models.Code.Scale

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2018-04-04
        - description: Test created
    2. revision info:
        - author : alfoa
        - date : 2019-03-07
        - description: Modified syntax in Functions as for issue #934

2.3.160 FRAMEWORK DATABASES.TEST PUSH INTO HDF5

This test can be found at "`./raven/tests/framework/Databases/test_push_into_`
`hdf5.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Databases.test_push_into_hdf5
```

or

```
./run_framework_tests --re=framework/Databases.test_push_into_hdf5
```

- Test Description:

    - The idea of this input case is to test che capability of RAVEN create a Database HDF5 from DataObjects.PointSet and DataObjects.HistorySet and to construct from a Database the DataObjects.

- Original Author:

    - alfoa

- Creation date:

    - 2013-11-11

- The classes tested in this test are:

    - DataObjects.PointSet, DataObjects.HistorySet, Databases.HDF5

- Since the creation of this test, the following main revisions have been performed:

245

1. revision info:
   - author : alfoa
   - date : 2015-05-19
   - description: Closes #171

2. revision info:
   - author : alfoa
   - date : 2015-06-18
   - description: Changed Name of all DataObjects

3. revision info:
   - author : alfoa
   - date : 2015-06-21
   - description: modified Names + added new capabilities and flexibility in DataObjects + added options block. Modified XSD schema and manual to reflect the modifications

4. revision info:
   - author : maljdan
   - date : 2016-04-06
   - description: Updating test cases to reflect the changes to the user input.

5. revision info:
   - author : talbpaul
   - date : 2016-04-26
   - description: added check for pre-existing backup files when validating

6. revision info:
   - author : maljdan
   - date : 2016-05-20
   - description: Updating the test cases to remove references to Point or History.

7. revision info:
   - author : alfoa
   - date : 2017-01-21
   - description: Adding this test description.

8. revision info:
   - author : alfoa
   - date : 2019-03-01
   - description: Modified test location

2.3.161 FRAMEWORK DATABASES.TEST MERGE 2 DATABASES

This test can be found at "`./raven/tests/framework/Databases/test_merge_2_`
`databases.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Databases.test_merge_2_databases
```

or

```
./run_framework_tests --re=framework/Databases.test_merge_2_databases
```

- Test Description:
    - This test is aimed to check the possiblity in RAVEN to merge 2 different Databases of type HDF5.
- Original Author:
    - alfoa
- Creation date:
    - 2015-03-03
- The classes tested in this test are:
    - Databases.HDF5
- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : maljdan
        - date : 2016-04-06
        - description: Updating test cases to reflect the changes to the user input.
    2. revision info:
        - author : talbpaul
        - date : 2016-04-26
        - description: some tests slipped through
    3. revision info:
        - author : alfoa
        - date : 2016-04-27
        - description: New subdirectories structure

4. revision info:

    – author : maljdan
    – date : 2016-05-20
    – description: Updating the test cases to remove references to Point or History.

5. revision info:

    – author : maljdan
    – date : 2016-05-23
    – description: Changing and regolding a test case that uses an external model when unnecessary.

6. revision info:

    – author : alfoa
    – date : 2017-01-21
    – description: Adding this test description.

7. revision info:

    – author : alfoa
    – date : 2019-03-01
    – description: Modified test location

2.3.162   FRAMEWORK DATABASES.NEWERDATABASEWITHFILENAME

This test can be found at "`./raven/tests/framework/Databases/test_new_database_
with_filename.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Databases.newerDatabaseWithFilename
```

or

```
./run_framework_tests --re=framework/Databases.newerDatabaseWithFilename
```

- Test Description:

    – This test is aimed to check the possiblity in RAVEN to create a newer Database (HDF5) with a specific name

- Original Author:

    – alfoa

- Creation date:

- 2016-12-12

- The classes tested in this test are:

  - Databases.HDF5

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2017-05-19
     - description: Added test
  2. revision info:
     - author : alfoa
     - date : 2019-03-01
     - description: Modified test location

2.3.163 FRAMEWORK DATABASES.HDF5SELECTIVE

This test can be found at "`./raven/tests/framework/Databases/hdf5_selective.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Databases.HDF5selective
```

or

```
./run_framework_tests --re=framework/Databases.HDF5selective
```

- Test Description:

  - Tests the ability for HDF5 databases to selectively store data by defining variable blocks. Without the selectivity, the resulting HDF5 is 220 KB (all.hdf5). With selectivity, the resulting HDF5 is 187 KB (sine.hdf5).

- Original Author:

  - talbpaul

- Creation date:

  - 2017-07-06

- The classes tested in this test are:

– Databases.HDF5

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : alfoa
        – date : 2019-03-01
        – description: Modified test location

2.3.164 FRAMEWORK DATABASES.HDF5LOCATION

This test can be found at "`./raven/tests/framework/Databases/hdf5_location.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Databases.HDF5location
```

or

```
./run_framework_tests --re=framework/Databases.HDF5location
```

- Test Description:

    – Tests that the location specified for the HDF5 is relative to the working dir, not to the run dir.

- Original Author:

    – talbpaul

- Creation date:

    – 2017-07-10

- The classes tested in this test are:

    – Databases.HDF5

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : alfoa
        – date : 2019-03-01
        – description: Modified test location

2.3.165 FRAMEWORK DATABASES.LARGE HDF5

This test can be found at "`./raven/tests/framework/Databases/test_large_database.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Databases.large_HDF5
```

or

```
./run_framework_tests --re=framework/Databases.large_HDF5
```

- Test Description:

    - This test is aimed to test the capability of the RAVEN database strucuture to handle large databases (#926) in terms of group names.

- Original Author:

    - @alfoa

- Creation date:

    - 2019-03-01

- The classes tested in this test are:

    - Databases.HDF5

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2019-03-01
        - description: Added test for testing new way to handle group names

2.3.166 FRAMEWORK DATAOBJECTS.TEST OUTPUT POINT ATTRIBUTES

This test can be found at "`./raven/tests/framework/DataObjects/pointSetAttributes.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/DataObjects.test_output_point_attributes
```

or

```
./run_framework_tests --re=framework/DataObjects.test_output_point_attribut
```

- Test Description:

  - Test to check the functionalities of DataObjects preprocess the data applying simple operator (e.g. max value, average, min value, etc.), in the *options* XML node. In this case it tests the attributes for PointSet.

- Original Author:

  - alfoa

- Creation date:

  - 2018-02-01

- The classes tested in this test are:

  - DataObjects.PointSet, Models.ExternalModel

2.3.167 FRAMEWORK DATAOBJECTS.TEST OUTPUT ATTRIBUTES

This test can be found at "`./raven/tests/framework/DataObjects/historySetAttributes.`
`xml`". This test can be called executing the following command:

```
./run_tests --re=framework/DataObjects.test_output_attributes
```

or

```
./run_framework_tests --re=framework/DataObjects.test_output_attributes
```

- Test Description:

  - Test to check the functionalities of DataObjects preprocess the data applying simple operator (e.g. max value, average, min value, etc.), in the *options* XML node. In this case it tests the attributes for HistorySet.

- Original Author:

  - alfoa

- Creation date:

– 2018-02-01

- The classes tested in this test are:

    – DataObjects.HistorySet, Models.ExternalModel

2.3.168 FRAMEWORK DATAOBJECTS.TEST OUTPUT FROM DB POINT ATTRIBUTES

This test can be found at "`./raven/tests/framework/DataObjects/pointSetFromDBAttribute`
`xml`". This test can be called executing the following command:

```
./run_tests --re=framework/DataObjects.test_output_from_db_point_attributes
```

or

```
./run_framework_tests --re=framework/DataObjects.test_output_from_db_point_
```

- Test Description:

    – Test to check the functionalities of DataObjects preprocess the data applying simple
      operator (e.g. max value, average, min value, etc.), in the *options* XML node. In this
      case it tests the attributes for PointSet coming from a Database.

- Original Author:

    – alfoa

- Creation date:

    – 2018-02-01

- The classes tested in this test are:

    – DataObjects.PointSet, Models.ExternalModel

2.3.169 FRAMEWORK DATAOBJECTS.TEST OUTPUT FROM DB HISTORY ATTRIBUTES

This test can be found at "`./raven/tests/framework/DataObjects/historySetFromDBAttribu`
`xml`". This test can be called executing the following command:

```
./run_tests --re=framework/DataObjects.test_output_from_db_history_attribu
```

or

```
./run_framework_tests --re=framework/DataObjects.test_output_from_db_histo
```

- Test Description:

  - Test to check the functionalities of DataObjects preprocess the data applying simple operator (e.g. max value, average, min value, etc.), in the *options* XML node. In this case it tests the attributes for HistorySet coming from a DataBase.

- Original Author:

  - alfoa

- Creation date:

  - 2018-02-01

- The classes tested in this test are:

  - DataObjects.HistorySet, Models.ExternalModel

2.3.170 FRAMEWORK DATAOBJECTS.DATAOBJECT METADATA

This test can be found at "`./raven/tests/framework/DataObjects/test_DataObject_metadata.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/DataObjects.dataObject_metadata
```

or

```
./run_framework_tests --re=framework/DataObjects.dataObject_metadata
```

- Test Description:

  - Test to check the functionalities of DataObjects.PointSet, when metadata need to be dumped out. In this test, the PointProbability generated during the employment of a sampling strategy is dumped in the CSV files, even if it is part of the metadata container.

- Original Author:

  - maljdan

- Creation date:

– 2016-06-23

- The classes tested in this test are:

    – DataObjects.PointSet

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : maljdan
        – date : 2016-06-23
        – description: Moving test case into a specific DataObjects folder
    2. revision info:
        – author : alfoa
        – date : 2017-01-21
        – description: Adding this test description.

2.3.171 FRAMEWORK DATAOBJECTS.LOAD CSV

This test can be found at "`./raven/tests/framework/DataObjects/test_load_csv.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/DataObjects.load_csv
```

or

```
./run_framework_tests --re=framework/DataObjects.load_csv
```

- Test Description:

    – Test to check the functionalities of DataObjects.PointSet to be constructed by an extern input file (csv)

- Original Author:

    – maljdan

- Creation date:

    – 2016-06-23

- The classes tested in this test are:

– DataObjects.PointSet

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : alfoa
        – date : 2017-01-21
        – description: Adding this test description.

2.3.172 FRAMEWORK DATAOBJECTS.LOAD CSV HISTORY

This test can be found at "`./raven/tests/framework/DataObjects/test_load_csv_history.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/DataObjects.load_csv_history
```

or

```
./run_framework_tests --re=framework/DataObjects.load_csv_history
```

- Test Description:

    – Test to check the functionalities of DataObjects.HistorySet to be constructed by an extern input file (csv)

- Original Author:

    – maljdan

- Creation date:

    – 2016-06-23

- The classes tested in this test are:

    – DataObjects.HistorySet

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : alfoa
        – date : 2017-01-21
        – description: Adding this test description.

2.3.173 FRAMEWORK DATAOBJECTS.LOAD CSV HISTORY

This test can be found at "`./raven/tests/framework/DataObjects/load_csv_dataset.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/DataObjects.load_csv_history
```

or

```
./run_framework_tests --re=framework/DataObjects.load_csv_history
```

- Test Description:

    - Test to check the functionalities of DataObjects.DataSet to be constructed by an extern input file (csv)

- Original Author:

    - maljdan

- Creation date:

    - 2018-04-26

- The classes tested in this test are:

    - DataObjects.DataSet

2.3.174 FRAMEWORK DATAOBJECTS.LOAD TWO CSVS

This test can be found at "`./raven/tests/framework/DataObjects/test_load_two_csvs.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/DataObjects.load_two_csvs
```

or

```
./run_framework_tests --re=framework/DataObjects.load_two_csvs
```

- Test Description:

    - This test verifies that multiple files can be loaded into a single point set without destroying the information from each other.

- Original Author:
    - maljdan

- Creation date:
    - 2017-06-26

- The classes tested in this test are:
    - DataObjects.PointSet

2.3.175 FRAMEWORK DATAOBJECTS.LOAD TWO CSV HISTORIES

This test can be found at "`./raven/tests/framework/DataObjects/test_load_two_csv_histories.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/DataObjects.load_two_csv_histories
```

or

```
./run_framework_tests --re=framework/DataObjects.load_two_csv_histories
```

- Test Description:
    - This test verifies that multiple csv files can be loaded into a single history set without destroying the information from each other.

- Original Author:
    - maljdan

- Creation date:
    - 2017-06-26

- The classes tested in this test are:
    - DataObjects.HistorySet

2.3.176 FRAMEWORK DATAOBJECTS.LOAD TWO CSV HISTORIES FAIL

This test can be found at "`./raven/tests/framework/DataObjects/load_two_csv_histories_fail.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/DataObjects.load_two_csv_histories_fail
```

or

```
./run_framework_tests --re=framework/DataObjects.load_two_csv_histories_fa:
```

- Test Description:

    - The input variable "b" is missing in the second history set, replaced by "e", so the result dataobject fails to construct. This test checks the error received.

- Original Author:

    - talbpaul

- Creation date:

    - 2018-01-23

- The classes tested in this test are:

    - DataObjects.HistorySet

2.3.177 FRAMEWORK DATAOBJECTS.LOAD PRINT LARGE NUM VARS

This test can be found at "`./raven/tests/framework/DataObjects/test_large_num_vars.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/DataObjects.load_print_large_num_vars
```

or

```
./run_framework_tests --re=framework/DataObjects.load_print_large_num_vars
```

- Test Description:

    - Test to check the performance of load and print of DataSet

- Original Author:

  - wangc

- Creation date:

  - 2018-11-11

- The classes tested in this test are:

  - DataObjects.DataSet

2.3.178 FRAMEWORK DATAOBJECTS.LOAD PRINT LARGE NUM VARS HEAVY

This test can be found at "`./raven/tests/framework/DataObjects/test_large_num_vars_heavy.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/DataObjects.load_print_large_num_vars_heavy
```

or

```
./run_framework_tests --re=framework/DataObjects.load_print_large_num_vars_
```

- Test Description:

  - Test to check the performance of load and print of DataSet

- Original Author:

  - wangc

- Creation date:

  - 2018-11-11

- The classes tested in this test are:

  - DataObjects.DataSet

2.3.179 FRAMEWORK.DISTRIBUTIONS.CATEGORICAL

This test can be found at "./raven/tests/framework/Distributions/test_distributionsCat xml". This test can be called executing the following command:

```
./run_tests --re=framework.Distributions.categorical
```

or

```
./run_framework_tests --re=framework.Distributions.categorical
```

- Test Description:

    - This test is aimed to test the capability of RAVEN to use 1D Categorical distributions.

- Original Author:

    - mandd

- Creation date:

    - 2016-11-02

- The classes tested in this test are:

    - Distributions.Categorical

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2017-01-21
        - description: Adding this test description.
    2. revision info:
        - author : wangc
        - date : 2017-12-20
        - description: convert test to use the new DataObjects with the new structure of basic statistic
    3. revision info:
        - author : wangc
        - date : 2018-12-18

- description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the pointwise metadata, and will be printed out in the output csv files by default. In order to avoid regolding this test, the optional node 'what' with text values 'input, output' is added. In this case, only the user requested variables as specified in the DataObjects are printed out.

2.3.180 FRAMEWORK.DISTRIBUTIONS.LAPLACE

This test can be found at "`./raven/tests/framework/Distributions/test_distributionsLap`
`xml`". This test can be called executing the following command:

```
./run_tests --re=framework.Distributions.laplace
```

or

```
./run_framework_tests --re=framework.Distributions.laplace
```

- Test Description:

  - This test is aimed to test the capability of RAVEN to use 1D Laplace distributions.

- Original Author:

  - cogljj

- Creation date:

  - 2017-04-26

- The classes tested in this test are:

  - Distributions.Laplace

2.3.181 FRAMEWORK.DISTRIBUTIONS.GEOMETRIC

This test can be found at "`./raven/tests/framework/Distributions/test_distributionsGeo`
`xml`". This test can be called executing the following command:

```
./run_tests --re=framework.Distributions.geometric
```

or

```
./run_framework_tests --re=framework.Distributions.geometric
```

- Test Description:

    - This test is aimed to test the capability of RAVEN to use 1D Geometric distribution.

- Original Author:

    - cogljj

- Creation date:

    - 2017-04-26

- The classes tested in this test are:

    - Distributions.Geometric

2.3.182 FRAMEWORK.DISTRIBUTIONS.CATEGORICAL

This test can be found at "`./raven/tests/framework/Distributions/test_distributionsMar xml`". This test can be called executing the following command:

```
./run_tests --re=framework.Distributions.categorical
```

or

```
./run_framework_tests --re=framework.Distributions.categorical
```

- Test Description:

    - This test is aimed to test the capability of RAVEN to use 1D Markov Categorical distributions.

- Original Author:

    - wangc

- Creation date:

    - 2018-01-24

- The classes tested in this test are:

    - Distributions.Markov

2.3.183 FRAMEWORK.DISTRIBUTIONS.LOGUNIFORM

This test can be found at "`./raven/tests/framework/Distributions/test_distributionsLog` `xml`". This test can be called executing the following command:

```
./run_tests --re=framework.Distributions.logUniform
```

or

```
./run_framework_tests --re=framework.Distributions.logUniform
```

- Test Description:
  - This test checks the capability of RAVEN to use 1D LogUniform distributions (natural).
- Original Author:
  - mandd
- Creation date:
  - 2018-05-07
- The classes tested in this test are:
  - Distributions.LogUniform

2.3.184 FRAMEWORK.DISTRIBUTIONS.LOG10UNIFORM

This test can be found at "`./raven/tests/framework/Distributions/test_distributionsLog` `xml`". This test can be called executing the following command:

```
./run_tests --re=framework.Distributions.log10Uniform
```

or

```
./run_framework_tests --re=framework.Distributions.log10Uniform
```

- Test Description:
  - This test checks the capability of RAVEN to use 1D LogUniform distributions (decimal base).

- Original Author:

  - mandd

- Creation date:

  - 2018-05-07

- The classes tested in this test are:

  - Distributions.LogUniform

2.3.185 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELLINEARPARALLEL

This test can be found at "`./raven/tests/framework/ensembleModelTests/test_ensemble_model_linear_internal_parallel.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelLinearParall
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelL
```

- Test Description:

  - Example of usage of the Ensemble Model capability in RAVEN, connecting multiple External Models. This test is aimed to check the functionality of assembling multiple Models, when they result in a single chain of Models (linear system). This test checks the functionality of the model using a multi processor (ParallelPython) parallelization scheme.

- Original Author:

  - alfoa

- Creation date:

  - 2016-04-14

- The classes tested in this test are:

  - Models.EnsembleModel, Models.ExternalModel, JobHandler.ParallelPython

- Since the creation of this test, the following main revisions have been performed:

1. revision info:
    - author : alfoa
    - date : 2016-04-21
    - description: Modified number of processors

2. revision info:
    - author : maljdan
    - date : 2016-05-20
    - description: Updating the test cases to remove references to Point or History.

3. revision info:
    - author : alfoa
    - date : 2016-09-01
    - description: Close #650

4. revision info:
    - author : alfoa
    - date : 2016-11-14
    - description: New syntax ensemble

5. revision info:
    - author : alfoa
    - date : 2017-01-21
    - description: Adding this test description.

2.3.186 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELLINEARTHREAD

This test can be found at "`./raven/tests/framework/ensembleModelTests/test_ensemble_model_linear_threading.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelLinearThrea
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelL
```

- Test Description:

– Example of usage of the Ensemble Model capability in RAVEN, connecting multiple External Models. This test is aimed to check the functionality of assembling multiple Models, when they result in a single chain of Models (linear system). This test checks the functionality of the model using a multi threading parallelization scheme.

• Original Author:

– alfoa

• Creation date:

– 2016-04-14

• The classes tested in this test are:

– Models.EnsembleModel, Models.ExternalModel, JobHandler.Thread

• Since the creation of this test, the following main revisions have been performed:

1. revision info:
   – author : maljdan
   – date : 2016-05-20
   – description: Updating the test cases to remove references to Point or History.

2. revision info:
   – author : alfoa
   – date : 2016-09-01
   – description: Close #650

3. revision info:
   – author : alfoa
   – date : 2016-11-14
   – description: New syntax ensemble

4. revision info:
   – author : alfoa
   – date : 2017-01-21
   – description: Adding this test description.

2.3.187 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELLINEARTHREADWI

This test can be found at "`./raven/tests/framework/ensembleModelTests/test_ ensemble_model_linear_threading_with_time_series.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelLinearThrea
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelL
```

- Test Description:

  - Example of usage of the Ensemble Model capability in RAVEN, connecting multiple
    External Models. This test is aimed to check the functionality of assembling multiple
    Models, when they result in a single chain of Models (linear system) and they need to
    transfer "time series" type of data (vectors) using the DataSet DataObject. This test
    checks the functionality of the model using a multi threading parallelization scheme.

- Original Author:

  - alfoa

- Creation date:

  - 2016-08-02

- The classes tested in this test are:

  - Models.EnsembleModel, Models.ExternalModel, JobHandler.Thread

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2016-11-29
     - description: Added test for time series
  2. revision info:
     - author : alfoa
     - date : 2016-12-01
     - description: Fixed order of objects in test inputs in order to respect the XSD
       schema
  3. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

4. revision info:

   - author : alfoa
   - date : 2018-02-03
   - description: Modified test for the new DataObject system. Usage of DataSet.

2.3.188 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELNONLINEARPARAL

This test can be found at "`./raven/tests/framework/ensembleModelTests/test_ensemble_model_picard_parallel.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelNonLinearPa
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelN
```

- Test Description:

  - Example of usage of the Ensemble Model capability in RAVEN, connecting multiple External Models. This test is aimed to check the functionality of assembling multiple Models, testing the iterative scheme present in RAVEN when the chain of Models turn to be a Non Linear System. This test checks the functionality of the Model with a multi processor (Parallel Python) parallelization scheme.

- Original Author:

  - alfoa

- Creation date:

  - 2016-04-14

- The classes tested in this test are:

  - Models.EnsembleModel, Models.ExternalModel, JobHandler.ParallelPython

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:

     - author : alfoa
     - date : 2016-04-21
     - description: Modified number of processors

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2. revision info:

   - author : maljdan
   - date : 2016-05-20
   - description: Updating the test cases to remove references to Point or History.

3. revision info:

   - author : alfoa
   - date : 2016-09-01
   - description: Close #650

4. revision info:

   - author : alfoa
   - date : 2016-11-14
   - description: New syntax ensemble

5. revision info:

   - author : alfoa
   - date : 2017-01-21
   - description: Adding this test description.

2.3.189   FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELNONLINEARTHREA

This test can be found at "`./raven/tests/framework/ensembleModelTests/test_ensemble_model_picard_thread.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelNonLinearTh
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelN
```

- Test Description:

  - Example of usage of the Ensemble Model capability in RAVEN, connecting multiple External Models. This test is aimed to check the functionality of assembling multiple Models, testing the iterative scheme present in RAVEN when the chain of Models turn to be a Non Linear System. This test checks the functionality of the Model with a multi threading parallelization scheme.

- Original Author:

- alfoa

- Creation date:

  - 2016-04-14

- The classes tested in this test are:

  - Models.EnsembleModel, Models.ExternalModel, JobHandler.Thread

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2016-04-21
     - description: Modified number of processors
  2. revision info:
     - author : maljdan
     - date : 2016-05-20
     - description: Updating the test cases to remove references to Point or History.
  3. revision info:
     - author : alfoa
     - date : 2016-09-01
     - description: Close #650
  4. revision info:
     - author : alfoa
     - date : 2016-11-14
     - description: New syntax ensemble
  5. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.
  6. revision info:
     - author : wangc
     - date : 2017-09-11
     - description: add new sub-node 'initialStartModels'

2.3.190 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELWITHCODE

This test can be found at "`./raven/tests/framework/ensembleModelTests/test_ensemble_model_linear_threading_with_code.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelWithCode
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelW
```

- Test Description:

  - Example of usage of the Ensemble Model capability in RAVEN, connecting multiple External Models and Codes. This test is aimed to check the functionality of assembling multiple Models, when they result in a single chain of Models (linear system). This test checks the functionality of the model using a multi threading parallelization scheme for the External Models and multi processor scheme for the external Code.

- Original Author:

  - alfoa

- Creation date:

  - 2016-04-14

- The classes tested in this test are:

  - Models.EnsembleModel, Models.ExternalModel, Models.Code, JobHandler.Thread

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2016-04-21
     - description: Modified number of processors
  2. revision info:
     - author : alfoa
     - date : 2016-11-14
     - description: New syntax ensemble
  3. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.191 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELLINEARPARALLELV

This test can be found at "`./raven/tests/framework/ensembleModelTests/test_ensemble_model_linear_internal_parallel_with_optimizer.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelLinearParall
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelLi
```

- Test Description:

  - Example of usage of the Ensemble Model capability in RAVEN, connecting multiple External Models. This test is aimed to check the functionality of assembling multiple Models, when they result in a single chain of Models (linear system) and they are sampled with an Optimization scheme. This test checks the functionality of the model using a multi processor (ParallelPython) parallelization scheme.

- Original Author:

  - alfoa

- Creation date:

  - 2016-09-01

- The classes tested in this test are:

  - Models.EnsembleModel, Models.ExternalModel, JobHandler.ParallelPython

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2016-10-20
     - description: Modified XSD and removed dim attribute from all the tests
  2. revision info:

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- author : chenj
- date : 2016-10-31
- description: Regold parallel EnsembleModel test since change in the optimization algorithm

3. revision info:

- author : alfoa
- date : 2016-11-14
- description: New syntax ensemble

4. revision info:

- author : alfoa
- date : 2017-01-21
- description: Adding this test description.

2.3.192 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELLATERALINSERTIO

This test can be found at "`./raven/tests/framework/ensembleModelTests/test_ensemble_model_linear_with_multiple_lateral_insertions.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelLateralInse
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelL
```

- Test Description:

  - Example of usage of the Ensemble Model capability in RAVEN, connecting multiple External Models. This test is aimed to check the functionality of assembling multiple Models, when multiple chains of Models are connected "laterly".

- Original Author:

  - alfoa

- Creation date:

  - 2016-12-13

- The classes tested in this test are:

– Models.EnsembleModel, Models.ExternalModel, JobHandler.ParallelPython

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2017-01-21
        - description: Adding this test description.

2.3.193 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELWITH2CODESANDA

This test can be found at "`./raven/tests/framework/ensembleModelTests/test_ensemble_model_with_2_codes.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelWith2CodesAr
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelW:
```

- Test Description:

    – Example of usage of the Ensemble Model capability in RAVEN, connecting multiple multiple Codes together, with same output variable names. This means that the alias system has been used and this test is aimed to show how to use it in these kinds of situations.

- Original Author:

    – alfoa

- Creation date:

    – 2017-02-16

- The classes tested in this test are:

    – Models.Code, JobHandler.Thread

2.3.194 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELWITH2CODESANDA

This test can be found at "`./raven/tests/framework/ensembleModelTests/test_
ensemble_model_2_codes_optional_output.xml`". This test can be called executing
the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelWith2CodesAr
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelW:
```

- Test Description:

    - The main goal of this test is to show how to specify optional output in the Ensemble
      Model object. All the RAVEN available data storage types are tested (DataObjects and
      Databases).

- Original Author:

    - alfoa

- Creation date:

    - 2017-05-17

- The classes tested in this test are:

    - Models.Code, JobHandler.Thread

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2017-07-10
        - description: Modified test in order to show how to use a HDF5 as optional output
          (Issue #237)

2.3.195 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELLINEAREXPECTEDI

This test can be found at "`./raven/tests/framework/ensembleModelTests/test_
ensemble_model_linear_expected_failures.xml`". This test can be called execut-
ing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelLinearExpect
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelL:
```

- Test Description:

    - Mechanic TEST: This test is aimed to check that the failures from the EnsembleModel are correctly collected without abnormal termination of RAVEN.

- Original Author:

    - alfoa

- Creation date:

    - 2017-09-22

- The classes tested in this test are:

    - Models.EnsembleModel, Models.ExternalModel, JobHandler.Thread

2.3.196 FRAMEWORK ENSEMBLEMODELTESTS.TESTENSEMBLEMODELFULLYCORRVARS

This test can be found at "`./raven/tests/framework/ensembleModelTests/test_ensemble_model_fully_correlated_vars.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEnsembleModelFullyCorrVa:
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.testEnsembleModelFu
```

- Test Description:

    - This test is a mechanical test for the EnsembleModel to test that it can correctly handle fully correlated variables

- Original Author:

    - alfoa

- Creation date:

  - 2017-12-07

- The classes tested in this test are:

  - Models.EnsembleModel, Models.ExternalModel, Models.Code, JobHandler.Thread

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2017-12-07
     - description: Added the test

2.3.197 FRAMEWORK ENSEMBLEMODELTESTS.INDEXINPUTOUTPUT

This test can be found at "`./raven/tests/framework/ensembleModelTests/index_input_output.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.indexInputOutput
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.indexInputOutput
```

- Test Description:

  - Tests that an index can be depended on by variables in both in input and output space of an ensembled model.

- Original Author:

  - talbpaul

- Creation date:

  - 2018-02-06

- The classes tested in this test are:

  - Models.EnsembleModel, Models.ExternalModel, DataObject.DataSet

2.3.198 FRAMEWORK ENSEMBLEMODELTESTS.TESTEMCONNECTION

This test can be found at "`./raven/tests/framework/ensembleModelTests/test_em_connection.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ensembleModelTests.testEMConnection
```

or

```
./run_framework_tests --re=framework/ensembleModelTests.testEMConnection
```

- Test Description:

    - Example of usage of the Ensemble Model capability in RAVEN, connecting multiple External Models. This test is aimed to check the connection between multiple models, as reported in issue #696.

- Original Author:

    - alfoa

- Creation date:

    - 2018-08-04

- The classes tested in this test are:

    - Models.EnsembleModel, Models.ExternalModel, JobHandler.ParallelPython

2.3.199 FRAMEWORK ERRORCHECKS.MISSINGSTEPS

This test can be found at "`./raven/tests/framework/ErrorChecks/test_noSteps.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ErrorChecks.missingSteps
```

or

```
./run_framework_tests --re=framework/ErrorChecks.missingSteps
```

- Test Description:

- This test is aimed to check the functionality of RAVEN to error out in case some input inconsistencies are found. In this case, the error in case of no Step is tested.

- Original Author:

  - talbpaul

- Creation date:

  - 2016-02-09

- The classes tested in this test are:

  - Steps.MultiRun

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-04-26
     - description: Updated test to accept new "overwrite" attribute in HDF5
  2. revision info:
     - author : alfoa
     - date : 2016-04-27
     - description: New subdirectories structure
  3. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.200 FRAMEWORK ERRORCHECKS.MVNNOTSQUARE

This test can be found at "`./raven/tests/framework/ErrorChecks/test_MVN_not_square.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ErrorChecks.MVNnotSquare
```

or

```
./run_framework_tests --re=framework/ErrorChecks.MVNnotSquare
```

- Test Description:

  - This test is aimed to check the functionality of RAVEN to error out in case some input inconsistencies are found. In this case, the fact that the MultiVariate distribution errors out when it is not square

- Original Author:

  - talbpaul

- Creation date:

  - 2016-07-14

- The classes tested in this test are:

  - Distributions.MultivariateNormal

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.201 FRAMEWORK ERRORCHECKS.MVNBADDIMS

This test can be found at "`./raven/tests/framework/ErrorChecks/test_MVN_bad_dims.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ErrorChecks.MVNbadDims
```

or

```
./run_framework_tests --re=framework/ErrorChecks.MVNbadDims
```

- Test Description:

  - This test is aimed to check the functionality of RAVEN to error out in case some input inconsistencies are found. In this case, the fact that the MultiVariate distribution errors out when not all the dimensions of the MultiVariate are used in the sampling strategy.

- Original Author:

- talbpaul

- Creation date:

  - 2016-07-14

- The classes tested in this test are:

  - Distributions.MultivariateNormal, Samplers.MonteCarlo

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.202 FRAMEWORK ERRORCHECKS.BADHISTORY

This test can be found at "`./raven/tests/framework/ErrorChecks/loadBadHistory.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ErrorChecks.badHistory
```

or

```
./run_framework_tests --re=framework/ErrorChecks.badHistory
```

- Test Description:

  - This test is aimed to check the functionality of RAVEN to error out in case some input inconsistencies are found. In this case, the data contained in "badHistorySet.csv" is foulty and the code (HistorySet) needs to error out.

- Original Author:

  - maljovec

- Creation date:

  - 2017-07-21

- The classes tested in this test are:

  - Steps.IOStep, DataObjects.HistorySet

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- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2018-05-15
     - description: Adding this test description.

2.3.203 FRAMEWORK ERRORCHECKS.BADHISTORY

This test can be found at "`./raven/tests/framework/ErrorChecks/loadBadPointSet.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ErrorChecks.badHistory
```

or

```
./run_framework_tests --re=framework/ErrorChecks.badHistory
```

- Test Description:

  - This test is aimed to check the functionality of RAVEN to error out in case some input inconsistencies are found. In this case, the data contained in "badHistory.csv" is foulty and the code (PointSet) needs to error out.

- Original Author:

  - maljovec

- Creation date:

  - 2017-07-21

- The classes tested in this test are:

  - Steps.IOStep, DataObjects.PointSet

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2018-05-15
     - description: Adding this test description.

2.3.204 FRAMEWORK ERRORCHECKS.BADINSIMULATION

This test can be found at "`./raven/tests/framework/ErrorChecks/badInSimulation.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ErrorChecks.badInSimulation
```

or

```
./run_framework_tests --re=framework/ErrorChecks.badInSimulation
```

- Test Description:

    - This test is aimed to check the functionality of RAVEN to error out in case some input inconsistencies are found. In this case, the input is malformed.

- Original Author:

    - maljovec

- Creation date:

    - 2017-07-21

- The classes tested in this test are:

    - Simulation

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2018-05-15
        - description: Adding this test description.

2.3.205 FRAMEWORK ERRORCHECKS.UNSYNCEDTYPICALHISTORY

This test can be found at "`./raven/tests/framework/ErrorChecks/unsyncedTypicalHistory.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ErrorChecks.unsyncedTypicalHistory
```

or

```
./run_framework_tests --re=framework/ErrorChecks.unsyncedTypicalHistory
```

- Test Description:

    - This test is aimed to check the functionality of RAVEN to error out in case some input inconsistencies are found. In this case, the HistorySet passed into the PostProcessor TypicalHistoryFromHistorySet is not syncronized and the code must error out.

- Original Author:

    - maljovec

- Creation date:

    - 2017-07-21

- The classes tested in this test are:

    - Models.PostProcessors.InterfacePostProcessor.TypicalHistoryFromHistorySet

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2018-05-15
        - description: Adding this test description.

2.3.206   FRAMEWORK HYBRIDMODEL.HYBRIDMODEL

This test can be found at "`./raven/tests/framework/hybridModel/test_hybrid_model.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/hybridModel.hybridModel
```

or

```
./run_framework_tests --re=framework/hybridModel.hybridModel
```

- Test Description:

    - Example of usage of the Hybrid Model capability in RAVEN This test is intended to check the functionality of Hybrid Model.

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- Original Author:

  – wangc

- Creation date:

  – 2017-09-13

- The classes tested in this test are:

  – Models.HybridModel, Models.ExternalModel, Models.ROM

2.3.207 FRAMEWORK HYBRIDMODEL.ROMTRAIN

This test can be found at "`./raven/tests/framework/hybridModel/test_train_rom.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/hybridModel.romTrain
```

or

```
./run_framework_tests --re=framework/hybridModel.romTrain
```

- Test Description:

  – This test is intended to check the rom train capability of the Hybrid Model.

- Original Author:

  – wangc

- Creation date:

  – 2017-09-20

- The classes tested in this test are:

  – Models.HybridModel, Models.ExternalModel, Models.ROM

2.3.208 FRAMEWORK HYBRIDMODEL.RUNCODE

This test can be found at "`./raven/tests/framework/hybridModel/test_code.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/hybridModel.runCode
```

or

```
./run_framework_tests --re=framework/hybridModel.runCode
```

- Test Description:
    - This test is aimed to test the HybridModel system with the generic code system.
- Original Author:
    - wangc
- Creation date:
    - 2017-09-21
- The classes tested in this test are:
    - Models.HybridModel, Models.Code.GenericCode

2.3.209 FRAMEWORK HYBRIDMODEL.ROM ROM

This test can be found at "`./raven/tests/framework/hybridModel/test_rom_rom.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/hybridModel.rom_rom
```

or

```
./run_framework_tests --re=framework/hybridModel.rom_rom
```

- Test Description:
    - Example of usage of the Hybrid Model capability in RAVEN This test is intended to check the functionality of Hybrid Model. Use ROM to train ROM

- Original Author:

  - wangc

- Creation date:

  - 2017-09-13

- The classes tested in this test are:

  - Models.HybridModel, Models.ROM

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2017-12-20
     - description: replaced median absolute error with average absolute error score

2.3.210 FRAMEWORK OPTIMIZERS.VERBOSE

This test can be found at "`./raven/tests/framework/Optimizers/verbose.xml`".
This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.Verbose
```

or

```
./run_framework_tests --re=framework/Optimizers.Verbose
```

- Test Description:

  - This tests the output of preset verbosity options (_stepSize, etc) for optimizer runs.

- Original Author:

  - talbpaul

- Creation date:

  - 2017-06-01

- The classes tested in this test are:

  - Optimizer

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : talbpaul
        – date : 2018-01-03
        – description: Switched from snapshot to writeSteps as final
    2. revision info:
        – author : talbpaul
        – date : 2018-04-04
        – description: Added a constant to test passing through
    3. revision info:
        – author : talbpaul
        – date : 2018-10-23
        – description: removed gradient prints

2.3.211 FRAMEWORK OPTIMIZERS.MAX

This test can be found at "`./raven/tests/framework/Optimizers/infinite.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.Max
```

or

```
./run_framework_tests --re=framework/Optimizers.Max
```

- Test Description:

    – This test runs the optimization on 1/x, returning "inf" at x=0. It primarily tests that gradients can be obtained when infinite solutions are provided.

- Original Author:

    – talbpaul

- Creation date:

    – 2017-06-13

- The classes tested in this test are:

- – Optimizer

- • Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - – author : talbpaul
     - – date : 2018-10-23
     - – description: limited outputs checked to just the solution

2.3.212 FRAMEWORK OPTIMIZERS.ROSENBROCKWITHSAMPLERERROR

This test can be found at "`./raven/tests/framework/Optimizers/rosenbrock_with_sampler_expected_error.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.RosenbrockWithSamplerError
```

or

```
./run_framework_tests --re=framework/Optimizers.RosenbrockWithSamplerError
```

- • Test Description:

  - – This test is aimed to check if the errors using a Initialization Sampler are handled.

- • Original Author:

  - – alfoa

- • Creation date:

  - – 2017-08-29

- • The classes tested in this test are:

  - – Optimizer

- • Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - – author : talbpaul
     - – date : 2018-10-23
     - – description: limited outputs checked to just the solution

2.3.213 FRAMEWORK OPTIMIZERS.BEALEFAILUREREJECTION

This test can be found at "`./raven/tests/framework/Optimizers/beale_failure_and_rejection.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.BealeFailureRejection
```

or

```
./run_framework_tests --re=framework/Optimizers.BealeFailureRejection
```

- Test Description:

    - This test is aimed to test the ability of the Optimizer to handle failed runs, rejecting the point and cutting the learning rate

- Original Author:

    - alfoa

- Creation date:

    - 2017-09-25

- The classes tested in this test are:

    - Optimizer

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : talbpaul
        - date : 2018-01-04
        - description: switched from snapshot to writeSteps final
    2. revision info:
        - author : talbpaul
        - date : 2018-10-23
        - description: limited outputs checked to just the solution

2.3.214 FRAMEWORK OPTIMIZERS.RRR

This test can be found at "`./raven/tests/framework/Optimizers/raven_running_ raven.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Optimizers.RrR
```

or

```
./run_framework_tests --re=framework/Optimizers.RrR
```

- Test Description:

    - Tests the Raven-running-Raven interface to assure correct operation with optimizer pass-back.

- Original Author:

    - talbpaul

- Creation date:

    - 2018-04-09

- The classes tested in this test are:

    - Optimizer

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : talbpaul
        - date : 2018-10-23
        - description: limited outputs checked to just the solution

2.3.215 FRAMEWORK OUTSTREAMS.IMAGE GENERATION TEXT

This test can be found at "`./raven/tests/framework/OutStreams/imageGeneration_ ps.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/OutStreams.image_generation_text
```

or

```
./run_framework_tests --re=framework/OutStreams.image_generation_text
```

- Test Description:

    - Test to check the functionalities of OutStreams system in RAVEN of type Plot. This
      test is aimed to check the capability of RAVEN to create a scatter Plot in PostScript
      format.

- Original Author:

    - maljdan

- Creation date:

    - 2016-04-27

- The classes tested in this test are:

    - OutStreams.Plot

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : talbpaul
        - date : 2016-09-15
        - description: Test updates
    2. revision info:
        - author : alfoa
        - date : 2016-10-20
        - description: Modified XSD and removed dim attribute from all the tests
    3. revision info:
        - author : alfoa
        - date : 2017-01-21
        - description: Adding this test description.

2.3.216   FRAMEWORK.IMAGE GENERATION RAW

This test can be found at "`./raven/tests/framework/OutStreams/testImageGeneration.`
`py`". This test can be called executing the following command:

```
./run_tests --re=framework.image_generation_raw
```

or

```
./run_framework_tests --re=framework.image_generation_raw
```

- Test Description:

  - This test the online generation of plots (colorbar plot). It can not be considered part of the active code but of the regression test system.

    This test will use ImageMagick's "compare" utility in order to determine if two image files are within some amount of tolerance. This script operates by executing raven on the input file and then using compare to determine if the gold file and the generated file are near identical. If they are near enough to identical this test will report a "pass," otherwise it will return a "fail."

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-27

- The classes tested in this test are:

  -

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2016-05-04
     - description: Fixing the test for the compare executable to test the gold image against itself, if this returns a non-zero code, then the version of imageMagick cannot be used to get a valid difference. Also, I am removing the difference image and instead doing null: to remove the output file when using compare.

  2. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.217 FRAMEWORK OUTSTREAMS.INTERACTIVE PLOTTING

This test can be found at "`./raven/tests/framework/OutStreams/interactivePlot.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/OutStreams.interactive_plotting
```

or

```
./run_framework_tests --re=framework/OutStreams.interactive_plotting
```

- Test Description:

  - Test to check the functionalities of OutStreams system in RAVEN of type Plot. This test is aimed to check the capability of RAVEN to create a Plot and visualize it on the screen (interactvly)

- Original Author:

  - maljdan

- Creation date:

  - 2016-06-30

- The classes tested in this test are:

  - OutStreams.Plot

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2016-09-01
     - description: Close #650
  2. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: Test updates
  3. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.218 FRAMEWORK OUTSTREAMS.INVALIDINTERPOLATION

This test can be found at "`./raven/tests/framework/OutStreams/invalidInterpolation.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/OutStreams.invalidInterpolation
```

or

```
./run_framework_tests --re=framework/OutStreams.invalidInterpolation
```

- Test Description:

    - This test was added to detect a defect in the plotting of something like a contour/surface/pcolor/wireframe where it is not well-defined when a single point is used. See #832

- Original Author:

    - maljdan

- Creation date:

    - 2017-03-22

- The classes tested in this test are:

    - OutStreams.Plot

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : talbpaul
        - date : 2018-01-02
        - description: Added input data object to prevent same-input-as-output error

2.3.219 FRAMEWORK OUTSTREAMS.TEST SUBPLOT

This test can be found at "`./raven/tests/framework/OutStreams/test_subPlot.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/OutStreams.test_subPlot
```

or

```
./run_framework_tests --re=framework/OutStreams.test_subPlot
```

- Test Description:

  - Test to check the functionalities of OutStreams system in RAVEN to Plot out the information contained in DataObjects, determining in a sub plotting layout (multiple plots side by side in the same figure)

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-26

- The classes tested in this test are:

  - OutStreams.Plot

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2016-05-20
     - description: Updating the test cases to remove references to Point or History.
  2. revision info:
     - author : alfoa
     - date : 2016-09-01
     - description: Close #650
  3. revision info:
     - author : alfoa
     - date : 2016-10-20
     - description: Modified XSD and removed dim attribute from all the tests
  4. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.220 FRAMEWORK OUTSTREAMS.IO ROM PICKLE

This test can be found at "`./raven/tests/framework/OutStreams/test_io_ROM_pickle.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/OutStreams.io_ROM_pickle
```

or

```
./run_framework_tests --re=framework/OutStreams.io_ROM_pickle
```

- Test Description:
  - Test to check the functionalities of OutStreams system in RAVEN to Print out the information contained in DataObjects. In addition, it checks the capability of RAVEN to construct a ROM from a pickle file.

- Original Author:
  - maljdan

- Creation date:
  - 2016-04-26

- The classes tested in this test are:
  - Models.ROM, DataObjects.PointSet, DataObjects.HistorySet, OutStreams.Print

- Since the creation of this test, the following main revisions have been performed:
  1. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.221 FRAMEWORK OUTSTREAMS.LEGEND

This test can be found at "`./raven/tests/framework/OutStreams/test_legend.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/OutStreams.legend
```

or

```
./run_framework_tests --re=framework/OutStreams.legend
```

- Test Description:

  - Test to check the functionalities of OutStreams system in RAVEN of type Plot, when a legend is added.

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-27

- The classes tested in this test are:

  - OutStreams.Plot

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2016-05-04
     - description: Fixing the test for the compare executable to test the gold image against itself, if this returns a non-zero code, then the version of imageMagick cannot be used to get a valid difference. Also, I am removing the difference image and instead doing null: to remove the output file when using compare.
  2. revision info:
     - author : chenj
     - date : 2016-07-07
     - description: edit docstring
  3. revision info:
     - author : alfoa
     - date : 2018-05-15
     - description: Adding this test description.

2.3.222 FRAMEWORK OUTSTREAMS.LINE

This test can be found at "`./raven/tests/framework/OutStreams/line_plot.xml`".
This test can be called executing the following command:

```
./run_tests --re=framework/OutStreams.line
```

or

```
./run_framework_tests --re=framework/OutStreams.line
```

- Test Description:

    - Test to check the functionalities of OutStreams system in RAVEN of line Plot, when HistorySet is used. Fix issue #722

- Original Author:

    - wangc

- Creation date:

    - 2018-08-02

- The classes tested in this test are:

    - OutStreams.Plot

2.3.223 FRAMEWORK PCA ADAPTIVE SGC TEST ADAPTIVE SGC PCA ANALYTIC

This test can be found at "`./raven/tests/framework/pca_adaptive_sgc/test_adaptive_sgc_pca_analytic.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_adaptive_sgc/test_adaptive_sgc_pca_analytic
```

or

```
./run_framework_tests --re=framework/pca_adaptive_sgc/test_adaptive_sgc_pca
```

- Test Description:

    - Tests use of the PCA method for adaptive sparse grids on polynomial models.

- Original Author:

  - wangc

- Creation date:

  - 2015-11-30

- The classes tested in this test are:

  - Distributions.MultivariateNormal,Samplers.AdaptiveSparseGrid,SupervisedLearning.GaussPolynomi

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2019-01-08
     - description: moved from ROM-File to ROM-DataObject

2.3.224 FRAMEWORK PCA ADAPTIVE SGC TEST ADAPTIVE SGC ATTENU COR-RELATION

This test can be found at "`./raven/tests/framework/pca_adaptive_sgc/test_adaptive_sgc_attenu_correlation.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_adaptive_sgc/test_adaptive_sgc_attenu_correl
```

or

```
./run_framework_tests --re=framework/pca_adaptive_sgc/test_adaptive_sgc_att
```

- Test Description:

  - Tests use of the PCA method for adaptive sparse grids on exponential decay models with nonzero covariance.

- Original Author:

  - wangc

- Creation date:

  - 2015-11-30

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- The classes tested in this test are:

  – Distributions.MultivariateNormal,Samplers.AdaptiveSparseGrid,SupervisedLearning.GaussPolynomi

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:

     – author : talbpaul
     – date : 2019-01-08
     – description: moving from ROM-file to ROM-dataobject

2.3.225 FRAMEWORK PCA GRID GRIDPCAVALUE

This test can be found at "`./raven/tests/framework/pca_grid/test_grid_pca_value.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_grid/gridPCAValue
```

or

```
./run_framework_tests --re=framework/pca_grid/gridPCAValue
```

- Test Description:

  – Tests the value-generated Grid sampler combined with input reductions via PCA method, using multivariate normal distributions.

- Original Author:

  – wangc

- Creation date:

  – 2015-10-28

- The classes tested in this test are:

  – Samplers.Grid

2.3.226 FRAMEWORK PCA GRID GRIDPCACDF

This test can be found at "`./raven/tests/framework/pca_grid/test_grid_pca_cdf.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_grid/gridPCACdf
```

or

```
./run_framework_tests --re=framework/pca_grid/gridPCACdf
```

- Test Description:
    - Tests the CDF-generated Grid sampler combined with input reductions via PCA method, using multivariate normal distributions.

- Original Author:
    - wangc

- Creation date:
    - 2015-10-28

- The classes tested in this test are:
    - Samplers.Grid

2.3.227 FRAMEWORK PCA GRID MCPCA

This test can be found at "`./raven/tests/framework/pca_grid/test_mc_pca.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_grid/mcPCA
```

or

```
./run_framework_tests --re=framework/pca_grid/mcPCA
```

- Test Description:
    - Tests the MonteCarlo sampler combined with input reductions via PCA method, using multivariate normal distributions.

- Original Author:

  – wangc

- Creation date:

  – 2015-10-28

- The classes tested in this test are:

  – Samplers.MonteCarlo

2.3.228 FRAMEWORK PCA LHS LHSVALUE

This test can be found at "`./raven/tests/framework/pca_LHS/test_LHS_pca_value.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_LHS/LHSValue
```

or

```
./run_framework_tests --re=framework/pca_LHS/LHSValue
```

- Test Description:

  – Tests use of the PCA method to sample in LHS surrogate input space, with grid constructed by value.

- Original Author:

  – wangc

- Creation date:

  – 2015-11-18

- The classes tested in this test are:

  – Distributions.MultivariateNormal,Samplers.Stratified,PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : wangc
     – date : 2017-12-20
     – description: convert test to use the new DataObjects with the new structure of basic statistic

2.3.229 FRAMEWORK PCA LHS LHSCDF

This test can be found at "`./raven/tests/framework/pca_LHS/test_LHS_pca_cdf.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_LHS/LHSCdf
```

or

```
./run_framework_tests --re=framework/pca_LHS/LHSCdf
```

- Test Description:

    - Tests use of the PCA method to sample in LHS surrogate input space, with grid constructed via CDF.

- Original Author:

    - wangc

- Creation date:

    - 2015-11-18

- The classes tested in this test are:

    - Distributions.MultivariateNormal,Samplers.Stratified,PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2017-12-20
        - description: convert test to use the new DataObjects with the new structure of basic statistic

2.3.230 FRAMEWORK PCA LHS STRATIFIEDVALUE

This test can be found at "`./raven/tests/framework/pca_LHS/test_stratified_pca_value.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_LHS/stratifiedValue
```

or

```
./run_framework_tests --re=framework/pca_LHS/stratifiedValue
```

- Test Description:

    - Tests use of the PCA method to sample in LHS surrogate input space with grid by value.

- Original Author:

    - wangc

- Creation date:

    - 2015-11-18

- The classes tested in this test are:

    - Distributions.MultivariateNormal,Samplers.Stratified

2.3.231   FRAMEWORK PCA LHS STRATIFIEDCDF

This test can be found at "`./raven/tests/framework/pca_LHS/test_stratified_pca_cdf.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_LHS/stratifiedCdf
```

or

```
./run_framework_tests --re=framework/pca_LHS/stratifiedCdf
```

- Test Description:

    - Tests use of the PCA method to sample in LHS surrogate input space with grid by CDF.

- Original Author:

    - wangc

- Creation date:

    - 2015-11-18

- The classes tested in this test are:

    - Distributions.MultivariateNormal,Samplers.Stratified

2.3.232 FRAMEWORK PCA LHS LHS

This test can be found at "`./raven/tests/framework/pca_LHS/test_LHS.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_LHS/LHS
```

or

```
./run_framework_tests --re=framework/pca_LHS/LHS
```

- Test Description:

    - Tests use of the PCA method to sample in LHS surrogate input space.

- Original Author:

    - wangc

- Creation date:

    - 2015-11-18

- The classes tested in this test are:

    - Distributions.MultivariateNormal,Samplers.Stratified,PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2017-12-20
        - description: convert test to use the new DataObjects with the new structure of basic statistic

2.3.233 FRAMEWORK PCA LHS LHSCORRELATED

This test can be found at "`./raven/tests/framework/pca_LHS/test_LHS_correlated_cdf.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_LHS/LHSCorrelated
```

or

```
./run_framework_tests --re=framework/pca_LHS/LHSCorrelated
```

- Test Description:

    - Tests use of the PCA method to sample in LHS surrogate input space. The distributions are a multivariate normal.

- Original Author:

    - wangc

- Creation date:

    - 2015-11-18

- The classes tested in this test are:

    - Distributions.MultivariateNormal,Samplers.Stratified,PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2017-12-20
        - description: convert test to use the new DataObjects with the new structure of basic statistic

2.3.234 FRAMEWORK PCA LHS LHSUNCORRELATED

This test can be found at "`./raven/tests/framework/pca_LHS/test_LHS_uncorrelated_cdf.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_LHS/LHSuncorrelated
```

or

```
./run_framework_tests --re=framework/pca_LHS/LHSuncorrelated
```

- Test Description:

    - Benchmark for test of the PCA method to sample in LHS surrogate input space.

- Original Author:
  - wangc

- Creation date:
  - 2015-11-18

- The classes tested in this test are:
  - Distributions.MultivariateNormal,Samplers.Stratified,PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:
  1. revision info:
     - author : wangc
     - date : 2017-12-20
     - description: convert test to use the new DataObjects with the new structure of basic statistic

2.3.235 FRAMEWORK PCA ROM INPUTPCAREDUCTION

This test can be found at "`./raven/tests/framework/pca_rom/test_input_pca.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_rom/inputPCAReduction
```

or

```
./run_framework_tests --re=framework/pca_rom/inputPCAReduction
```

- Test Description:
  - Tests capability of PCA input reduction.

- Original Author:
  - wangc

- Creation date:
  - 2015-09-14

- The classes tested in this test are:
  - Distributions.MultivariateNormal

2.3.236 FRAMEWORK PCA ROM MVNABS

This test can be found at "./raven/tests/framework/pca_rom/test_MVN_abs.xml".
This test can be called executing the following command:

```
./run_tests --re=framework/pca_rom/MVNAbs
```

or

```
./run_framework_tests --re=framework/pca_rom/MVNAbs
```

- Test Description:

    - Tests MVN with absolute covariance matrix

- Original Author:

    - wangc

- Creation date:

    - 2015-09-14

- The classes tested in this test are:

    - Distributions.MultivariateNormal

2.3.237 FRAMEWORK PCA ROM MVNREL

This test can be found at "./raven/tests/framework/pca_rom/test_MVN_rel.xml".
This test can be called executing the following command:

```
./run_tests --re=framework/pca_rom/MVNRel
```

or

```
./run_framework_tests --re=framework/pca_rom/MVNRel
```

- Test Description:

    - Tests MVN with relative covariance matrix

- Original Author:

– wangc

- Creation date:
    - 2015-09-14

- The classes tested in this test are:
    - Distributions.MultivariateNormal

2.3.238 FRAMEWORK PCA ROM.ROM

This test can be found at "`./raven/tests/framework/pca_rom/test_rom.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_rom.ROM
```

or

```
./run_framework_tests --re=framework/pca_rom.ROM
```

- Test Description:
    - Tests a high-input-dimensionality case to demonstrate input reduction.

- Original Author:
    - wangc

- Creation date:
    - 2015-09-14

- The classes tested in this test are:
    - Distributions.MultivariateNormal

2.3.239 FRAMEWORK PCA ROM ONEDIM

This test can be found at "`./raven/tests/framework/pca_rom/test_one_dim_pca.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_rom/oneDim
```

or

```
./run_framework_tests --re=framework/pca_rom/oneDim
```

- Test Description:

  - Tests fix for Issue #389 where the code errored when the problem is reduced to 1 dimension.

- Original Author:

  - wangc

- Creation date:

  - 2015-09-14

- The classes tested in this test are:

  - Distributions.MultivariateNormal

2.3.240 FRAMEWORK PCA SPARSEGRID NORMAL

This test can be found at "`./raven/tests/framework/pca_sparseGridCollocation/ test_scgpc_normal.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_sparseGrid/normal
```

or

```
./run_framework_tests --re=framework/pca_sparseGrid/normal
```

- Test Description:

  - Tests the SparseGridCollocation sampler combined with input reductions via PCA method, using correlated multivariate normal distributions. Uses distributions with nonzero means.

- Original Author:

  - wangc

- Creation date:

- – 2015-11-23

- The classes tested in this test are:

    - – Samplers.SparseGridCollocation,SupervisedLearning.GaussPolynomialROM

2.3.241 FRAMEWORK PCA SPARSEGRID MVNUNCORRELATED

This test can be found at "`./raven/tests/framework/pca_sparseGridCollocation/test_scgpc_uncorrelatedMVN.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_sparseGrid/MVNUncorrelated
```

or

```
./run_framework_tests --re=framework/pca_sparseGrid/MVNUncorrelated
```

- Test Description:

    - – Tests the SparseGridCollocation sampler combined with input reductions via PCA method, using uncorrelated multivariate normal distributions.

- Original Author:

    - – wangc

- Creation date:

    - – 2015-11-23

- The classes tested in this test are:

    - – Samplers.SparseGridCollocation,SupervisedLearning.GaussPolynomialROM

2.3.242 FRAMEWORK PCA SPARSEGRID MVNCORRELATED

This test can be found at "`./raven/tests/framework/pca_sparseGridCollocation/test_scgpc_correlatedMVN.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_sparseGrid/MVNCorrelated
```

or

```
./run_framework_tests --re=framework/pca_sparseGrid/MVNCorrelated
```

- Test Description:

    - Tests the SparseGridCollocation sampler combined with input reductions via PCA method, using correlated multivariate normal distributions.

- Original Author:

    - wangc

- Creation date:

    - 2015-11-23

- The classes tested in this test are:

    - Samplers.SparseGridCollocation,SupervisedLearning.GaussPolynomialROM

2.3.243 FRAMEWORK PCA SPARSEGRID ATTENUATIONTEST

This test can be found at "`./raven/tests/framework/pca_sparseGridCollocation/test_attenuation.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_sparseGrid/attenuationTest
```

or

```
./run_framework_tests --re=framework/pca_sparseGrid/attenuationTest
```

- Test Description:

    - Tests the SparseGridCollocation sampler combined wit input reductions via PCA method, using uncorrelated multivariate normal distributions.

- Original Author:

    - wangc

- Creation date:

    - 2015-11-23

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- The classes tested in this test are:

    - Samplers.SparseGridCollocation,SupervisedLearning.GaussPolynomialROM

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : talbpaul
        - date : 2019-01-09
        - description: moving from ROM-file to ROM-dataobject

2.3.244 FRAMEWORK PCASAMPLER PCAINDEX

This test can be found at "`./raven/tests/framework/pcaSampler/test_pca_index.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pcaSampler/pcaIndex
```

or

```
./run_framework_tests --re=framework/pcaSampler/pcaIndex
```

- Test Description:

    - Tests use of the PCA method to sample in surrogate input space.

- Original Author:

    - wangc

- Creation date:

    - 2016-02-16

- The classes tested in this test are:

    - Distributions.MultivariateNormal,Samplers

2.3.245 FRAMEWORK PCASAMPLER MULTIPCA

This test can be found at "./raven/tests/framework/pcaSampler/test_multi_pca.xml". This test can be called executing the following command:

```
./run_tests --re=framework/pcaSampler/multiPCA
```

or

```
./run_framework_tests --re=framework/pcaSampler/multiPCA
```

- Test Description:
    - Tests use of multiple PCA surrogates in one sampling scheme.
- Original Author:
    - wangc
- Creation date:
    - 2016-02-16
- The classes tested in this test are:
    - Distributions.MultivariateNormal,Samplers.MonteCarlo

2.3.246 FRAMEWORK PCASAMPLER GRIDPCA

This test can be found at "./raven/tests/framework/pcaSampler/test_pca_index_grid.xml". This test can be called executing the following command:

```
./run_tests --re=framework/pcaSampler/gridPCA
```

or

```
./run_framework_tests --re=framework/pcaSampler/gridPCA
```

- Test Description:
    - Tests use of the PCA method to sample in gridded surrogate input space.
- Original Author:

– wangc

- Creation date:

    – 2016-02-16

- The classes tested in this test are:

    – Distributions.MultivariateNormal,Samplers.Grid

2.3.247 FRAMEWORK POSTPROCESSORS BASICSTATISTICS GRID ANALYTIC

This test can be found at "`./raven/tests/framework/PostProcessors/BasicStatistics/grid_analytic.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/grid_analytic
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/grid_a
```

- Test Description:

    – This test checks all the basic statistics on analytic values using a grid sampling; however, the analytic models are not yet documented.

- Original Author:

    – alfoa

- Creation date:

    – 2015-11-21

- The classes tested in this test are:

    – PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : wangc
        – date : 2017-12-05
        – description: convert test to use the new dataobjects

2. revision info:

   – author : wangc
   – date : 2018-12-13
   – description: In PR #882, the standard errors on statistics moments are imple-
     mented, these quantities are stored in the pointwise metadata, and will be printed
     out in the output csv files by default. In order to avoid regolding this test, the op-
     tional node 'what' with text values 'input, output' is added. In this case, only the
     user requested variables as specified in the DataObjects are printed out.

2.3.248 FRAMEWORK POSTPROCESSORS BASICSTATISTICS GRID INVALUE

This test can be found at "`./raven/tests/framework/PostProcessors/BasicStatistics/`
`grid_inValue.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/grid_inValue
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/grid_i
```

- Test Description:

  – This test checks many basic statistics using a grid sampling.

- Original Author:

  – alfoa

- Creation date:

  – 2015-12-16

- The classes tested in this test are:

  – PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:

     – author : wangc
     – date : 2017-12-05
     – description: convert test to use the new dataobjects

2. revision info:

    – author : wangc
    – date : 2018-12-13
    – description: In PR #882, the standard errors on statistics moments are imple-
      mented, these quantities are stored in the pointwise metadata, and will be printed
      out in the output csv files by default. In order to avoid regolding this test, the op-
      tional node 'what' with text values 'input, output' is added. In this case, only the
      user requested variables as specified in the DataObjects are printed out.

2.3.249 FRAMEWORK POSTPROCESSORS BASICSTATISTICS MC

This test can be found at "`./raven/tests/framework/PostProcessors/BasicStatistics/`
`mc.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/mc
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/mc
```

- Test Description:

    – This test checks basic statistics on Monte Carlo samples.

- Original Author:

    – alfoa

- Creation date:

    – 2015-11-18

- The classes tested in this test are:

    – PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : wangc
        – date : 2017-12-05
        – description: convert test to use the new dataobjects

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2. revision info:

   – author : wangc
   – date : 2018-12-13
   – description: In PR #882, the standard errors on statistics moments are imple-
     mented, these quantities are stored in the pointwise metadata, and will be printed
     out in the output csv files by default. In order to avoid regolding this test, the op-
     tional node 'what' with text values 'input, output' is added. In this case, only the
     user requested variables as specified in the DataObjects are printed out.

2.3.250 FRAMEWORK POSTPROCESSORS BASICSTATISTICS.MCFLOATPERCENTILE

This test can be found at "`./raven/tests/framework/PostProcessors/BasicStatistics/`
`mc_float_percentile.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics.mcFloatPercentile
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics.mcFloat
```

- Test Description:

  – This test checks basic statistics on Monte Carlo samples, requesting percentiles less
    than 1 percent

- Original Author:

  – alfoa

- Creation date:

  – 2017-03-26

- The classes tested in this test are:

  – PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:

     – author : wangc
     – date : 2017-12-05
     – description: convert test to use the new dataobjects

2.3.251 FRAMEWORK POSTPROCESSORS BASICSTATISTICS GRID ANALYTIC

This test can be found at "`./raven/tests/framework/PostProcessors/BasicStatistics/stratified_analytic.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/grid_analytic
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/grid_a
```

- Test Description:

    - This test checks basic statistics on Stratified samples

- Original Author:

    - alfoa

- Creation date:

    - 2015-11-22

- The classes tested in this test are:

    - PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2017-12-05
        - description: convert test to use the new dataobjects
    2. revision info:
        - author : wangc
        - date : 2018-12-13
        - description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the pointwise metadata, and will be printed out in the output csv files by default. In order to avoid regolding this test, the optional node 'what' with text values 'input, output' is added. In this case, only the user requested variables as specified in the DataObjects are printed out.

2.3.252 FRAMEWORK POSTPROCESSORS BASICSTATISTICS FACTORIAL ANALYTIC

This test can be found at "`./raven/tests/framework/PostProcessors/BasicStatistics/factorial_analytic.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/factorial_analyt
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/factor
```

- Test Description:

  - This test checks basic statistics on Factorial samples.

- Original Author:

  - alfoa

- Creation date:

  - 2015-11-22

- The classes tested in this test are:

  - PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2017-12-05
     - description: convert test to use the new dataobjects
  2. revision info:
     - author : wangc
     - date : 2018-12-13
     - description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the pointwise metadata, and will be printed out in the output csv files by default. In order to avoid regolding this test, the optional node 'what' with text values 'input, output' is added. In this case, only the user requested variables as specified in the DataObjects are printed out.

2.3.253 FRAMEWORK POSTPROCESSORS BASICSTATISTICS RESPONSESURFACE-DOE ANALYTIC

This test can be found at "`./raven/tests/framework/PostProcessors/BasicStatistics/responseSurfaceDoE_analytic.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/responseSurfaceD
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/respons
```

- Test Description:

    - This test checks the basic statistics on Response Surface Design of Experiment samples

- Original Author:

    - alfoa

- Creation date:

    - 2015-11-22

- The classes tested in this test are:

    - PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2017-12-05
        - description: convert test to use the new dataobjects

    2. revision info:
        - author : wangc
        - date : 2018-12-13
        - description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the pointwise metadata, and will be printed out in the output csv files by default. In order to avoid regolding this test, the optional node 'what' with text values 'input, output' is added. In this case, only the user requested variables as specified in the DataObjects are printed out.

2.3.254 FRAMEWORK POSTPROCESSORS BASICSTATISTICS PRINTXML

This test can be found at "`./raven/tests/framework/PostProcessors/BasicStatistics/print_xml.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/printXml
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/printXn
```

- Test Description:
    - This test checks the ability of the basic statistics PP to print RAVEN XML outputs.
- Original Author:
    - talbpaul
- Creation date:
    - 2016-05-10
- The classes tested in this test are:
    - PostProcessors.BasicStatistics
- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : wangc
        - date : 2017-12-05
        - description: convert test to use the new dataobjects
    2. revision info:
        - author : wangc
        - date : 2018-12-13
        - description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the pointwise metadata, and will be printed out in the output csv files by default. In order to avoid regolding this test, the optional node 'what' with text values 'input, output' is added. In this case, only the user requested variables as specified in the DataObjects are printed out.

2.3.255 FRAMEWORK POSTPROCESSORS BASICSTATISTICS SENSITIVITY

This test can be found at "`./raven/tests/framework/PostProcessors/BasicStatistics/sensitivity.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/sensitivity
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/sensit
```

- Test Description:

    - This test checks the sensitivities (and other metrics) calculated by basic statistics PP

- Original Author:

    - wangc

- Creation date:

    - 2015-12-10

- The classes tested in this test are:

    - PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2017-12-05
        - description: convert test to use the new dataobjects
    2. revision info:
        - author : wangc
        - date : 2018-12-13
        - description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the pointwise metadata, and will be printed out in the output csv files by default. In order to avoid regolding this test, the optional node 'what' with text values 'input, output' is added. In this case, only the user requested variables as specified in the DataObjects are printed out.

2.3.256 FRAMEWORK POSTPROCESSORS BASICSTATISTICS.SENSITIVITYONLY

This test can be found at "`./raven/tests/framework/PostProcessors/BasicStatistics/`
`sensitivity_only.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics.sensitivityOnly
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics.sensiti
```

- Test Description:
    - This test checks the sensitivities only calculated by basic statistics PP
- Original Author:
    - alfoa
- Creation date:
    - 2017-07-18
- The classes tested in this test are:
    - PostProcessors.BasicStatistics
- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : wangc
        - date : 2017-12-05
        - description: convert test to use the new dataobjects

2.3.257 FRAMEWORK POSTPROCESSORS BASICSTATISTICS TIMEDEPENDENT

This test can be found at "`./raven/tests/framework/PostProcessors/BasicStatistics/`
`time_dep.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/timeDependent
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/timeDep
```

- Test Description:

  – This tests time-dependent basic statistics.

- Original Author:

  – alfoa

- Creation date:

  – 2016-06-20

- The classes tested in this test are:

  – PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : wangc
     – date : 2017-12-05
     – description: convert test to use the new dataobjects

  2. revision info:
     – author : wangc
     – date : 2018-12-13
     – description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the pointwise metadata, and will be printed out in the output csv files by default. In order to avoid regolding this test, the optional node 'what' with text values 'input, output' is added. In this case, only the user requested variables as specified in the DataObjects are printed out.

2.3.258 FRAMEWORK POSTPROCESSORS BASICSTATISTICS TIMEDEPENDENTA-SYNCHISTORIES

This test can be found at "`./raven/tests/framework/PostProcessors/BasicStatistics/time_dep_asyncHists.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/timeDependentAsy
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/timeDe
```

- Test Description:

  - This test checks time-dependent basic statistics with histories that are not synchronized a priori.

- Original Author:

  - alfoa

- Creation date:

  - 2016-06-21

- The classes tested in this test are:

  - PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2017-12-05
     - description: convert test to use the new dataobjects
  2. revision info:
     - author : wangc
     - date : 2017-12-20
     - description: convert test to use the new DataObjects with the new structure of basic statistic
  3. revision info:
     - author : wangc
     - date : 2018-12-13
     - description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the pointwise metadata, and will be printed out in the output csv files by default. In order to avoid regolding this test, the optional node 'what' with text values 'input, output' is added. In this case, only the user requested variables as specified in the DataObjects are printed out.

2.3.259 FRAMEWORK POSTPROCESSORS BASICSTATISTICS VARIATIONCOEFFI-CIENT

This test can be found at "`./raven/tests/framework/PostProcessors/BasicStatistics/variationCoefficient.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/variationCoeffic
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/variat
```

- Test Description:
  - This test is used to test the defect mentioned in issue #666 This test will make sure the expectedValue and the variationCoefficient are correctly computed. If the expectedValues are zero, the variationCoefficient will be INF.

- Original Author:
  - wangc

- Creation date:
  - 2015-11-21

- The classes tested in this test are:
  - PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:
  1. revision info:
     - author : wangc
     - date : 2017-12-05
     - description: convert test to use the new dataobjects

2.3.260 FRAMEWORK POSTPROCESSORS BASICSTATISTICS MC UNIFORM

This test can be found at "./raven/tests/framework/PostProcessors/BasicStatistics/mcUnif.xml". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/mc_uniform
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/mc_uni
```

- Test Description:

  - Tests basic statistics on uniformly-sampled normally-distributed Monte Carlo sampling.

- Original Author:

  - mandd

- Creation date:

  - 2016-11-28

- The classes tested in this test are:

  - PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2017-12-05
     - description: convert test to use the new dataobjects
  2. revision info:
     - author : wangc
     - date : 2018-12-13
     - description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the pointwise metadata, and will be printed out in the output csv files by default. In order to avoid regolding this test, the optional node 'what' with text values 'input, output' is added. In this case, only the user requested variables as specified in the DataObjects are printed out.

2.3.261 FRAMEWORK POSTPROCESSORS BASICSTATISTICS WRITEHEAVYXML

This test can be found at "`./raven/tests/framework/PostProcessors/BasicStatistics/heavy_xml_write.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/writeHeavyXml
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/writeHe
```

- Test Description:

  - This tests time-dependent basic statistics writing a large number of entries to ensure good speed.

- Original Author:

  - talbpaul

- Creation date:

  - 2017-03-16

- The classes tested in this test are:

  - PostProcessors.BasicStatistics,Files.DynamicXMLOutput

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2017-12-05
     - description: convert test to use the new dataobjects
  2. revision info:
     - author : wangc
     - date : 2018-12-13
     - description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the pointwise metadata, and will be printed out in the output csv files by default. In order to avoid regolding this test, the optional node 'what' with text values 'input, output' is added. In this case, only the user requested variables as specified in the DataObjects are printed out.

2.3.262 FRAMEWORK POSTPROCESSORS BASICSTATISTICS TIMEDEPOUTCSV

This test can be found at "`./raven/tests/framework/PostProcessors/BasicStatistics/test_timedep_out_csv.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/timeDepOutCsv
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/timeDep
```

- Test Description:

  - This test checks basic statistics for csv ouptut

- Original Author:

  - alfoa

- Creation date:

  - 2017-03-29

- The classes tested in this test are:

  - PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2017-12-20
     - description: convert test to use the new DataObjects with the new structure of basic statistic
  2. revision info:
     - author : wangc
     - date : 2018-05-15
     - description: remove unecessary plots
  3. revision info:
     - author : wangc
     - date : 2018-12-13
     - description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the pointwise metadata, and will be printed out in the output csv files by default. In order to avoid regolding this test, the optional node 'what' with text values 'input, output' is added. In this case, only the user requested variables as specified in the DataObjects are printed out.

2.3.263 FRAMEWORK POSTPROCESSORS BASICSTATISTICS TIMEDEPDATASET

This test can be found at "`./raven/tests/framework/PostProcessors/BasicStatistics/time_dep_dataset.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/timeDepDataset
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/timeDe
```

- Test Description:

    - This tests dumping time-dependent basic statistics into dataset

- Original Author:

    - wangc

- Creation date:

    - 2018-08-25

- The classes tested in this test are:

    - PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2018-12-13
        - description: avoid metadata output since metadata is added in basicStatistics
    2. revision info:
        - author : wangc
        - date : 2018-12-13
        - description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the pointwise metadata, and will be printed out in the output csv files by default. In this case, the time dependent standard errors will be printed out.

2.3.264 FRAMEWORK POSTPROCESSORS BASICSTATISTICS NML

This test can be found at "./raven/tests/framework/PostProcessors/BasicStatistics/
test_not_multiple_linear.xml". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics/nml
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics/nml
```

- Test Description:

  - This test checks sensitivity, variance dependent sensitivity calculations without using the multiple linear regression method. This means the inputs are treated uncorrelated with respective to the output space

- Original Author:

  - wangc

- Creation date:

  - 2018-09-08

- The classes tested in this test are:

  - PostProcessors.BasicStatistics

2.3.265 FRAMEWORK POSTPROCESSORS BASICSTATISTICS.STE

This test can be found at "`./raven/tests/framework/PostProcessors/BasicStatistics/ste_mc.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics.ste
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics.ste
```

- Test Description:

  - This test checks standard error calculations of statistics moments in basic statistics using Monte Carlo samples.

- Original Author:

  - wangc

- Creation date:

  - 2018-12-13

- The classes tested in this test are:

  - PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-12-13
     - description: In PR #882, the standard errors on statistics moments are imple-
       mented, these quantities are stored in the pointwise metadata, and will be printed
       out in the output csv files by default. This test will test the Monte Carlo-based
       weighted standard errors calculations. The equivalent sample size will be equal
       the number of samples in this case, and then standard errors will be computed
       with unbiased standard deviations and/or the equivalent sample size.

2.3.266   FRAMEWORK POSTPROCESSORS BASICSTATISTICS.STEGRID

This test can be found at "`./raven/tests/framework/PostProcessors/BasicStatistics/
ste_grid.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/BasicStatistics.steGrid
```

or

```
./run_framework_tests --re=framework/PostProcessors/BasicStatistics.steGrid
```

- Test Description:

  - This test checks standard error calculations of statistics moments in basic statistics
    using Grid samples.

- Original Author:

  - wangc

- Creation date:

  - 2018-12-13

- The classes tested in this test are:

  - PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-12-13
     - description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the pointwise metadata, and will be printed out in the output csv files by default. This test will test the grid-based weighted standard errors calculations. The equivalent sample size will be computed first using the probability weights, and then standard errors will be computed with unbiased standard deviations and/or the equivalent sample size.

2.3.267 FRAMEWORK POSTPROCESSORS METRIC TEST CROSS VALIDATION

This test can be found at "`./raven/tests/framework/PostProcessors/CrossValidations/ test_cross_validation.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_cross_validation
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_cross_valid
```

- Test Description:

  - This test checks the CrossValidation PostProcessor with KFold method

- Original Author:

  - wangc

- Creation date:

  - 2017-09-06

- The classes tested in this test are:

  - PostProcessors.CrossValidation

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2017-12-07
     - description: convert test to use the new dataobjects

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2.3.268 FRAMEWORK POSTPROCESSORS METRIC TEST LABELKFOLD

This test can be found at "`./raven/tests/framework/PostProcessors/CrossValidations/test_LabelKFold.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_LabelKFold
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_LabelKFold
```

- Test Description:
    - This test checks the CrossValidation PostProcessor with LabelKFold method
- Original Author:
    - wangc
- Creation date:
    - 2017-09-07
- The classes tested in this test are:
    - PostProcessors.CrossValidation
- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : wangc
        - date : 2017-12-07
        - description: convert test to use the new dataobjects

2.3.269 FRAMEWORK POSTPROCESSORS METRIC TEST LEAVEONEOUT

This test can be found at "`./raven/tests/framework/PostProcessors/CrossValidations/test_labelShuffleSplit.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_leaveOneOut
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_leaveOneOut
```

- Test Description:

    - This test checks the CrossValidation PostProcessor with LabelShuffleSplit method

- Original Author:

    - wangc

- Creation date:

    - 2017-09-07

- The classes tested in this test are:

    - PostProcessors.CrossValidation

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2017-12-07
        - description: convert test to use the new dataobjects

2.3.270 FRAMEWORK POSTPROCESSORS METRIC TEST LEAVEONEOUT

This test can be found at "`./raven/tests/framework/PostProcessors/CrossValidations/test_leaveOneOut.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_leaveOneOut
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_leaveOneOut
```

- Test Description:

    - This test checks the CrossValidation PostProcessor with leaveOneOut method

- Original Author:

– wangc

- Creation date:

    – 2017-09-07

- The classes tested in this test are:

    – PostProcessors.CrossValidation

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : wangc
        – date : 2017-12-07
        – description: convert test to use the new dataobjects

2.3.271 FRAMEWORK POSTPROCESSORS METRIC TEST LEAVEPLABELOUT

This test can be found at "`./raven/tests/framework/PostProcessors/CrossValidations/`
`test_leavePLabelOut.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_leavePLabelOut
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_leavePLabel
```

- Test Description:

    – This test checks the CrossValidation PostProcessor with LeavePLabelOut method

- Original Author:

    – wangc

- Creation date:

    – 2017-09-07

- The classes tested in this test are:

    – PostProcessors.CrossValidation

- Since the creation of this test, the following main revisions have been performed:

1. revision info:
   - author : wangc
   - date : 2017-12-07
   - description: convert test to use the new dataobjects

2.3.272 FRAMEWORK POSTPROCESSORS METRIC TEST LEAVEPOUT

This test can be found at "`./raven/tests/framework/PostProcessors/CrossValidations/`
`test_leavePOut.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_leavePOut
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_leavePOut
```

- Test Description:
  - This test checks the CrossValidation PostProcessor with leavePOut method
- Original Author:
  - wangc
- Creation date:
  - 2017-09-07
- The classes tested in this test are:
  - PostProcessors.CrossValidation
- Since the creation of this test, the following main revisions have been performed:
  1. revision info:
     - author : wangc
     - date : 2017-12-07
     - description: convert test to use the new dataobjects

2.3.273 FRAMEWORK POSTPROCESSORS METRIC TEST SHUFFLESPLIT

This test can be found at "`./raven/tests/framework/PostProcessors/CrossValidations/`
`test_shuffleSplit.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_shuffleSplit
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_shuffleSpl
```

- Test Description:
    - This test checks the CrossValidation PostProcessor with shuffle and split method
- Original Author:
    - wangc
- Creation date:
    - 2017-09-07
- The classes tested in this test are:
    - PostProcessors.CrossValidation
- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : wangc
        - date : 2017-12-07
        - description: convert test to use the new dataobjects

2.3.274 FRAMEWORK POSTPROCESSORS METRIC TEST STRATIFIEDKFOLD

This test can be found at "`./raven/tests/framework/PostProcessors/CrossValidations/`
`test_stratifiedKFold.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_stratifiedKFold
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_stratifiedl
```

- Test Description:

    - This test checks the CrossValidation PostProcessor with Stratified K-Folds method

- Original Author:

    - wangc

- Creation date:

    - 2017-09-07

- The classes tested in this test are:

    - PostProcessors.CrossValidation

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2017-12-07
        - description: convert test to use the new dataobjects

2.3.275 FRAMEWORK POSTPROCESSORS METRIC TEST STRATIFIEDSHUFFLE-SPLIT

This test can be found at "`./raven/tests/framework/PostProcessors/CrossValidations/test_stratifiedShuffleSplit.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_stratifiedShuffleSpl
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_stratifiedS
```

- Test Description:

    - This test checks the CrossValidation PostProcessor with StratifiedShuffleSplit method

- Original Author:

    - wangc

- Creation date:

- 2017-09-07

- The classes tested in this test are:

  - PostProcessors.CrossValidation

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2017-12-07
     - description: convert test to use the new dataobjects

2.3.276 FRAMEWORK POSTPROCESSORS METRIC TEST LEAVEONELABELOUT

This test can be found at "`./raven/tests/framework/PostProcessors/CrossValidations/test_leaveOneLabelOut.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_leaveOneLabelOut
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_leaveOneLabelOut
```

- Test Description:

  - This test checks the CrossValidation PostProcessor with LeaveOneLabelOut method

- Original Author:

  - wangc

- Creation date:

  - 2017-09-07

- The classes tested in this test are:

  - PostProcessors.CrossValidation

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2017-12-07
     - description: convert test to use the new dataobjects

2.3.277 FRAMEWORK POSTPROCESSORS DATACLASSIFIER CLUSTERING

This test can be found at "`./raven/tests/framework/PostProcessors/DataClassifier/`
`test_dataClassifier_postprocessor.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataClassifier/Clustering/
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataClassifier/Cluster
```

- Test Description:
    - Test DataClassifier PostProcessor with PointSet input

- Original Author:
    - wangc

- Creation date:
    - 2018-10-18

- The classes tested in this test are:
    - DataClassifier

- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : wangc
        - date : 2019-04-26
        - description: Move the test from PRAPlugin to RAVEN tests/framework/PostPro-cessors/DataClassifier, this is because the DataClassifier PostProcessor is currently in RAVEN main repository.
    2. revision info:
        - author : wangc
        - date : 2019-05-02
        - description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

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2.3.278 FRAMEWORK POSTPROCESSORS DATACLASSIFIER CLUSTERING

This test can be found at "`./raven/tests/framework/PostProcessors/DataClassifier/`
`test_dataClassifier_postprocessor_HS.xml`". This test can be called executing the
following command:

```
./run_tests --re=framework/PostProcessors/DataClassifier/Clustering/
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataClassifier/Cluster
```

- Test Description:

  - Test DataClassifier PostProcessor with HistorySet input

- Original Author:

  - wangc

- Creation date:

  - 2018-10-18

- The classes tested in this test are:

  - DataClassifier

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2019-04-26
     - description: Move the test from PRAPlugin to RAVEN tests/framework/PostPro-
       cessors/DataClassifier, this is because the DataClassifier PostProcessor is currently
       in RAVEN main repository.

  2. revision info:
     - author : wangc
     - date : 2019-05-02
     - description: As reported in issue #805, RAVEN will not allow input DataObject
       of PostProcessor to be output DataObject, the output data object will be renamed,
       and the variable name of labels will be explicitly defined.

2.3.279 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUS-TERING KMEANS

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces` `Clustering/test_dataMiningKMeans.xml`". This test can be called executing the fol-lowing command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clusteri
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

  - Tests clustering with the KMeans model.

- Original Author:

  - maljdan

- Creation date:

  - 2016-09-09

- The classes tested in this test are:

  - DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-09-27
     - description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.280 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUS-TERING KMEANSPCA

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces` `Clustering/test_dataMiningKMeansPCA.xml`". This test can be called executing the following command:

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```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clusteri
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:
    - Tests clustering with KMeans followed by data reduction with PCA.
- Original Author:
    - senrs
- Creation date:
    - 2015-11-24
- The classes tested in this test are:
    - DataMining
- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : wangc
        - date : 2018-09-27
        - description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.281 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUSTERING MINIBATCHKMEANS

This test can be found at "./raven/tests/framework/PostProcessors/DataMiningPostProces
Clustering/test_dataMiningMiniBatchKMeans.xml". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clusteri
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

  - Tests clustering with the MiniBatchKMeans model.

- Original Author:

  - senrs

- Creation date:

  - 2015-11-24

- The classes tested in this test are:

  - DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-09-27
     - description: As reported in issue #805, RAVEN will not allow input DataObject
       of PostProcessor to be output DataObject, the output data object will be renamed,
       and the variable name of labels will be explicitly defined.

2.3.282   FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUS-TERING MEANSHIFT

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces`
`Clustering/test_dataMiningMeanShift.xml`". This test can be called executing the
following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clusteri
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

  - Tests clustering with the MeanShift model.

- Original Author:

– senrs

- Creation date:

  – 2015-11-24

- The classes tested in this test are:

  – DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : wangc
     – date : 2018-09-27
     – description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.283   FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUS-TERING AFFINITYPROPOGATION

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces`
`Clustering/test_dataMiningAffinityPropogation.xml`". This test can be called
executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clusteri
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

  – Tests clustering with the AffinityPropogation model.

- Original Author:

  – senrs

- Creation date:

  – 2015-11-24

- The classes tested in this test are:

  - DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:

     - author : wangc
     - date : 2018-09-27
     - description: As reported in issue #805, RAVEN will not allow input DataObject
       of PostProcessor to be output DataObject, the output data object will be renamed,
       and the variable name of labels will be explicitly defined.

2.3.284 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUS-TERING DBSCAN

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces`
`Clustering/test_dataMiningDBSCAN.xml`". This test can be called executing the fol-
lowing command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clusteri
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

  - Tests clustering with the DBSCAN model.

- Original Author:

  - senrs

- Creation date:

  - 2015-11-24

- The classes tested in this test are:

  - DataMining

- Since the creation of this test, the following main revisions have been performed:

1. revision info:
   - author : wangc
   - date : 2018-09-27
   - description: As reported in issue #805, RAVEN will not allow input DataObject
     of PostProcessor to be output DataObject, the output data object will be renamed,
     and the variable name of labels will be explicitly defined.

2.3.285 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUS-TERING SPECTRALCLUSTERING

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces`
`Clustering/test_dataMiningSpectralClustering.xml`". This test can be called
executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clusteri
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:
  - Tests clustering with SpectralClustering model.
- Original Author:
  - senrs
- Creation date:
  - 2015-11-24
- The classes tested in this test are:
  - DataMining
- Since the creation of this test, the following main revisions have been performed:
  1. revision info:
     - author : wangc
     - date : 2018-09-27
     - description: As reported in issue #805, RAVEN will not allow input DataObject
       of PostProcessor to be output DataObject, the output data object will be renamed,
       and the variable name of labels will be explicitly defined.

2.3.286 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUS-TERING GAUSSIANMIXTURE

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces`
`Clustering/test_dataMiningGaussianMixture.xml`". This test can be called exe-
cuting the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clusteri
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

    - Tests mixtures with the GMM model.

- Original Author:

    - senrs

- Creation date:

    - 2015-11-24

- The classes tested in this test are:

    - DataMining

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2018-09-27
        - description: As reported in issue #805, RAVEN will not allow input DataObject
          of PostProcessor to be output DataObject, the output data object will be renamed,
          and the variable name of labels will be explicitly defined.

2.3.287 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUS-TERING TIME DEP CLUSTERING FILTERED

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces`
`Clustering/test_TD_KMeans_Filtered.xml`". This test can be called executing the
following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clusterir
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

  - Tests clustering with the KMeans model and preprocessing.

- Original Author:

  - mandd

- Creation date:

  - 2016-03-30

- The classes tested in this test are:

  - DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-09-27
     - description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.288 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUS-TERING VARIATIONALGMM

This test can be found at "./raven/tests/framework/PostProcessors/DataMiningPostProces
Clustering/test_dataMiningVariationalGMM.xml". This test can be called execut-
ing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clusterir
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

  – Tests clustering with VBGMM (Variational Bayesian Gaussian Mixture Model).

- Original Author:

  – senrs

- Creation date:

  – 2015-11-24

- The classes tested in this test are:

  – DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : wangc
     – date : 2018-09-27
     – description: As reported in issue #805, RAVEN will not allow input DataObject
       of PostProcessor to be output DataObject, the output data object will be renamed,
       and the variable name of labels will be explicitly defined.

2.3.289 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUS-TERING AGGLOMERATIVE

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces`
`Clustering/test_dataMiningAgglomerative.xml`". This test can be called execut-
ing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clusteri
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

  – Tests clustering using the Agglomerative model.

- Original Author:

- – mandd

- Creation date:

  - – 2016-07-20

- The classes tested in this test are:

  - – DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - – author : maljdan
     - – date : 2017-08-07
     - – description: Modifying this test case to exercise putting the data into a new data object different than the input of to the clustering algorithm

2.3.290 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUS-TERING TIME DEP CLUSTERING FILTERED

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces` `Clustering/test_TD_MeanShift.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clusteri
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

  - – Tests clustering with the MeanShift model and preprocessing.

- Original Author:

  - – mandd

- Creation date:

  - – 2016-07-20

- The classes tested in this test are:

- DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-09-27
     - description: As reported in issue #805, RAVEN will not allow input DataObject
       of PostProcessor to be output DataObject, the output data object will be renamed,
       and the variable name of labels will be explicitly defined.

2.3.291 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUS-
TERING TIME DEP HIERARCHICALSCIPY DTW

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces`
`Clustering/test_TD_hierarchical_dtw.xml`". This test can be called executing the
following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clusteri
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

  - Tests clustering with Hierarchical model and DTW metric.

- Original Author:

  - mandd

- Creation date:

  - 2016-10-10

- The classes tested in this test are:

  - DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc

356

– date : 2018-09-27

– description: As reported in issue #805, RAVEN will not allow input DataObject
of PostProcessor to be output DataObject, the output data object will be renamed,
and the variable name of labels will be explicitly defined.

2.3.292 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUS-TERING TIME DEP HIERARCHICALSCIPY DTW DERIVATIVE

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces`
`Clustering/test_TD_hierarchical_dtw_derivative.xml`". This test can be called
executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clusteri
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

  – Tests clustering with Hierarchical model and derivative DTW metric.

- Original Author:

  – mandd

- Creation date:

  – 2016-10-21

- The classes tested in this test are:

  – DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : wangc
     – date : 2018-09-27
     – description: As reported in issue #805, RAVEN will not allow input DataObject
       of PostProcessor to be output DataObject, the output data object will be renamed,
       and the variable name of labels will be explicitly defined.

2.3.293 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUS-TERING HIERARCHICALSCIPY

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces`
`Clustering/test_dataMiningHierarchical.xml`". This test can be called executing
the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clusteri
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

  - Tests clustering with the Hierarchical model.

- Original Author:

  - mannd

- Creation date:

  - 2016-10-10

- The classes tested in this test are:

  - DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-09-27
     - description: As reported in issue #805, RAVEN will not allow input DataObject
       of PostProcessor to be output DataObject, the output data object will be renamed,
       and the variable name of labels will be explicitly defined.

2.3.294 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUS-TERING AGGLOMERATIVEDTW

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces`
`Clustering/test_TD_agglomerative_dtw.xml`". This test can be called executing the
following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clusterir
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:
  - Tests clustering with Agglomerative model with DTW metric.

- Original Author:
  - mandd

- Creation date:
  - 2016-10-10

- The classes tested in this test are:
  - DataMining

- Since the creation of this test, the following main revisions have been performed:
  1. revision info:
     - author : wangc
     - date : 2018-09-27
     - description: As reported in issue #805, RAVEN will not allow input DataObject
       of PostProcessor to be output DataObject, the output data object will be renamed,
       and the variable name of labels will be explicitly defined.

2.3.295 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUS-TERING AGGLOMERATIVEEUCLIDEAN

This test can be found at "./raven/tests/framework/PostProcessors/DataMiningPostProces
Clustering/test_TD_agglomerative_euclidean.xml". This test can be called ex-
ecuting the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clusterir
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:
    - Tests clustering with Agglomerative model with Minkowski metric.
- Original Author:
    - mandd
- Creation date:
    - 2016-10-10
- The classes tested in this test are:
    - DataMining
- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : maljdan
        - date : 2017-08-07
        - description: Modifying this test case to exercise putting the data into a new data object different than the input of to the clustering algorithm
    2. revision info:
        - author : wangc
        - date : 2018-09-27
        - description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.296 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUS-TERING HIERARCHICALSCIPY SKL

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces`
`Clustering/test_dataMiningHierarchical_SKL_Pairwise.xml`". This test can
be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clusteri
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

  - Tests clustering with the Hierarchical model with the SKL metric.

- Original Author:

  - mandd

- Creation date:

  - 2016-12-05

- The classes tested in this test are:

  - DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-09-27
     - description: As reported in issue #805, RAVEN will not allow input DataObject
       of PostProcessor to be output DataObject, the output data object will be renamed,
       and the variable name of labels will be explicitly defined.

2.3.297 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR CLUS-
TERING.INTERACTIVE UI

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces
Clustering/hierarchical_ui.xml`". This test can be called executing the following
command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Clusteri
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

  - This test exercises the user interface coupled with the Hierarchical Clustering available
    in RAVEN. This test is very similar to HierarchicalScipy except this adds the ability to
    test the loading, running, and tear down of the UI associated to that class.

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- Original Author:

  - maljdan

- Creation date:

  - 2016-05-09

- The classes tested in this test are:

  - PostProcessors.DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-09-27
     - description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.298 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMENSIONALITYREDUCTION EXACTPCA MLE

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces` `DimensionalityReduction/test_dataMiningExactPCA_MLE.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimension
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

  - Tests decomposition with PCA and MLE. This test exercises our ability to accept a string for n_components See Issue #649

- Original Author:

  - maljdan

- Creation date:

362

– 2016-08-11

- The classes tested in this test are:

  – DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-09-27
     - description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.299   FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMEN-SIONALITYREDUCTION RANDOMIZEDPCA

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces DimensionalityReduction/test_dataMiningRandomizedPCA.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimension
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

  – Tests decomposition with RandomizedPCA.

- Original Author:

  – senrs

- Creation date:

  – 2015-11-24

- The classes tested in this test are:

  – DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-09-27
     - description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.300 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMEN-SIONALITYREDUCTION KERNELPCA

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces DimensionalityReduction/test_dataMiningKernelPCA.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimension
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

  - Tests decomposition with KernelPCA

- Original Author:

  - senrs

- Creation date:

  - 2015-11-24

- The classes tested in this test are:

  - DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-09-27

    – description: As reported in issue #805, RAVEN will not allow input DataObject
    of PostProcessor to be output DataObject, the output data object will be renamed,
    and the variable name of labels will be explicitly defined.

2.3.301   FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMEN-SIONALITYREDUCTION SPARSEPCA

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces`
`DimensionalityReduction/test_dataMiningSparsePCA.xml`". This test can be
called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimension
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

    – Tests decomposition with SparsePCA

- Original Author:

    – senrs

- Creation date:

    – 2015-11-24

- The classes tested in this test are:

    – DataMining

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : wangc
        – date : 2018-09-27
        – description: As reported in issue #805, RAVEN will not allow input DataObject
          of PostProcessor to be output DataObject, the output data object will be renamed,
          and the variable name of labels will be explicitly defined.

2.3.302 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMEN-SIONALITYREDUCTION MINIBATCHSPARSEPCA

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces`
`DimensionalityReduction/test_dataMiningMiniBatchSparsePCA.xml`". This
test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimension
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

    - Tests decomposition with MiniBatchSparsePCA

- Original Author:

    - senrs

- Creation date:

    - 2015-11-24

- The classes tested in this test are:

    - DataMining

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2018-09-27
        - description: As reported in issue #805, RAVEN will not allow input DataObject
          of PostProcessor to be output DataObject, the output data object will be renamed,
          and the variable name of labels will be explicitly defined.

2.3.303 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMEN-SIONALITYREDUCTION TRUNCATEDSVD

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces`
`DimensionalityReduction/test_dataMiningTruncatedSVD.xml`". This test can
be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimensio
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

    - Test decomposition using the TruncatedSVD model.

- Original Author:

    - senrs

- Creation date:

    - 2015-11-24

- The classes tested in this test are:

    - DataMining

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2018-09-27
        - description: As reported in issue #805, RAVEN will not allow input DataObject
          of PostProcessor to be output DataObject, the output data object will be renamed,
          and the variable name of labels will be explicitly defined.

2.3.304 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMEN-SIONALITYREDUCTION FASTICA

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces`
`DimensionalityReduction/test_dataMiningFastICA.xml`". This test can be called
executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimensio
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

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- Test Description:

  - Tests decomposition using FastICA.

- Original Author:

  - senrs

- Creation date:

  - 2015-11-24

- The classes tested in this test are:

  - DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-09-27
     - description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.305 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMEN-SIONALITYREDUCTION ISOMAP

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces DimensionalityReduction/test_dataMiningIsomap.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimension
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

  - Testing manifold with Isomap.

- Original Author:

– senrs

- Creation date:

  – 2015-11-24

- The classes tested in this test are:

  – DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : wangc
     – date : 2018-09-27
     – description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.306   FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMEN-SIONALITYREDUCTION LOCALLYLINEAREMBEDDING

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces DimensionalityReduction/test_dataMiningLocallyLinearEmbedding.xml`".
This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimension
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:

  – Tests manifold with LocallyLinearEmbedding.

- Original Author:

  – senrs

- Creation date:

  – 2015-11-24

- The classes tested in this test are:

  - DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-09-27
     - description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.307   FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMEN-SIONALITYREDUCTION SPECTRALEMBEDDING

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces`
`DimensionalityReduction/test_dataMiningSpectralEmbedding.xml`". This
test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimension
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcessor
```

- Test Description:

  - Tests manifold with SpectralEmbedding.

- Original Author:

  - senrs

- Creation date:

  - 2015-11-24

- The classes tested in this test are:

  - DataMining

- Since the creation of this test, the following main revisions have been performed:

1. revision info:
   - author : wangc
   - date : 2018-09-27
   - description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.308 FRAMEWORK POSTPROCESSORS DATAMININGPOSTPROCESSOR DIMEN-SIONALITYREDUCTION MULTIDIMENSIONALSCALING

This test can be found at "`./raven/tests/framework/PostProcessors/DataMiningPostProces`
`DimensionalityReduction/test_dataMiningMultiDimensionalScaling.xml`".
This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/DataMiningPostProcessor/Dimension
```

or

```
./run_framework_tests --re=framework/PostProcessors/DataMiningPostProcesso
```

- Test Description:
  - Tests manifold with MDS
- Original Author:
  - senrs
- Creation date:
  - 2015-11-24
- The classes tested in this test are:
  - DataMining
- Since the creation of this test, the following main revisions have been performed:
  1. revision info:
     - author : wangc
     - date : 2018-09-27
     - description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.309 FRAMEWORK POSTPROCESSORS ETIMPORTERPOSTPROCESSOR.ET IM-PORTER OPENPSA

This test can be found at "`./raven/tests/framework/PostProcessors/ETimporterPostProces`
`test_ETimporter.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/ETimporterPostProcessor.ET_import
```

or

```
./run_framework_tests --re=framework/PostProcessors/ETimporterPostProcesso
```

- Test Description:

    - Tests of the ETImporter post-processor: it read an event-tree (ET) from an .xml file (eventTree.xml) and it imports the ET structure into a PointSet. Note that the ET needs to be in an OpenPSA format.

- Original Author:

    - mandd

- Creation date:

    - 2017-11-07

- The classes tested in this test are:

    - ETimporter

2.3.310 FRAMEWORK POSTPROCESSORS ETIMPORTERPOSTPROCESSOR.ET IM-PORTER OPENPSA SYMBOLIC

This test can be found at "`./raven/tests/framework/PostProcessors/ETimporterPostProces`
`test_ETimporterSymbolic.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/ETimporterPostProcessor.ET_import
```

or

```
./run_framework_tests --re=framework/PostProcessors/ETimporterPostProcesso
```

- Test Description:

  - Tests of the ETImporter post-processor: it read an event-tree (ET) from an .xml file (eventTree.xml) and it imports the ET structure into a PointSet. Note that the ET needs to be in an OpenPSA format. In particular, this tests checks that capability of the PP to manage symbolic ID for the ET sequences. Note that in this configuration, a mapping file is generated

- Original Author:

  - mandd

- Creation date:

  - 2017-11-07

- The classes tested in this test are:

  - ETimporter

2.3.311 FRAMEWORK POSTPROCESSORS ETIMPORTERPOSTPROCESSOR.ET IM-PORTER OPENPSA DEFINE BRANCH

This test can be found at "./raven/tests/framework/PostProcessors/ETimporterPostProces
test_ETimporter_DefineBranch.xml". This test can be called executing the following
command:

```
./run_tests --re=framework/PostProcessors/ETimporterPostProcessor.ET_import
```

or

```
./run_framework_tests --re=framework/PostProcessors/ETimporterPostProcesso
```

- Test Description:

  - Tests of the ETImporter post-processor: it read an event-tree (ET) from an .xml file (eventTree.xml) and it imports the ET structure into a PointSet. Note that the ET needs to be in an OpenPSA format. In particular, this tests checks that capability of the PP to manage ETs that contains by-pass branches.

- Original Author:

  - mandd

- Creation date:

– 2017-11-07

• The classes tested in this test are:

  – ETimporter

2.3.312 FRAMEWORK POSTPROCESSORS.ETIMPORTERPOSTPROCESSORMULTIPLEET.ET
IMPORTER OPENPSA COUPLEDET

This test can be found at "`./raven/tests/framework/PostProcessors/ETimporterPostProces`
`test_ETimporterMultipleET.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors.ETimporterPostProcessorMultipleE
```

or

```
./run_framework_tests --re=framework/PostProcessors.ETimporterPostProcesso
```

• Test Description:

  – Tests of the ETImporter post-processor: it read an event-tree (ET) from multiple .xml
    files (eventTree1.xml and eventTree2.xml). Note that one single ET is provided but its
    structure is splitted into two files, i.e., the sub ETs are linked. and it imports the fullET
    structure into a PointSet. Note that the ETs need to be in an OpenPSA format.

• Original Author:

  – mandd

• Creation date:

  – 2017-11-07

• The classes tested in this test are:

  – ETimporter

2.3.313 FRAMEWORK POSTPROCESSORS ETIMPORTERPOSTPROCESSOR.ET IM-
PORTER OPENPSA EXPAND

This test can be found at "`./raven/tests/framework/PostProcessors/ETimporterPostProces`
`test_ETimporter_expand.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/ETimporterPostProcessor.ET_import
```

or

```
./run_framework_tests --re=framework/PostProcessors/ETimporterPostProcesso
```

- Test Description:

  - Tests of the ETImporter post-processor: it read an event-tree (ET) from an .xml file (eventTree.xml) and it imports the ET structure into a PointSet. Note that the ET needs to be in an OpenPSA format.

- Original Author:

  - mandd

- Creation date:

  - 2017-11-07

- The classes tested in this test are:

  - ETimporter

2.3.314 FRAMEWORK POSTPROCESSORS ETIMPORTERPOSTPROCESSOR.ET IM-PORTER 3BRANCHES

This test can be found at "`./raven/tests/framework/PostProcessors/ETimporterPostProces test_ETimporter_3branches.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/ETimporterPostProcessor.ET_import
```

or

```
./run_framework_tests --re=framework/PostProcessors/ETimporterPostProcesso
```

- Test Description:

  - Tests of the ETImporter post-processor: it read an event-tree (ET) from an .xml file (eventTree.xml) and it imports the ET structure into a PointSet. Note that the ET needs to be in an OpenPSA format.

- Original Author:

  – mandd

- Creation date:

  – 2017-11-07

- The classes tested in this test are:

  – ETimporter

2.3.315 FRAMEWORK POSTPROCESSORS ETIMPORTERPOSTPROCESSOR.ETIMPORTER 3BRANCHES NEWNUMBERING

This test can be found at "`./raven/tests/framework/PostProcessors/ETimporterPostProces`
`test_ETimporter_3branches_NewNumbering.xml`". This test can be called executing
the following command:

```
./run_tests --re=framework/PostProcessors/ETimporterPostProcessor.ETimporte
```

or

```
./run_framework_tests --re=framework/PostProcessors/ETimporterPostProcesso
```

- Test Description:

  – Tests of the ETImporter post-processor: it read an event-tree (ET) from an .xml file
    (eventTree.xml) and it imports the ET structure into a PointSet. Note that the ET needs
    to be in an OpenPSA format.

- Original Author:

  – mandd

- Creation date:

  – 2017-11-07

- The classes tested in this test are:

  – ETimporter

2.3.316 FRAMEWORK POSTPROCESSORS ETIMPORTERPOSTPROCESSOR.ETIMPORTER 3BRANCHES NEWNUMBERING EXPANDED

This test can be found at "`./raven/tests/framework/PostProcessors/ETimporterPostProces`
`test_ETimporter_3branches_NewNumbering_expanded.xml`". This test can be called
executing the following command:

```
./run_tests --re=framework/PostProcessors/ETimporterPostProcessor.ETimporte
```

or

```
./run_framework_tests --re=framework/PostProcessors/ETimporterPostProcesso
```

- Test Description:

    - Tests of the ETImporter post-processor: it read an event-tree (ET) from an .xml file (eventTree.xml) and it imports the ET structure into a PointSet. Note that the ET needs to be in an OpenPSA format.

- Original Author:

    - mandd

- Creation date:

    - 2017-11-07

- The classes tested in this test are:

    - ETimporter

2.3.317 FRAMEWORK POSTPROCESSORS EXTERNALPOSTPROCESSOR.MULTIPLE USAGE

This test can be found at "`./raven/tests/framework/PostProcessors/ExternalPostProcesso`
`multiple_usage.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/ExternalPostProcessor.multiple_us
```

or

```
./run_framework_tests --re=framework/PostProcessors/ExternalPostProcessor.m
```

- Test Description:

  - A simple example of writing an external python function and using it inside RAVEN.
    Here we are testing whether using the same external processor on multiple data objects
    does not cause naming issues.

- Original Author:

  - maljdan

- Creation date:

  - 2015-06-28

- The classes tested in this test are:

  - PostProcessors.ExternalPostProcessor

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2019-03-07
     - description: Modified syntax in Functions as for issue #934

2.3.318   FRAMEWORK POSTPROCESSORS EXTERNALPOSTPROCESSOR.HISTORY SET PARTITIONING

This test can be found at "`./raven/tests/framework/PostProcessors/ExternalPostProcesso
test_history_set_partitioning.xml`". This test can be called executing the following
command:

```
./run_tests --re=framework/PostProcessors/ExternalPostProcessor.history_se
```

or

```
./run_framework_tests --re=framework/PostProcessors/ExternalPostProcessor.
```

- Test Description:

  - An example of using the External Post-Processor to partition a history set by creating
    a new data object that removes data where the time is less than 0.0001.

- Original Author:

- alfoa

- Creation date:

  - 2016-09-15

- The classes tested in this test are:

  - PostProcessors.ExternalPostProcessor

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2016-10-04
     - description: Adding an additional example that addresses Josh's comment.
  2. revision info:
     - author : alfoa
     - date : 2019-03-07
     - description: Modified syntax in Functions as for issue #934

2.3.319 FRAMEWORK POSTPROCESSORS EXTERNALPOSTPROCESSOR.HISTORY SET DELETING HISTORIES

This test can be found at "`./raven/tests/framework/PostProcessors/ExternalPostProcesso`
`test_history_set_partitioning_and_remove_some_histories.xml`". This test
can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/ExternalPostProcessor.history_set
```

or

```
./run_framework_tests --re=framework/PostProcessors/ExternalPostProcessor.l
```

- Test Description:

  - An example of using the External Post-Processor to remove some data points from a History Set. This differs from test_history_set_partitioning.xml as that test removed output points only in the time series, whereas this one will remove them from the input space.

- Original Author:

    – alfoa

- Creation date:

    – 2016-10-04

- The classes tested in this test are:

    – PostProcessors.ExternalPostProcessor

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:

     – author : maljdan
     – date : 2017-01-17
     – description: Added an additional example that addresses Josh's comment

  2. revision info:

     – author : alfoa
     – date : 2016-10-04
     – description: Adding test descriptions for the tests related to the ExternalPostPro-
       cessor

  3. revision info:

     – author : alfoa
     – date : 2019-03-07
     – description: Modified syntax in Functions as for issue #934

2.3.320 FRAMEWORK POSTPROCESSORS FASTFOURIERTRANSFORM.BASIC

This test can be found at "`./raven/tests/framework/PostProcessors/FastFourierTransform`
`basic.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/FastFourierTransform.Basic
```

or

```
./run_framework_tests --re=framework/PostProcessors/FastFourierTransform.Ba
```

- Test Description:

– Tests the basic functionality of the FastFourierTransform postprocessor to create a frequency-amplitude Fourier analysis of a signal.

The signals are created using Basic/dataGenerator.py, and use analytic Fourier-based signals. The first realization uses periods of 4, 8 and 20, and in the second realization the periods are 3.333, 13, and 50. At the corresponding periods (in the "fft_*csv" files, under "signal_fft_period"), there should be a peak in the "signal_fft_amplitude" values.

- Original Author:

  – talbpaul

- Creation date:

  – 2018-09-11

- The classes tested in this test are:

  – PostProcessors.FastFourierTransform

2.3.321 FRAMEWORK POSTPROCESSORS FTIMPORTERPOSTPROCESSOR.FTIMPORTER AND

This test can be found at "./raven/tests/framework/PostProcessors/FTimporterPostProces test_FTimporter_and.xml". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/FTimporterPostProcessor.FTimporte
```

or

```
./run_framework_tests --re=framework/PostProcessors/FTimporterPostProcesso
```

- Test Description:

  – Tests of the FTImporter post-processor: it read a fault-tree (ET) from an .xml file (eventTree.xml) and it imports the FT structure into a PointSet. Note that the FT needs to be in an OpenPSA format.

- Original Author:

  – mandd

- Creation date:

  – 2017-11-07

- The classes tested in this test are:

  – ETimporter

2.3.322 FRAMEWORK POSTPROCESSORS FTIMPORTERPOSTPROCESSOR.FTIMPORTER AND WITHNOT

This test can be found at "`./raven/tests/framework/PostProcessors/FTimporterPostProces` `test_FTimporter_and_withNOT.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/FTimporterPostProcessor.FTimporte
```

or

```
./run_framework_tests --re=framework/PostProcessors/FTimporterPostProcesso
```

- Test Description:

  - Tests of the FTImporter post-processor: it read a fault-tree (ET) from an .xml file (eventTree.xml) and it imports the FT structure into a PointSet. Note that the FT needs to be in an OpenPSA format.

- Original Author:

  - mandd

- Creation date:

  - 2017-11-07

- The classes tested in this test are:

  - ETimporter

2.3.323 FRAMEWORK POSTPROCESSORS FTIMPORTERPOSTPROCESSOR.FTIMPORTER AND WITHNOT EMBEDDED

This test can be found at "`./raven/tests/framework/PostProcessors/FTimporterPostProces` `test_FTimporter_and_withNOT_embedded.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/FTimporterPostProcessor.FTimporte
```

or

```
./run_framework_tests --re=framework/PostProcessors/FTimporterPostProcesso
```

- Test Description:

  - Tests of the FTImporter post-processor: it read a fault-tree (ET) from an .xml file (eventTree.xml) and it imports the FT structure into a PointSet. Note that the FT needs to be in an OpenPSA format.

- Original Author:

  - mandd

- Creation date:

  - 2017-11-07

- The classes tested in this test are:

  - ETimporter

2.3.324 FRAMEWORK POSTPROCESSORS FTIMPORTERPOSTPROCESSOR

This test can be found at "`./raven/tests/framework/PostProcessors/FTimporterPostProces`
`test_FTimporter_and_withNOT_withNOT_embedded.xml`". This test can be called
executing the following command:

```
./run_tests --re=framework/PostProcessors/FTimporterPostProcessor
```

or

```
./run_framework_tests --re=framework/PostProcessors/FTimporterPostProcesso
```

- Test Description:

  - Tests of the FTImporter post-processor: it read a fault-tree (ET) from an .xml file (eventTree.xml) and it imports the FT structure into a PointSet. Note that the FT needs to be in an OpenPSA format.

- Original Author:

  - mandd

- Creation date:

  - 2017-11-07

- The classes tested in this test are:

  - ETimporter

2.3.325 FRAMEWORK POSTPROCESSORS FTIMPORTERPOSTPROCESSOR.FTIMPORTER ATLEAST

This test can be found at "`./raven/tests/framework/PostProcessors/FTimporterPostProces` `test_FTimporter_atleast.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/FTimporterPostProcessor.FTimporte
```

or

```
./run_framework_tests --re=framework/PostProcessors/FTimporterPostProcesso
```

- Test Description:

    - Tests of the FTImporter post-processor: it read a fault-tree (ET) from an .xml file (eventTree.xml) and it imports the FT structure into a PointSet. Note that the FT needs to be in an OpenPSA format.

- Original Author:

    - mandd

- Creation date:

    - 2017-11-07

- The classes tested in this test are:

    - ETimporter

2.3.326 FRAMEWORK POSTPROCESSORS FTIMPORTERPOSTPROCESSOR.FTIMPORTER CARDINALITY

This test can be found at "`./raven/tests/framework/PostProcessors/FTimporterPostProces` `test_FTimporter_cardinality.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/FTimporterPostProcessor.FTimporte
```

or

```
./run_framework_tests --re=framework/PostProcessors/FTimporterPostProcesso
```

- Test Description:

  - Tests of the FTImporter post-processor: it read a fault-tree (ET) from an .xml file (eventTree.xml) and it imports the FT structure into a PointSet. Note that the FT needs to be in an OpenPSA format.

- Original Author:

  - mandd

- Creation date:

  - 2017-11-07

- The classes tested in this test are:

  - ETimporter

2.3.327 FRAMEWORK POSTPROCESSORS FTIMPORTERPOSTPROCESSOR.FTIMPORTER COMPONENT

This test can be found at "`./raven/tests/framework/PostProcessors/FTimporterPostProces`
`test_FTimporter_component.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/FTimporterPostProcessor.FTimporte
```

or

```
./run_framework_tests --re=framework/PostProcessors/FTimporterPostProcesso
```

- Test Description:

  - Tests of the FTImporter post-processor: it read a fault-tree (ET) from an .xml file (eventTree.xml) and it imports the FT structure into a PointSet. Note that the FT needs to be in an OpenPSA format.

- Original Author:

  - mandd

- Creation date:

  - 2017-11-07

- The classes tested in this test are:

  - ETimporter

2.3.328 FRAMEWORK POSTPROCESSORS FTIMPORTERPOSTPROCESSOR.FTIMPORTER IFF

This test can be found at "`./raven/tests/framework/PostProcessors/FTimporterPostProces`
`test_FTimporter_iff.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/FTimporterPostProcessor.FTimporte
```

or

```
./run_framework_tests --re=framework/PostProcessors/FTimporterPostProcesso
```

- Test Description:

  - Tests of the FTImporter post-processor: it read a fault-tree (ET) from an .xml file (eventTree.xml) and it imports the FT structure into a PointSet. Note that the FT needs to be in an OpenPSA format.

- Original Author:

  - mandd

- Creation date:

  - 2017-11-07

- The classes tested in this test are:

  - ETimporter

2.3.329 FRAMEWORK POSTPROCESSORS FTIMPORTERPOSTPROCESSOR.FTIMPORTER IMPY

This test can be found at "`./raven/tests/framework/PostProcessors/FTimporterPostProces`
`test_FTimporter_imply.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/FTimporterPostProcessor.FTimporte
```

or

```
./run_framework_tests --re=framework/PostProcessors/FTimporterPostProcesso
```

- Test Description:

- Tests of the FTImporter post-processor: it read a fault-tree (ET) from an .xml file (eventTree.xml) and it imports the FT structure into a PointSet. Note that the FT needs to be in an OpenPSA format.

- Original Author:

  - mandd

- Creation date:

  - 2017-11-07

- The classes tested in this test are:

  - ETimporter

2.3.330   FRAMEWORK POSTPROCESSORS FTIMPORTERPOSTPROCESSOR.FTIMPORTER MULTIPLEFTS

This test can be found at "./raven/tests/framework/PostProcessors/FTimporterPostProces
test_FTimporter_multipleFTs.xml". This test can be called executing the following
command:

```
./run_tests --re=framework/PostProcessors/FTimporterPostProcessor.FTimporte
```

or

```
./run_framework_tests --re=framework/PostProcessors/FTimporterPostProcesso
```

- Test Description:

  - Tests of the FTImporter post-processor: it read a fault-tree (ET) from an .xml file (eventTree.xml) and it imports the FT structure into a PointSet. Note that the FT needs to be in an OpenPSA format.

- Original Author:

  - mandd

- Creation date:

  - 2017-11-07

- The classes tested in this test are:

  - ETimporter

2.3.331 FRAMEWORK POSTPROCESSORS FTIMPORTERPOSTPROCESSOR.FTIMPORTER NAND

This test can be found at "./raven/tests/framework/PostProcessors/FTimporterPostProces
test_FTimporter_nand.xml". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/FTimporterPostProcessor.FTimporte
```

or

```
./run_framework_tests --re=framework/PostProcessors/FTimporterPostProcesso
```

- Test Description:

    - Tests of the FTImporter post-processor: it read a fault-tree (ET) from an .xml file (eventTree.xml) and it imports the FT structure into a PointSet. Note that the FT needs to be in an OpenPSA format.

- Original Author:

    - mandd

- Creation date:

    - 2017-11-07

- The classes tested in this test are:

    - ETimporter

2.3.332 FRAMEWORK POSTPROCESSORS FTIMPORTERPOSTPROCESSOR.FTIMPORTER NOR

This test can be found at "./raven/tests/framework/PostProcessors/FTimporterPostProces
test_FTimporter_nor.xml". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/FTimporterPostProcessor.FTimporte
```

or

```
./run_framework_tests --re=framework/PostProcessors/FTimporterPostProcesso
```

- Test Description:

– Tests of the FTImporter post-processor: it read a fault-tree (ET) from an .xml file
(eventTree.xml) and it imports the FT structure into a PointSet. Note that the FT needs
to be in an OpenPSA format.

- Original Author:

  – mandd

- Creation date:

  – 2017-11-07

- The classes tested in this test are:

  – ETimporter

2.3.333 FRAMEWORK POSTPROCESSORS FTIMPORTERPOSTPROCESSOR.FTIMPORTER OR

This test can be found at "`./raven/tests/framework/PostProcessors/FTimporterPostProces
test_FTimporter_or.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/FTimporterPostProcessor.FTimporte
```

or

```
./run_framework_tests --re=framework/PostProcessors/FTimporterPostProcesso
```

- Test Description:

  – Tests of the FTImporter post-processor: it read a fault-tree (ET) from an .xml file
(eventTree.xml) and it imports the FT structure into a PointSet. Note that the FT needs
to be in an OpenPSA format.

- Original Author:

  – mandd

- Creation date:

  – 2017-11-07

- The classes tested in this test are:

  – ETimporter

2.3.334 FRAMEWORK POSTPROCESSORS FTIMPORTERPOSTPROCESSOR.FTIMPORTER OR HOUSEEVENT

This test can be found at "`./raven/tests/framework/PostProcessors/FTimporterPostProces`
`test_FTimporter_or_houseEvent.xml`". This test can be called executing the following
command:

```
./run_tests --re=framework/PostProcessors/FTimporterPostProcessor.FTImporte
```

or

```
./run_framework_tests --re=framework/PostProcessors/FTimporterPostProcesso
```

- Test Description:

  - Tests of the FTImporter post-processor: it read a fault-tree (ET) from an .xml file
    (eventTree.xml) and it imports the FT structure into a PointSet. Note that the FT needs
    to be in an OpenPSA format.

- Original Author:

  - mandd

- Creation date:

  - 2017-11-07

- The classes tested in this test are:

  - ETimporter

2.3.335 FRAMEWORK POSTPROCESSORS FTIMPORTERPOSTPROCESSOR.FTIMPORTER XOR

This test can be found at "`./raven/tests/framework/PostProcessors/FTimporterPostProces`
`test_FTimporter_xor.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/FTimporterPostProcessor.FTImporte
```

or

```
./run_framework_tests --re=framework/PostProcessors/FTimporterPostProcesso
```

- Test Description:

  – Tests of the FTImporter post-processor: it read a fault-tree (ET) from an .xml file (eventTree.xml) and it imports the FT structure into a PointSet. Note that the FT needs to be in an OpenPSA format.

- Original Author:

  – mandd

- Creation date:

  – 2017-11-07

- The classes tested in this test are:

  – ETimporter

2.3.336 FRAMEWORK POSTPROCESSORS FTIMPORTERPOSTPROCESSOR.FTIMPORTER NOT

This test can be found at "`./raven/tests/framework/PostProcessors/FTimporterPostProces`
`test_FTimporter_not.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/FTimporterPostProcessor.FTimporte
```

or

```
./run_framework_tests --re=framework/PostProcessors/FTimporterPostProcesso
```

- Test Description:

  – Tests of the FTImporter post-processor: it read a fault-tree (ET) from an .xml file (eventTree.xml) and it imports the FT structure into a PointSet. Note that the FT needs to be in an OpenPSA format.

- Original Author:

  – mandd

- Creation date:

  – 2017-11-07

- The classes tested in this test are:

  – ETimporter

2.3.337 FRAMEWORK POSTPROCESSORS FTIMPORTERPOSTPROCESSOR.FTIMPORTER DOUBLENOT

This test can be found at "`./raven/tests/framework/PostProcessors/FTimporterPostProces`
`test_FTimporter_doubleNot.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/FTimporterPostProcessor.FTimporte
```

or

```
./run_framework_tests --re=framework/PostProcessors/FTimporterPostProcesso
```

- Test Description:

    - Tests of the FTImporter post-processor: it read a fault-tree (ET) from an .xml file (eventTree.xml) and it imports the FT structure into a PointSet. Note that the FT needs to be in an OpenPSA format.

- Original Author:

    - mandd

- Creation date:

    - 2017-11-07

- The classes tested in this test are:

    - ETimporter

2.3.338 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR INTER-FACEDPOSTPROCESSOR

This test can be found at "`./raven/tests/framework/PostProcessors/InterfacedPostProces`
`test_interfacedPP.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/interface
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcesso
```

- Test Description:

  - Test of the interfaced post-processor interface

- Original Author:

  - mandd

- Creation date:

  - 2019-01-16

- The classes tested in this test are:

  - InterfacedPostProcessor

2.3.339 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR INTER-FACEDPOSTPROCESSORPARALLEL

This test can be found at "`./raven/tests/framework/PostProcessors/InterfacedPostProces`
`test_interfacedPP_parallel.xml`". This test can be called executing the following
command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/interface
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcesso
```

- Test Description:

  - Test of the interfaced post-processor interface performed in parallel

- Original Author:

  - mandd

- Creation date:

  - 2019-01-16

- The classes tested in this test are:

  - InterfacedPostProcessor

2.3.340 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR HISTO-RYSAMPLING

This test can be found at "`./raven/tests/framework/PostProcessors/InterfacedPostProces` `test_historySetSamplingIPP.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/historySa
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcesso
```

- Test Description:
    - Tests of the HistorySetSampling interfaced post-processor and all its sampling types
- Original Author:
    - mandd
- Creation date:
    - 2016-02-09
- The classes tested in this test are:
    - InterfacedPostProcessor
- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : wangc
        - date : 2018-08-08
        - description: Test the defect issue #739

2.3.341 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR HISTO-RYSAMPLINGINTERVALAVE

This test can be found at "`./raven/tests/framework/PostProcessors/InterfacedPostProces` `test_historySetSamplingIntervalAve.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/historyS
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcesso
```

- Test Description:

    - Tests of the HistorySetSampling post-processor with intervalAverage interpolation technique

- Original Author:

    - junc

- Creation date:

    - 2016-11-16

- The classes tested in this test are:

    - InterfacedPostProcessor

2.3.342 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR HISTORYSETSNAPSHOT

This test can be found at "`./raven/tests/framework/PostProcessors/InterfacedPostProces`
`test_historySetSnapshot.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/HistorySe
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcesso
```

- Test Description:

    - Tests of the HistorySetSnapShot interfaced post-processor

- Original Author:

    - mandd

395

- Creation date:
    - 2016-02-09

- The classes tested in this test are:
    - InterfacedPostProcessor

2.3.343 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR HISTO-RYSETSNAPSHOTMIXED

This test can be found at "`./raven/tests/framework/PostProcessors/InterfacedPostProces`
`test_historySetSnapshot_mixed.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/HistorySe
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcesso
```

- Test Description:
    - Tests of HistorySetSnapShot and its mixed type of snapshot techniques

- Original Author:
    - talbpaul

- Creation date:
    - 2016-06-14

- The classes tested in this test are:
    - InterfacedPostProcessor

2.3.344 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR HISTO-RYSETSYNC

This test can be found at "`./raven/tests/framework/PostProcessors/InterfacedPostProces`
`test_historySetSync.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/HistorySe
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcesso
```

- Test Description:

  - Tests of the HistorySetSync interfaced post-processor

- Original Author:

  - mandd

- Creation date:

  - 2016-02-09

- The classes tested in this test are:

  - InterfacedPostProcessor

2.3.345   FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR HS SYNC ALL

This test can be found at "`./raven/tests/framework/PostProcessors/InterfacedPostProces`
`test_historySetSyncAll.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/hs_sync_a
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcesso
```

- Test Description:

  - Tests of the HistorySetSync interfaced post-processor and in particular the all syncMethod

- Original Author:

  - talbpaul

- Creation date:

  - 2016-04-13

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- The classes tested in this test are:

  – InterfacedPostProcessor

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : talbpaul
     – date : 2019-01-09
     – description: moving from ROM-file to ROM-dataobjects

2.3.346 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR HS SYNC MIN

This test can be found at "`./raven/tests/framework/PostProcessors/InterfacedPostProces`
`test_historySetSyncMin.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/hs_sync_
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcesso
```

- Test Description:

  – Tests of the HistorySetSync interfaced post-processor and in particular the MIN syncMethod

- Original Author:

  – talbpaul

- Creation date:

  – 2016-04-14

- The classes tested in this test are:

  – InterfacedPostProcessor

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : talbpaul
     – date : 2019-01-09
     – description: moving from ROM-file to ROM-dataobjects

2.3.347 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR HS SYNC MAX

This test can be found at "`./raven/tests/framework/PostProcessors/InterfacedPostProces`
`test_historySetSyncMax.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/hs_sync_r
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcesso
```

- Test Description:
    - Tests of the HistorySetSync interfaced post-processor and in particular the MAX syncMethod
- Original Author:
    - talbpaul
- Creation date:
    - 2016-04-14
- The classes tested in this test are:
    - InterfacedPostProcessor
- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : talbpaul
        - date : 2019-01-09
        - description: moving from ROM-file to ROM-dataobjects

2.3.348 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR HS2PS

This test can be found at "`./raven/tests/framework/PostProcessors/InterfacedPostProces`
`test_HS2PS.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/HS2PS
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcesso
```

- Test Description:

    - Tests of the HS2PS interfaced post-processor

- Original Author:

    - mandd

- Creation date:

    - 2016-02-09

- The classes tested in this test are:

    - InterfacedPostProcessor

2.3.349 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR INTER-FACEDPOSTPROCESSOR POINTSET

This test can be found at "./raven/tests/framework/PostProcessors/InterfacedPostProces
test_interfacedPP_pointset.xml". This test can be called executing the following
command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/interface
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcesso
```

- Test Description:

    - Test of the interfaced post-processor interface to deal with pointSet

- Original Author:

    - mandd

- Creation date:

    - 2019-01-16

- The classes tested in this test are:

    - InterfacedPostProcessor

2.3.350 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR TYPI-CALHISTORYFROMHS

This test can be found at "`./raven/tests/framework/PostProcessors/InterfacedPostProces` `test_typicalHistoryFromHS.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/TypicalH
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcesso
```

- Test Description:

    - Tests of the TypicalHistoryFromHistorySet interfaced post-processor

- Original Author:

    - chenj

- Creation date:

    - 2016-07-07

- The classes tested in this test are:

    - InterfacedPostProcessor

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : talbpaul
        - date : 2019-01-30
        - description: regolded using central binning system for empirical distributions, also formatted test to raven standard xml

2.3.351 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR RISKMEA-SURESDISCRETE

This test can be found at "`./raven/tests/framework/PostProcessors/InterfacedPostProces` `test_riskMeasuresDiscrete.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/RiskMeasu
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcesso
```

- Test Description:

  - Tests of the four risk importance measures: Risk Achievement Worth (RAW), Risk Reduction Worth (RRW), Birnbaum (B) and Fussell-Vesely (FV)

- Original Author:

  - mandd

- Creation date:

  - 2016-10-31

- The classes tested in this test are:

  - InterfacedPostProcessor

2.3.352 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR.METADATAUSAGEI

This test can be found at "./raven/tests/framework/PostProcessors/InterfacedPostProces test_metadata_usage_in_interfacePP.xml". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor.metadataU
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcesso
```

- Test Description:

  - Test of the interfaced post-processor interface internally using metadata coming from RAVEN.

- Original Author:

  - mandd

```

- Creation date:

    - 2019-01-16

- The classes tested in this test are:

    - Models.PostProcessors.InterfacedPostProcessor

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2018-05-15
        - description: Adding this test description.

### 2.3.353 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR RISKMEA-SURESDISCRETEMULTIPLEIE

This test can be found at "`./raven/tests/framework/PostProcessors/InterfacedPostProces`
`test_riskMeasuresDiscreteMultipleIE.xml`". This test can be called executing the
following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/RiskMeasu
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcesso
```

- Test Description:

    - Tests of the four risk importance measures for multiple IEs: Risk Achievement Worth
      (RAW), Risk Reduction Worth (RRW), Birnbaum (B) and Fussell-Vesely (FV)

- Original Author:

    - mandd

- Creation date:

    - 2017-02-23

- The classes tested in this test are:

    - InterfacedPostProcessor

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2.3.354 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR RISKMEA-SURESTIMEDEP

This test can be found at "`./raven/tests/framework/PostProcessors/InterfacedPostProces`
`test_riskMonitor.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor/RiskMeasu
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcesso
```

- Test Description:

  - Tests of the four risk importance measures for time dependent data: Risk Achievement Worth (RAW), Risk Reduction Worth (RRW), Birnbaum (B) and Fussell-Vesely (FV)

- Original Author:

  - mandd

- Creation date:

  - 2017-02-23

- The classes tested in this test are:

  - InterfacedPostProcessor

2.3.355 FRAMEWORK POSTPROCESSORS INTERFACEDPOSTPROCESSOR.HSTOPSOPERATOR

This test can be found at "`./raven/tests/framework/PostProcessors/InterfacedPostProces`
`test_HistorySetToPointSetOperators.xml`". This test can be called executing the
following command:

```
./run_tests --re=framework/PostProcessors/InterfacedPostProcessor.HStoPSope
```

or

```
./run_framework_tests --re=framework/PostProcessors/InterfacedPostProcesso
```

- Test Description:

- This test is aimed to show how to use the "HStoPSOperator" InterfacedPostProcessor. The 3 basic functionalities are testes: 1) row-based projection, 2) pivot-value-based projection and 3) operator-based projection (max, min, average)

- Original Author:

  - alfoa

- Creation date:

  - 2018-02-01

- The classes tested in this test are:

  - InterfacedPostProcessor

2.3.356 FRAMEWORK POSTPROCESSORS LIMITSURFACE.TESTLIMITSURFACEPOSTPROCES

This test can be found at "`./raven/tests/framework/PostProcessors/LimitSurface/ test_LimitSurface_regressor_inverseWeight.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/LimitSurface.testLimitSurfacePost
```

or

```
./run_framework_tests --re=framework/PostProcessors/LimitSurface.testLimit
```

- Test Description:

  - This test is aimed to check the capability of RAVEN to generate Limit Surfaces, using a regressor surrogate model instead of a classifier, from a pre-generated data set (in this case, generated with a MonteCarlo sampling), outputting the generated Limit Surface in DataObject.PointSet(s) reporting both transition boundaries (-1 1) or just one of them.

- Original Author:

  - alfoa

- Creation date:

  - 2014-07-10

- The classes tested in this test are:

– Models.PostProcessors.LimitSurface, Functions.External, Models.ROM

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : alfoa
        – date : 2017-06-02
        – description: Adding this test description.

    2. revision info:
        – author : alfoa
        – date : 2017-12-14
        – description: Moved LimitSurface Postprocessor tests in a specific directory (tests/framework/PostProcessors/LimitSurface) and updated for new DataObject structure

    3. revision info:
        – author : alfoa
        – date : 2019-03-07
        – description: Modified syntax in Functions as for issue #934

2.3.357 FRAMEWORK POSTPROCESSORS METRIC TEST METRIC

This test can be found at "`./raven/tests/framework/PostProcessors/Metrics/test_metric.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_metric
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_metric
```

- Test Description:

    – This test checks the Metric PostProcessor

- Original Author:

    – wangc

- Creation date:

    – 2017-08-29

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- The classes tested in this test are:

  - PostProcessors.Metric

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2017-12-06
     - description: convert to using new data objects
  2. revision info:
     - author : wangc
     - date : 2017-11-20
     - description: restructure metric system, add time-dependent capability

2.3.358 FRAMEWORK POSTPROCESSORS METRIC TEST MULTIPLE INPUT OB-JECTS

This test can be found at "`./raven/tests/framework/PostProcessors/Metrics/test_metric_multiple_input_objects.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_multiple_input_object
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_multiple_i
```

- Test Description:

  - This test checks the Metric PostProcessor to accept multiple input data objects

- Original Author:

  - wangc

- Creation date:

  - 2017-08-30

- The classes tested in this test are:

  - PostProcessors.Metric

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2017-12-06
     - description: convert to using new data objects
  2. revision info:
     - author : wangc
     - date : 2017-11-20
     - description: restructure metric system, add time-dependent capability

2.3.359   FRAMEWORK POSTPROCESSORS METRIC TEST METRIC SKL

This test can be found at "`./raven/tests/framework/PostProcessors/Metrics/test_metric_skl.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_metric_skl
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_metric_skl
```

- Test Description:

  - This test checks metrics from ScikitLearn library

- Original Author:

  - wangc

- Creation date:

  - 2017-08-30

- The classes tested in this test are:

  - PostProcessors.Metric

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul

- – date : 2019-01-09
- – description: no printing directly from postprocessor to file

2. revision info:

- – author : wangc
- – date : 2017-12-06
- – description: convert to using new data objects

3. revision info:

- – author : wangc
- – date : 2017-11-20
- – description: restructure metric system, add time-dependent capability

2.3.360 FRAMEWORK POSTPROCESSORS METRIC TEST COMPARISON STATS MET-RICS

This test can be found at "`./raven/tests/framework/PostProcessors/Metrics/`
`test_comparison_stats_metrics.xml`". This test can be called executing the following
command:

```
./run_tests --re=framework/PostProcessors/Metric/test_comparison_stats_met
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_comparison_
```

- • Test Description:

  - – This test checks the Comparison Statistics Metric

- • Original Author:

  - – joshua-cogliati-inl

- • Creation date:

  - – 2017-09-12

- • The classes tested in this test are:

  - – PostProcessors.Metric

- • Since the creation of this test, the following main revisions have been performed:

1. revision info:
   - author : wangc
   - date : 2017-12-06
   - description: convert to using new data objects

2.3.361 FRAMEWORK POSTPROCESSORS METRIC TEST COMPARISON STATS METRICS GRID

This test can be found at "`./raven/tests/framework/PostProcessors/Metrics/test_comparison_stats_metrics_grid.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_comparison_stats_met
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_comparison_
```

- Test Description:
  - This test checks the Comparison Statistics Metrics with a Grid.
- Original Author:
  - joshua-cogliati-inl
- Creation date:
  - 2017-09-13
- The classes tested in this test are:
  - PostProcessors.Metric
- Since the creation of this test, the following main revisions have been performed:
  1. revision info:
     - author : wangc
     - date : 2017-12-06
     - description: convert to using new data objects

2.3.362 FRAMEWORK POSTPROCESSORS METRIC TEST COMPARISON STATS MET-RICS

This test can be found at "`./raven/tests/framework/PostProcessors/Metrics/ test_comparison_stats_metrics_dists.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_comparison_stats_met
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_comparison
```

- Test Description:

    - This test checks the Comparison Statistics Metric

- Original Author:

    - joshua-cogliati-inl

- Creation date:

    - 2017-09-12

- The classes tested in this test are:

    - PostProcessors.Metric

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2017-12-06
        - description: convert to using new data objects

2.3.363 FRAMEWORK.TEST DISTRIBUTIONS

This test can be found at "`./raven/tests/framework/PostProcessors/Metrics/ unit_test_comparison_statistics.py`". This test can be called executing the following command:

```
./run_tests --re=framework.test_distributions
```

or

```
./run_framework_tests --re=framework.test_distributions
```

- Test Description:

  - This test is a Unit Test for the comparison statistics metric. It checks all the functions that are available to RAVEN internally.

- Original Author:

  - cogljj

- Creation date:

  - 2017-09-08

- The classes tested in this test are:

  –

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2018-05-10
     - description: Added Log Uniform distribution unit test

2.3.364 FRAMEWORK POSTPROCESSORS METRIC TESTMETRICTD

This test can be found at "`./raven/tests/framework/PostProcessors/Metrics/test_metric_td.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/testMetricTD
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/testMetricTD
```

- Test Description:

  - This test checks the Metric PostProcessor to handle time-dependent data

- Original Author:

  - wangc

- Creation date:

  - 2017-11-20

- The classes tested in this test are:

  - PostProcessors.Metric

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2019-01-09
     - description: no writing directly to files from postprocessors

2.3.365 FRAMEWORK POSTPROCESSORS METRIC TEST METRIC SCIPY

This test can be found at "`./raven/tests/framework/PostProcessors/Metrics/test_metric_scipy.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_metric_scipy
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_metric_scip
```

- Test Description:

  - This test checks metrics from Scipy library

- Original Author:

  - wangc

- Creation date:

  - 2018-02-16

- The classes tested in this test are:

  - PostProcessors.Metric

2.3.366 FRAMEWORK POSTPROCESSORS METRIC TEST METRIC SCIPY BOOLEAN

This test can be found at "`./raven/tests/framework/PostProcessors/Metrics/`
`test_metric_scipy_boolean.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_metric_scipy_boolean
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_metric_scip
```

- Test Description:

    - This test checks metrics from Scipy library

- Original Author:

    - wangc

- Creation date:

    - 2018-02-16

- The classes tested in this test are:

    - PostProcessors.Metric

2.3.367 FRAMEWORK POSTPROCESSORS METRIC TEST DTW

This test can be found at "`./raven/tests/framework/PostProcessors/Metrics/`
`test_dtw.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/Metric/test_dtw
```

or

```
./run_framework_tests --re=framework/PostProcessors/Metric/test_dtw
```

- Test Description:

    - This test checks the Metric PostProcessor with DTW metric

- Original Author:

  - wangc

- Creation date:

  - 2018-02-20

- The classes tested in this test are:

  - PostProcessors.Metric

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2019-01-09
     - description: no writing directly to files from postprocessors

2.3.368 FRAMEWORK TEST COMPARISON STATISTICS

This test can be found at "`./raven/tests/framework/PostProcessors/OldComparisonStatist test_cc_stats.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/test_comparison_statistics
```

or

```
./run_framework_tests --re=framework/test_comparison_statistics
```

- Test Description:

  - Tests the comparison statistics class including both two PointSets and PointSet to distribution.

- Original Author:

  - cogljj

- Creation date:

  - 2014-10-16

- The classes tested in this test are:

– ComparisonStatistics

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2017-10-17
     - description: Removed support for PointSet output for ComparisonStatisticsModule

2.3.369 FRAMEWORK PCA GRID IMPORTANCERANKABSCOV

This test can be found at "`./raven/tests/framework/PostProcessors/pca_postprocessor/test_postprocessor.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_grid/importanceRankAbsCov
```

or

```
./run_framework_tests --re=framework/pca_grid/importanceRankAbsCov
```

- Test Description:

  - Tests the ImportanceRank postprocessor based on MVN distribution with absolute covariance matrix.

- Original Author:

  - wangc

- Creation date:

  - 2016-03-15

- The classes tested in this test are:

  - PostProcessors.ImportanceRank

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2017-12-13
     - description: convert test to use the new dataobjects

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2.3.370 FRAMEWORK PCA GRID IMPORTANCERANKRELCOV

This test can be found at "`./raven/tests/framework/PostProcessors/pca_postprocessor/`
`test_postprocessor_rel.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_grid/importanceRankRelCov
```

or

```
./run_framework_tests --re=framework/pca_grid/importanceRankRelCov
```

- Test Description:
  - Tests the ImportanceRank postprocessor based on MVN distribution with relative co-variance matrix.

- Original Author:
  - wangc

- Creation date:
  - 2016-03-15

- The classes tested in this test are:
  - PostProcessors.ImportanceRank

- Since the creation of this test, the following main revisions have been performed:
  1. revision info:
     - author : wangc
     - date : 2017-12-13
     - description: convert test to use the new dataobjects

2.3.371 FRAMEWORK PCA GRID TRANSFORMATIONMATRIX

This test can be found at "`./raven/tests/framework/PostProcessors/pca_postprocessor/`
`test_transformation.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_grid/transformationMatrix
```

or

```
./run_framework_tests --re=framework/pca_grid/transformationMatrix
```

- Test Description:

    - Tests the ImportanceRank postprocessor to output transformation and inverse transformation matrices.

- Original Author:

    - wangc

- Creation date:

    - 2016-07-15

- The classes tested in this test are:

    - PostProcessors.ImportanceRank

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2017-12-13
        - description: convert test to use the new dataobjects

2.3.372   FRAMEWORK PCA GRID TIMEDEPIMPORTANCERANK

This test can be found at "`./raven/tests/framework/PostProcessors/pca_postprocessor/test_time_dependent.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/pca_grid/timeDepImportanceRank
```

or

```
./run_framework_tests --re=framework/pca_grid/timeDepImportanceRank
```

- Test Description:

    - Tests the ImportanceRank postprocessor for time-dependent problems.

- Original Author:

  - wangc

- Creation date:

  - 2016-03-15

- The classes tested in this test are:

  - PostProcessors.ImportanceRank

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2017-12-13
     - description: convert test to use the new dataobjects

2.3.373 FRAMEWORK.SAFEST POINT PP

This test can be found at "`./raven/tests/framework/PostProcessors/SafestPoint/`
`test_safest_point.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.safest_point_pp
```

or

```
./run_framework_tests --re=framework.safest_point_pp
```

- Test Description:

  - This test is about the identification of the Safest Point in a set of controllable and un-
    controllable parameter. In order to do that, a LimitSurfaceSearch sampling is employed
    and sub-sequentially the PostProcessor of type SafestPoint is used.

- Original Author:

  - alfoa

- Creation date:

  - 2014-11-17

- The classes tested in this test are:

- – Samplers.LimitSurfaceSearch, Models.PostProcessor.SafestPoint, Steps.MultiRun

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - – author : mandd
     - – date : 2015-04-17
     - – description: conversion to Database and DataObjects

  2. revision info:
     - – author : alfoa
     - – date : 2015-05-19
     - – description: Closes #176

  3. revision info:
     - – author : alfoa
     - – date : 2015-06-18
     - – description: Changed Name of all DataObjects

  4. revision info:
     - – author : talbpaul
     - – date : 2015-07-07
     - – description: standardized tests

  5. revision info:
     - – author : cogljj
     - – date : 2015-09-29
     - – description: Modifing external modules to use relative to working directory.

  6. revision info:
     - – author : maljdan
     - – date : 2016-04-06
     - – description: Updating test cases to reflect the changes to the user input.

  7. revision info:
     - – author : alfoa
     - – date : 2017-01-21
     - – description: Adding this test description.

  8. revision info:
     - – author : alfoa
     - – date : 2019-03-07
     - – description: Modified syntax in Functions as for issue #934

2.3.374 FRAMEWORK.SAFEST POINT CDF PP

This test can be found at "`./raven/tests/framework/PostProcessors/SafestPoint/ test_safest_point_cdf.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.safest_point_cdf_pp
```

or

```
./run_framework_tests --re=framework.safest_point_cdf_pp
```

- Test Description:

  - This test is about the identification of the Safest Point in a set of controllable and un-controllable parameter. The un-controllable parameter space is probability weighted in this case. In order to do that, a LimitSurfaceSearch sampling is employed and sub-sequentially the PostProcessor of type SafestPoint is used.

- Original Author:

  - alfoa

- Creation date:

  - 2015-01-22

- The classes tested in this test are:

  - Samplers.LimitSurfaceSearch, Models.PostProcessor.SafestPoint, Steps.MultiRun

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : mandd
     - date : 2015-04-17
     - description: conversion to Database and DataObjects
  2. revision info:
     - author : alfoa
     - date : 2015-05-19
     - description: Closes #176
  3. revision info:
     - author : talbpaul

- date : 2015-06-04
- description: regolding after SG feature ordering, also changed Adaptive sampler to LimitSurfaceSearch sampler

4. revision info:
   - author : cogljj
   - date : 2015-09-29
   - description: Modifing external modules to use relative to working directory.

5. revision info:
   - author : maljdan
   - date : 2016-04-06
   - description: Updating test cases to reflect the changes to the user input.

6. revision info:
   - author : alfoa
   - date : 2017-01-21
   - description: Adding this test description.

7. revision info:
   - author : alfoa
   - date : 2019-03-07
   - description: Modified syntax in Functions as for issue #934

2.3.375 FRAMEWORK POSTPROCESSORS SAMPLESELECTOR.BASIC

This test can be found at "`./raven/tests/framework/PostProcessors/SampleSelector/basic.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/SampleSelector.Basic
```

or

```
./run_framework_tests --re=framework/PostProcessors/SampleSelector.Basic
```

- Test Description:
  - This test checks basic functionalities of the Sample Selector. The model multiplies the input x by 2.5 to obtain x1, and y is multiplied by 3.5 to obtain y1. x and y are sampled through a Monte Carlo sampler, with 10 realizations. The SampleSelector postprocessor is called several times, testing each of the selection methods.

- Original Author:

  - gm

- Creation date:

  - 2018-09-12

- The classes tested in this test are:

  - PostProcessors.SampleSelector

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2018-11-06
     - description: added index selection method to test

2.3.376 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCES-SOR CLUSTERING KMEANS

This test can be found at "`./raven/tests/framework/PostProcessors/TemporalDataMiningP`
`Clustering/test_tdmSKLearnKMeans.xml`". This test can be called executing the fol-
lowing command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostP
```

- Test Description:

  - Tests clustering with KMeans and a pivot parameter.

- Original Author:

  - chenj

- Creation date:

  - 2016-02-26

- The classes tested in this test are:

- DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-09-27
     - description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.377 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCES-SOR CLUSTERING MINIBATCHKMEANS

This test can be found at "`./raven/tests/framework/PostProcessors/TemporalDataMiningPc Clustering/test_tdmSKLearnMiniBatchKMeans.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/(
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostI
```

- Test Description:

  - Tests clustering with MiniBatchKMeans and a pivot parameter.

- Original Author:

  - chenj

- Creation date:

  - 2016-02-26

- The classes tested in this test are:

  - DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc

– date : 2018-09-27

– description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.378 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCES-SOR CLUSTERING MEANSHIFT

This test can be found at "`./raven/tests/framework/PostProcessors/TemporalDataMiningP` `Clustering/test_tdmSKLearnMeanShift.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPost
```

- Test Description:

    – Tests clustering with MeanShift and a pivot parameter.

- Original Author:

    – chenj

- Creation date:

    – 2016-02-26

- The classes tested in this test are:

    – DataMining

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : wangc
        – date : 2018-09-27
        – description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.379 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCES-SOR CLUSTERING DBSCAN

This test can be found at "`./raven/tests/framework/PostProcessors/TemporalDataMiningPo` `Clustering/test_tdmSKLearnDBSCAN.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/C
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostP
```

- Test Description:

    - Tests clustering with DBSCAN and a pivot parameter.

- Original Author:

    - chenj

- Creation date:

    - 2016-02-26

- The classes tested in this test are:

    - DataMining

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2018-09-27
        - description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.380 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCES-SOR CLUSTERING AFFINITYPROPOGATION

This test can be found at "`./raven/tests/framework/PostProcessors/TemporalDataMiningPo` `Clustering/test_tdmSKLearnAffinityPropogation.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/C
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostP
```

- Test Description:

    - Tests clustering with AffinityPropogation and a pivot parameter.

- Original Author:

    - chenj

- Creation date:

    - 2016-02-26

- The classes tested in this test are:

    - DataMining

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2018-09-27
        - description: As reported in issue #805, RAVEN will not allow input DataObject
          of PostProcessor to be output DataObject, the output data object will be renamed,
          and the variable name of labels will be explicitly defined.

2.3.381 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCES-SOR CLUSTERING SPECTRALCLUSTERING

This test can be found at "./raven/tests/framework/PostProcessors/TemporalDataMiningPo
Clustering/test_tdmSKLearnSpectralClustering.xml". This test can be called
executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/C
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostP
```

427

- Test Description:

  – Tests clustering with SpectralClustering with pivot parameter.

- Original Author:

  – chenj

- Creation date:

  – 2016-02-26

- The classes tested in this test are:

  – DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : wangc
     – date : 2018-09-27
     – description: As reported in issue #805, RAVEN will not allow input DataObject
       of PostProcessor to be output DataObject, the output data object will be renamed,
       and the variable name of labels will be explicitly defined.

2.3.382   FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCES-SOR CLUSTERING GAUSSIANMIXTURE

This test can be found at "`./raven/tests/framework/PostProcessors/TemporalDataMiningPo`
`Clustering/test_tdmSKLearnGaussianMixture.xml`". This test can be called exe-cuting the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/C
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostP
```

- Test Description:

  – Tests mixtures with Gaussian Mixture Model and a pivot parameter.

- Original Author:

- – chenj

- Creation date:

  - – 2016-02-26

- The classes tested in this test are:

  - – DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - – author : wangc
     - – date : 2018-09-27
     - – description: As reported in issue #805, RAVEN will not allow input DataObject
       of PostProcessor to be output DataObject, the output data object will be renamed,
       and the variable name of labels will be explicitly defined.

2.3.383 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCES-SOR CLUSTERING VARIATIONALGMM

This test can be found at "`./raven/tests/framework/PostProcessors/TemporalDataMiningPc`
`Clustering/test_tdmSKLearnVariationalGMM.xml`". This test can be called execut-
ing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/C
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostP
```

- Test Description:

  - – Testing clustering with VBGMM (Variational Bayesian Gaussian Mixture Modeling)
    and pivot parameter.

- Original Author:

  - – chenj

- Creation date:

  - – 2016-02-26

429

- The classes tested in this test are:

  - DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-09-27
     - description: As reported in issue #805, RAVEN will not allow input DataObject
       of PostProcessor to be output DataObject, the output data object will be renamed,
       and the variable name of labels will be explicitly defined.

2.3.384 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCES-SOR DIMENSIONALITYREDUCTION EXACTPCA

This test can be found at "`./raven/tests/framework/PostProcessors/TemporalDataMiningP`
`DimensionalityReduction/test_tdmSKLearnExactPCA.xml`". This test can be called
executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPost
```

- Test Description:

  - Tests decomposition with PCA and a pivot parameter.

- Original Author:

  - chenj

- Creation date:

  - 2016-02-29

- The classes tested in this test are:

  - DataMining

- Since the creation of this test, the following main revisions have been performed:

1. revision info:
   - author : wangc
   - date : 2018-09-27
   - description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.385 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCES-SOR DIMENSIONALITYREDUCTION RANDOMIZEDPCA

This test can be found at "`./raven/tests/framework/PostProcessors/TemporalDataMiningP` `DimensionalityReduction/test_tdmSKLearnRandomizedPCA.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPost
```

- Test Description:
  - Tests decomposition with RandomizedPCA and a pivot parameter.
- Original Author:
  - chenj
- Creation date:
  - 2016-02-29
- The classes tested in this test are:
  - DataMining
- Since the creation of this test, the following main revisions have been performed:
  1. revision info:
     - author : wangc
     - date : 2018-09-27
     - description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.386 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCES-SOR DIMENSIONALITYREDUCTION KERNELPCA

This test can be found at "`./raven/tests/framework/PostProcessors/TemporalDataMiningPo` `DimensionalityReduction/test_tdmSKLearnKernelPCA.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPost
```

- Test Description:

    - Tests decomposition with KernelPCA and a pivot parameter.

- Original Author:

    - chenj

- Creation date:

    - 2016-02-29

- The classes tested in this test are:

    - DataMining

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2018-09-27
        - description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.387 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCES-SOR DIMENSIONALITYREDUCTION SPARSEPCA

This test can be found at "`./raven/tests/framework/PostProcessors/TemporalDataMiningPo` `DimensionalityReduction/test_tdmSKLearnSparsePCA.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPost
```

- Test Description:

  - Tests decomposition with SparsePCA and a pivot parameter.

- Original Author:

  - chenj

- Creation date:

  - 2016-02-26

- The classes tested in this test are:

  - DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-09-27
     - description: As reported in issue #805, RAVEN will not allow input DataObject
       of PostProcessor to be output DataObject, the output data object will be renamed,
       and the variable name of labels will be explicitly defined.

2.3.388 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCES-SOR DIMENSIONALITYREDUCTION MINIBATCHSPARSEPCA

This test can be found at "`./raven/tests/framework/PostProcessors/TemporalDataMiningPo`
`DimensionalityReduction/test_tdmSKLearnMiniBatchSparsePCA.xml`". This
test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPost
```

- Test Description:

  - Tests decomposition with MiniBatchSparsePCA and a pivot parameter.

- Original Author:

  - chenj

- Creation date:

  - 2016-02-29

- The classes tested in this test are:

  - DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-09-27
     - description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.389   FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCES-SOR DIMENSIONALITYREDUCTION TRUNCATEDSVD

This test can be found at "`./raven/tests/framework/PostProcessors/TemporalDataMiningPo DimensionalityReduction/test_tdmSKLearnTruncatedSVD.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/I
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostI
```

- Test Description:

  - Tests decomposition with TruncatedSVD and a pivot parameter.

- Original Author:

– chenj

• Creation date:

– 2016-02-26

• The classes tested in this test are:

– DataMining

• Since the creation of this test, the following main revisions have been performed:

1. revision info:
   – author : wangc
   – date : 2018-09-27
   – description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.390 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCES-SOR DIMENSIONALITYREDUCTION FASTICA

This test can be found at "`./raven/tests/framework/PostProcessors/TemporalDataMiningPo DimensionalityReduction/test_tdmSKLearnFastICA.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/I
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostI
```

• Test Description:

– Tests decomposition with FastICA and a pivot parameter.

• Original Author:

– chenj

• Creation date:

– 2016-02-29

- The classes tested in this test are:

  - DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:

     - author : wangc
     - date : 2018-09-27
     - description: As reported in issue #805, RAVEN will not allow input DataObject
       of PostProcessor to be output DataObject, the output data object will be renamed,
       and the variable name of labels will be explicitly defined.

2.3.391 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCES-SOR DIMENSIONALITYREDUCTION LOCALLYLINEAREMBEDDING

This test can be found at "./raven/tests/framework/PostProcessors/TemporalDataMiningPo
DimensionalityReduction/test_tdmSKLearnLocallyLinearEmbedding.xml".
This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPostP
```

- Test Description:

  - Tests manifold with LocallyLinearEmbedding and a pivot paramater.

- Original Author:

  - chenj

- Creation date:

  - 2016-02-29

- The classes tested in this test are:

  - DataMining

- Since the creation of this test, the following main revisions have been performed:

1. revision info:
   – author : wangc
   – date : 2018-09-27
   – description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.392 FRAMEWORK POSTPROCESSORS TEMPORALDATAMININGPOSTPROCES-SOR DIMENSIONALITYREDUCTION MULTIDIMENSIONALSCALING

This test can be found at "`./raven/tests/framework/PostProcessors/TemporalDataMiningP`
`DimensionalityReduction/test_tdmSKLearnMultiDimensionalScaling.xml`".
This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TemporalDataMiningPostProcessor/
```

or

```
./run_framework_tests --re=framework/PostProcessors/TemporalDataMiningPost
```

- Test Description:

  – Tests manifold with MDS (MultiDimensionalScaling) and a pivot parameter.

- Original Author:

  – chenj

- Creation date:

  – 2016-02-29

- The classes tested in this test are:

  – DataMining

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : wangc
     – date : 2018-09-27
     – description: As reported in issue #805, RAVEN will not allow input DataObject of PostProcessor to be output DataObject, the output data object will be renamed, and the variable name of labels will be explicitly defined.

2.3.393 FRAMEWORK POSTPROCESSORS TOPOLOGICALPOSTPROCESSOR.TOPOLOGY SIMPLE

This test can be found at "`./raven/tests/framework/PostProcessors/TopologicalPostProce`
`test_topology_simple.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TopologicalPostProcessor.topology
```

or

```
./run_framework_tests --re=framework/PostProcessors/TopologicalPostProcesso
```

- Test Description:

    - A simple example of the approximate Morse-Smale complex (AMSC) interface using a test function consisting of a 2D Gaussian with a single maximum and 4 local minimum occurring at the corners of the domain space. The hill in the middle is purposefully off-centered so as to create non-uniform cases at each corner allowing us to simplify each local minimum in turn to create a 4 partition case, a 3 partition case, a 2 partition case, and a single partition case.

- Original Author:

    - maljdan

- Creation date:

    - 2015-09-02

- The classes tested in this test are:

    - PostProcessors.TopologicalDecomposition

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : cogljj
        - date : 2015-09-29
        - description: Modifying external modules to use relative to working directory.
    2. revision info:
        - author : maljdan
        - date : 2015-10-06

- description: Correcting the user manual and reducing the sleepTime on these tests to reduce their total run time to 15 s on my local machine.

3. revision info:

  - author : talbpaul
  - date : 2016-02-08
  - description: Converted failing tests.

4. revision info:

  - author : maljdan
  - date : 2016-04-06
  - description: Updating test cases to reflect the changes to the user input.

5. revision info:

  - author : maljdan
  - date : 2017-01-17
  - description: Adding test description.

2.3.394 FRAMEWORK POSTPROCESSORS TOPOLOGICALPOSTPROCESSOR.PERSISTENCE COUNT

This test can be found at "`./raven/tests/framework/PostProcessors/TopologicalPostProce`
`test_persistence_count.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TopologicalPostProcessor.persiste
```

or

```
./run_framework_tests --re=framework/PostProcessors/TopologicalPostProcesso
```

- Test Description:

  - A simple example of the approximate Morse-Smale complex (AMSC) interface where select a persistence level using the count of points in each partition, that is if a partition has fewer than x points, it will be merged into a neighboring partition. Note, that all of the "persistence" tests will use the Schwefel function for testing.

- Original Author:

  - maljdan

- Creation date:

- 2015-09-21

- The classes tested in this test are:

  - PostProcessors.TopologicalDecomposition

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : cogljj
     - date : 2015-09-29
     - description: Modifying external modules to use relative to working directory.

  2. revision info:
     - author : maljdan
     - date : 2015-10-05
     - description: Removing the local fits from the topology PP and reducing the problem sizes for the persistence tests.

  3. revision info:
     - author : maljdan
     - date : 2015-10-05
     - description: Adjusting the Schwefel function's domain to fit better with fewer data points.

  4. revision info:
     - author : maljdan
     - date : 2015-10-06
     - description: Correcting the user manual and reducing the sleepTime on these tests to reduce their total run time to 15 s on my local machine.

  5. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: Converted failing tests.

  6. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.

  7. revision info:
     - author : maljdan
     - date : 2017-01-17
     - description: Adding test description.

2.3.395 FRAMEWORK POSTPROCESSORS TOPOLOGICALPOSTPROCESSOR.PERSISTENCE PROB

This test can be found at "`./raven/tests/framework/PostProcessors/TopologicalPostProce`
`test_persistence_prob.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TopologicalPostProcessor.persiste
```

or

```
./run_framework_tests --re=framework/PostProcessors/TopologicalPostProcess
```

- Test Description:
  - A simple example of the approximate Morse-Smale complex (AMSC) interface where we select a persistence level based on a minimum amount of probability. That is, if the total probability weight of a partition is too small, then that partition will be merged into a neighboring partition given the normal rules of persistence simplification. Note, that all of the "persistence" tests will use the Schwefel function for testing.

- Original Author:
  - maljdan

- Creation date:
  - 2015-09-21

- The classes tested in this test are:
  - PostProcessors.TopologicalDecomposition

- Since the creation of this test, the following main revisions have been performed:
  1. revision info:
     - author : cogljj
     - date : 2015-09-29
     - description: Modifying external modules to use relative to working directory.
  2. revision info:
     - author : maljdan
     - date : 2015-10-05
     - description: Removing the local fits from the topology PP and reducing the problem sizes for the persistence tests.

3. revision info:

   – author : maljdan
   – date : 2015-10-05
   – description: Adjusting the Schwefel function's domain to fit better with fewer data points.

4. revision info:

   – author : maljdan
   – date : 2015-10-06
   – description: Correcting the user manual and reducing the sleepTime on these tests to reduce their total run time to 15 s on my local machine.

5. revision info:

   – author : talbpaul
   – date : 2016-02-08
   – description: Converted failing tests.

6. revision info:

   – author : maljdan
   – date : 2016-04-06
   – description: Updating test cases to reflect the changes to the user input.

7. revision info:

   – author : maljdan
   – date : 2017-01-17
   – description: Adding test description.

2.3.396 FRAMEWORK POSTPROCESSORS TOPOLOGICALPOSTPROCESSOR.PERSISTENCE VALUE

This test can be found at "`./raven/tests/framework/PostProcessors/TopologicalPostProce`
`test_persistence_value.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TopologicalPostProcessor.persiste
```

or

```
./run_framework_tests --re=framework/PostProcessors/TopologicalPostProcesso
```

- Test Description:

- A simple example of the approximate Morse-Smale complex (AMSC) interface where we select a persistence level based on the standard notion of the function value difference between the extrema and its nearest valued neighboring critical point. That is, larger peaks and valleys will persist longer than smaller "noisy" features. This is the standard definition of persistence used in Morse topology. Note, that all of the "persistence" tests will use the Schwefel function for testing.

- Original Author:

  - maljdan

- Creation date:

  - 2015-09-21

- The classes tested in this test are:

  - PostProcessors.TopologicalDecomposition

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : cogljj
     - date : 2015-09-29
     - description: Modifying external modules to use relative to working directory.
  2. revision info:
     - author : maljdan
     - date : 2015-10-05
     - description: Removing the local fits from the topology PP and reducing the problem sizes for the persistence tests.
  3. revision info:
     - author : maljdan
     - date : 2015-10-05
     - description: Adjusting the Schwefel function's domain to fit better with fewer data points.
  4. revision info:
     - author : maljdan
     - date : 2015-10-06
     - description: Correcting the user manual and reducing the sleepTime on these tests to reduce their total run time to 15 s on my local machine.
  5. revision info:

- author : talbpaul
- date : 2016-02-08
- description: Converted failing tests.

6. revision info:
   - author : maljdan
   - date : 2016-04-06
   - description: Updating test cases to reflect the changes to the user input.

7. revision info:
   - author : maljdan
   - date : 2017-01-17
   - description: Adding test description.

2.3.397 FRAMEWORK POSTPROCESSORS TOPOLOGICALPOSTPROCESSOR.PERSISTENCE FULL

This test can be found at "`./raven/tests/framework/PostProcessors/TopologicalPostProce`
`test_persistence_full.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TopologicalPostProcessor.persiste
```

or

```
./run_framework_tests --re=framework/PostProcessors/TopologicalPostProcesso
```

- Test Description:

  - A simple example of the approximate Morse-Smale complex (AMSC) interface where no persistence simplification will be done. Note, that all of the "persistence" tests will use the Schwefel function for testing.

- Original Author:

  - maljdan

- Creation date:

  - 2015-09-21

- The classes tested in this test are:

  - PostProcessors.TopologicalDecomposition

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : cogljj
     - date : 2015-09-29
     - description: Modifying external modules to use relative to working directory.

  2. revision info:
     - author : maljdan
     - date : 2015-10-05
     - description: Removing the local fits from the topology PP and reducing the problem sizes for the persistence tests.

  3. revision info:
     - author : maljdan
     - date : 2015-10-05
     - description: Adjusting the Schwefel function's domain to fit better with fewer data points.

  4. revision info:
     - author : maljdan
     - date : 2015-10-06
     - description: Correcting the user manual and reducing the sleepTime on these tests to reduce their total run time to 15 s on my local machine.

  5. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: Converted failing tests.

  6. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.

  7. revision info:
     - author : maljdan
     - date : 2017-01-17
     - description: Adding test description.

2.3.398 FRAMEWORK POSTPROCESSORS TOPOLOGICALPOSTPROCESSOR.KNN

This test can be found at "`./raven/tests/framework/PostProcessors/TopologicalPostProce`
`test_graph_knn.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TopologicalPostProcessor.knn
```

or

```
./run_framework_tests --re=framework/PostProcessors/TopologicalPostProcesso
```

- Test Description:

  - A simple example of the approximate Morse-Smale complex (AMSC) interface that exercises the k-nearest neighbor graph structure as the underlying connectivity model for the point cloud. Note, each of the "graph" test cases uses the GaussianPeaks test case which consists of 4 distinctly shaped Gaussian peaks in a 2D input domain.

- Original Author:

  - maljdan

- Creation date:

  - 2015-09-21

- The classes tested in this test are:

  - PostProcessors.TopologicalDecomposition

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : cogljj
     - date : 2015-09-29
     - description: Modifying external modules to use relative to working directory.
  2. revision info:
     - author : maljdan
     - date : 2015-10-06
     - description: Reducing the graph tests for the topology pp, and re-golding them, also adding a plotter to validate the results visually.
  3. revision info:

- author : talbpaul
- date : 2016-02-08
- description: Converted failing tests.

4. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

5. revision info:

- author : maljdan
- date : 2017-01-17
- description: Adding test description.

2.3.399 FRAMEWORK POSTPROCESSORS TOPOLOGICALPOSTPROCESSOR.RELAXED BETA SKELETON

This test can be found at "`./raven/tests/framework/PostProcessors/TopologicalPostProce
test_graph_bs.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TopologicalPostProcessor.relaxed_
```

or

```
./run_framework_tests --re=framework/PostProcessors/TopologicalPostProcesso
```


- Test Description:

  - A simple example of the approximate Morse-Smale complex (AMSC) interface that exercises the beta skeleton graph structure as the underlying connectivity model for the point cloud. Note, each of the "graph" test cases uses the GaussianPeaks test case which consists of 4 distinctly shaped Gaussian peaks in a 2D input domain.

- Original Author:

  - maljdan

- Creation date:

  - 2015-09-21

- The classes tested in this test are:

- PostProcessors.TopologicalDecomposition

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : cogljj
     - date : 2015-09-29
     - description: Modifying external modules to use relative to working directory.

  2. revision info:
     - author : maljdan
     - date : 2015-10-06
     - description: Reducing the graph tests for the topology pp, and re-golding them, also adding a plotter to validate the results visually.

  3. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: Converted failing tests.

  4. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.

  5. revision info:
     - author : maljdan
     - date : 2017-01-17
     - description: Adding test description.

2.3.400 FRAMEWORK POSTPROCESSORS TOPOLOGICALPOSTPROCESSOR.RELAXED BETA SKELETON

This test can be found at "`./raven/tests/framework/PostProcessors/TopologicalPostProce`
`test_graph_rbs.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TopologicalPostProcessor.relaxed_
```

or

```
./run_framework_tests --re=framework/PostProcessors/TopologicalPostProcesso
```

- Test Description:

  - A simple example of the approximate Morse-Smale complex (AMSC) interface that exercises the relaxed beta skeleton graph structure as the underlying connectivity model for the point cloud. Note, each of the "graph" test cases uses the GaussianPeaks test case which consists of 4 distinctly shaped Gaussian peaks in a 2D input domain.

- Original Author:

  - maljdan

- Creation date:

  - 2015-09-21

- The classes tested in this test are:

  - PostProcessors.TopologicalDecomposition

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : cogljj
     - date : 2015-09-29
     - description: Modifying external modules to use relative to working directory.
  2. revision info:
     - author : maljdan
     - date : 2015-10-06
     - description: Reducing the graph tests for the topology pp, and re-golding them, also adding a plotter to validate the results visually.
  3. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: Converted failing tests.
  4. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.
  5. revision info:
     - author : maljdan
     - date : 2017-01-17
     - description: Adding test description.

2.3.401 FRAMEWORK POSTPROCESSORS TOPOLOGICALPOSTPROCESSOR.INTERACTIVE UI

This test can be found at "`./raven/tests/framework/PostProcessors/TopologicalPostProce`
`test_topology_ui.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/TopologicalPostProcessor.interact
```

or

```
./run_framework_tests --re=framework/PostProcessors/TopologicalPostProcesso
```

- Test Description:
    - This test exercises the user interface coupled with the Morse-Smale topology code. This test is basically a copy of test_graph_knn.xml, but it exercises our ability to load, run, and tear down a Pyside UI.

- Original Author:
    - maljdan

- Creation date:
    - 2016-03-23

- The classes tested in this test are:
    - PostProcessors.QTopologicalDecomposition

- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : maljdan
        - date : 2016-07-17
        - description: Working on updating the syntax of test_topology_ui to match current devel.
    2. revision info:
        - author : maljdan
        - date : 2017-01-17
        - description: Adding test description.
    3. revision info:
        - author : maljdan
        - date : 2017-05-09
        - description: Adding this test to the automated system.

2.3.402 FRAMEWORK POSTPROCESSORS VALUEDURATION.BASIC

This test can be found at "`./raven/tests/framework/PostProcessors/ValueDuration/basic.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/PostProcessors/ValueDuration.Basic
```

or

```
./run_framework_tests --re=framework/PostProcessors/ValueDuration.Basic
```

- Test Description:
    - Tests the basic functionality of the ValueDuration postprocessor to create their unique brand of cumulative histograms.

- Original Author:
    - talbpaul

- Creation date:
    - 2018-08-28

- The classes tested in this test are:
    - PostProcessors.ValueDuration

2.3.403 FRAMEWORK SAMPLERS ROM TIMEDEPROM

This test can be found at "`./raven/tests/framework/ROM/test_t_rom.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/timeDepRom
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/timeDepRom
```

- Test Description:
    - This tests using a general time-dependent reduced-order model.

- Original Author:

  - talbpaul

- Creation date:

  - 2015-11-30

- The classes tested in this test are:

  - Models.ROM

2.3.404 FRAMEWORK SAMPLERS ROM TIMEDEPGUASSPOLY

This test can be found at "`./raven/tests/framework/ROM/test_time_dep_scgpc.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/timeDepGuassPoly
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/timeDepGuassPoly
```

- Test Description:

  - This tests using a time-dependent GaussPolynomialROM.

- Original Author:

  - talbpaul

- Creation date:

  - 2016-03-09

- The classes tested in this test are:

  - SupervisedLearning.GaussPolynomialROM

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2019-01-09
     - description: moving from ROM-files to ROM-dataobjects

2. revision info:

   – author : wangc
   – date : 2018-08-09
   – description: Add pivotParameter for time dependent ROM

2.3.405 FRAMEWORK.ROM.SKL TIME

This test can be found at "`./raven/tests/framework/ROM/skl_timedep.xml`". This test can be called executing the following command:

```
./run_tests --re=framework.ROM.SKL_time
```

or

```
./run_framework_tests --re=framework.ROM.SKL_time
```

- Test Description:

  – Tests the construction and sampling of time-dependent ScitKitLearn ROMs. In particular, tests that if one target (time) has all the same values, but not others, right action is still taken.

- Original Author:

  – talbpaul

- Creation date:

  – 2018-01-25

- The classes tested in this test are:

  – SupervisedLearning.SciKitLearn

2.3.406 FRAMEWORK ROM MSR.BIWEIGHT

This test can be found at "`./raven/tests/framework/ROM/MSR/test_biweight.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.biweight
```

or

```
./run_framework_tests --re=framework/ROM/MSR.biweight
```

- Test Description:

  - An example of using the Morse-Smale regression reduced order model with a biweight kernel function for the kernel density estimator.

    Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

  - maljdan

- Creation date:

  - 2015-10-06

- The classes tested in this test are:

  - SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2015-10-21
     - description: Converting AMSR test files using the provided conversion script.
  2. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: first update, looking for more failing tests to add
  3. revision info:
     - author : maljdan
     - date : 2016-02-10
     - description: Adding functionality to allow a user to specify a filename for an Out-stream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
  4. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

5. revision info:
   - author : maljdan
   - date : 2017-01-19
   - description: Adding this test description.

2.3.407   FRAMEWORK ROM MSR.COSINE

This test can be found at "`./raven/tests/framework/ROM/MSR/test_cosine.xml`".
This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.cosine
```

or

```
./run_framework_tests --re=framework/ROM/MSR.cosine
```

- Test Description:

  - An example of using the Morse-Smale regression reduced order model with a cosine kernel function for the kernel density estimator.

    Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

  - maljdan

- Creation date:

  - 2015-10-06

- The classes tested in this test are:

  - SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:

- – author : maljdan
- – date : 2015-10-21
- – description: Converting AMSR test files using the provided conversion script.

2. revision info:

- – author : talbpaul
- – date : 2016-02-08
- – description: first update, looking for more failing tests to add

3. revision info:

- – author : maljdan
- – date : 2016-02-10
- – description: Adding functionality to allow a user to specify a filename for an Out-stream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.

4. revision info:

- – author : maljdan
- – date : 2016-04-06
- – description: Updating test cases to reflect the changes to the user input.

5. revision info:

- – author : maljdan
- – date : 2017-01-19
- – description: Adding this test description.

2.3.408   FRAMEWORK ROM MSR.EPANECHNIKOV

This test can be found at "`./raven/tests/framework/ROM/MSR/test_Epanechnikov.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.Epanechnikov
```

or

```
./run_framework_tests --re=framework/ROM/MSR.Epanechnikov
```

- • Test Description:

  - – An example of using the Morse-Smale regression reduced order model with an Epanechnikov kernel function for the kernel density estimator.

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Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

  – maljdan

- Creation date:

  – 2015-10-06

- The classes tested in this test are:

  – SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2015-10-21
     - description: Converting AMSR test files using the provided conversion script.

  2. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: first update, looking for more failing tests to add

  3. revision info:
     - author : maljdan
     - date : 2016-02-10
     - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.

  4. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.

  5. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.409 FRAMEWORK ROM MSR.EXPONENTIAL

This test can be found at "`./raven/tests/framework/ROM/MSR/test_exponential.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.exponential
```

or

```
./run_framework_tests --re=framework/ROM/MSR.exponential
```

- Test Description:

  - An example of using the Morse-Smale regression reduced order model with an exponential kernel function for the kernel density estimator.

    Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

  - maljdan

- Creation date:

  - 2015-10-06

- The classes tested in this test are:

  - SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2015-10-21
     - description: Converting AMSR test files using the provided conversion script.
  2. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: first update, looking for more failing tests to add
  3. revision info:

- author : maljdan
- date : 2016-02-10
- description: Adding functionality to allow a user to specify a filename for an Out-stream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.

4. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

5. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.410 FRAMEWORK ROM MSR.GAUSSIAN

This test can be found at "`./raven/tests/framework/ROM/MSR/test_Gaussian.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.Gaussian
```

or

```
./run_framework_tests --re=framework/ROM/MSR.Gaussian
```

- Test Description:

  - An example of using the Morse-Smale regression reduced order model with a Gaussian kernel function for the kernel density estimator.

    Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

  - maljdan

- Creation date:

- 2015-10-06

- The classes tested in this test are:

  - SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2015-10-21
     - description: Converting AMSR test files using the provided conversion script.

  2. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: first update, looking for more failing tests to add

  3. revision info:
     - author : maljdan
     - date : 2016-02-10
     - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.

  4. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.

  5. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.411 FRAMEWORK ROM MSR.LOGISTIC

This test can be found at "`./raven/tests/framework/ROM/MSR/test_logistic.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.logistic
```

or

```
./run_framework_tests --re=framework/ROM/MSR.logistic
```

- Test Description:

  - An example of using the Morse-Smale regression reduced order model with a logistic
    kernel function for the kernel density estimator.

    Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a
    single Gaussian bump. The input dimensions are of largely different scales and one
    dimension is off-centered from the origin to ensure that normalization is being handled
    correctly.

- Original Author:

  - maljdan

- Creation date:

  - 2015-10-06

- The classes tested in this test are:

  - SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2015-10-21
     - description: Converting AMSR test files using the provided conversion script.
  2. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: first update, looking for more failing tests to add
  3. revision info:
     - author : maljdan
     - date : 2016-02-10
     - description: Adding functionality to allow a user to specify a filename for an Out-
       stream object that is potentially different than its variable name in the RAVEN
       input file. Adjusting test cases to exercise this functionality.
  4. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

5. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.412 FRAMEWORK ROM MSR.SILVERMAN

This test can be found at "`./raven/tests/framework/ROM/MSR/test_Silverman.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.Silverman
```

or

```
./run_framework_tests --re=framework/ROM/MSR.Silverman
```

- Test Description:

    - An example of using the Morse-Smale regression reduced order model with a Silverman kernel function for the kernel density estimator.
    Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

    - maljdan

- Creation date:

    - 2015-10-06

- The classes tested in this test are:

    - SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:

- author : maljdan
- date : 2015-10-21
- description: Converting AMSR test files using the provided conversion script.

2. revision info:
   - author : talbpaul
   - date : 2016-02-08
   - description: first update, looking for more failing tests to add

3. revision info:
   - author : maljdan
   - date : 2016-02-10
   - description: Adding functionality to allow a user to specify a filename for an Out-stream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.

4. revision info:
   - author : maljdan
   - date : 2016-04-06
   - description: Updating test cases to reflect the changes to the user input.

5. revision info:
   - author : maljdan
   - date : 2017-01-19
   - description: Adding this test description.

2.3.413   FRAMEWORK ROM MSR.TRIANGULAR

This test can be found at "`./raven/tests/framework/ROM/MSR/test_triangular.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.triangular
```

or

```
./run_framework_tests --re=framework/ROM/MSR.triangular
```

- Test Description:
  - An example of using the Morse-Smale regression reduced order model with a triangular kernel function for the kernel density estimator.

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Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

  – maljdan

- Creation date:

  – 2015-10-06

- The classes tested in this test are:

  – SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : maljdan
     – date : 2015-10-21
     – description: Converting AMSR test files using the provided conversion script.
  2. revision info:
     – author : talbpaul
     – date : 2016-02-08
     – description: first update, looking for more failing tests to add
  3. revision info:
     – author : maljdan
     – date : 2016-02-10
     – description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
  4. revision info:
     – author : maljdan
     – date : 2016-04-06
     – description: Updating test cases to reflect the changes to the user input.
  5. revision info:
     – author : maljdan
     – date : 2017-01-19
     – description: Adding this test description.

2.3.414 FRAMEWORK ROM MSR.TRICUBE

This test can be found at "./raven/tests/framework/ROM/MSR/test_tricube.xml".
This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.tricube
```

or

```
./run_framework_tests --re=framework/ROM/MSR.tricube
```

- Test Description:

  - An example of using the Morse-Smale regression reduced order model with a tricube kernel function for the kernel density estimator.

    Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

  - maljdan

- Creation date:

  - 2015-10-06

- The classes tested in this test are:

  - SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2015-10-21
     - description: Converting AMSR test files using the provided conversion script.
  2. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: first update, looking for more failing tests to add
  3. revision info:

- author : maljdan
- date : 2016-02-10
- description: Adding functionality to allow a user to specify a filename for an Out-stream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.

4. revision info:

  - author : maljdan
  - date : 2016-04-06
  - description: Updating test cases to reflect the changes to the user input.

5. revision info:

  - author : maljdan
  - date : 2017-01-19
  - description: Adding this test description.

2.3.415 FRAMEWORK ROM MSR.TRIWEIGHT

This test can be found at "`./raven/tests/framework/ROM/MSR/test_triweight.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.triweight
```

or

```
./run_framework_tests --re=framework/ROM/MSR.triweight
```

- Test Description:

  - An example of using the Morse-Smale regression reduced order model with a triweight kernel function for the kernel density estimator.

    Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

  - maljdan

- Creation date:

- – 2015-10-06

- The classes tested in this test are:

  - – SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - – author : maljdan
     - – date : 2015-10-21
     - – description: Converting AMSR test files using the provided conversion script.
  2. revision info:
     - – author : talbpaul
     - – date : 2016-02-08
     - – description: first update, looking for more failing tests to add
  3. revision info:
     - – author : maljdan
     - – date : 2016-02-10
     - – description: Adding functionality to allow a user to specify a filename for an Out-stream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
  4. revision info:
     - – author : maljdan
     - – date : 2016-04-06
     - – description: Updating test cases to reflect the changes to the user input.
  5. revision info:
     - – author : maljdan
     - – date : 2017-01-19
     - – description: Adding this test description.

2.3.416 FRAMEWORK ROM MSR.UNIFORM

This test can be found at "`./raven/tests/framework/ROM/MSR/test_uniform.xml`".
This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.uniform
```

or

```
./run_framework_tests --re=framework/ROM/MSR.uniform
```

- Test Description:

  – An example of using the Morse-Smale regression reduced order model with a uniform kernel function for the kernel density estimator.

  Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

  – maljdan

- Creation date:

  – 2015-10-06

- The classes tested in this test are:

  – SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : maljdan
     – date : 2015-10-21
     – description: Converting AMSR test files using the provided conversion script.
  2. revision info:
     – author : talbpaul
     – date : 2016-02-08
     – description: first update, looking for more failing tests to add
  3. revision info:
     – author : maljdan
     – date : 2016-02-10
     – description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
  4. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

5. revision info:
  - author : maljdan
  - date : 2017-01-19
  - description: Adding this test description.

2.3.417 FRAMEWORK ROM MSR.SVM

This test can be found at "`./raven/tests/framework/ROM/MSR/test_SVM.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.SVM
```

or

```
./run_framework_tests --re=framework/ROM/MSR.SVM
```

- Test Description:

  - An example of using the Morse-Smale regression reduced order model with a support vector machine.
    Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

  - maljdan

- Creation date:

  - 2015-10-06

- The classes tested in this test are:

  - SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:

469

- author : maljdan
- date : 2015-10-21
- description: Converting AMSR test files using the provided conversion script.

2. revision info:

   - author : talbpaul
   - date : 2016-02-08
   - description: first update, looking for more failing tests to add

3. revision info:

   - author : maljdan
   - date : 2016-02-10
   - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.

4. revision info:

   - author : maljdan
   - date : 2016-02-10
   - description: Using custom sampler blocks for the MSR-SVM tests.

5. revision info:

   - author : maljdan
   - date : 2016-04-06
   - description: Updating test cases to reflect the changes to the user input.

6. revision info:

   - author : maljdan
   - date : 2017-01-19
   - description: Adding this test description.

2.3.418   FRAMEWORK ROM MSR.SMOOTHSVM

This test can be found at "`./raven/tests/framework/ROM/MSR/test_smooth_SVM.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothSVM
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothSVM
```

- Test Description:

  - An example of using the Morse-Smale regression reduced order model with a support vector machine. This is a smoothed version of MSR where local models are blended together.

    Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

  - maljdan

- Creation date:

  - 2015-10-06

- The classes tested in this test are:

  - SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2015-10-21
     - description: Converting AMSR test files using the provided conversion script.

  2. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: first update, looking for more failing tests to add

  3. revision info:
     - author : maljdan
     - date : 2016-02-10
     - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.

  4. revision info:
     - author : maljdan
     - date : 2016-02-10
     - description: Using custom sampler blocks for the MSR-SVM tests.

5. revision info:

   - author : maljdan
   - date : 2016-04-06
   - description: Updating test cases to reflect the changes to the user input.

6. revision info:

   - author : maljdan
   - date : 2017-01-19
   - description: Adding this test description.

2.3.419   FRAMEWORK ROM MSR.SMOOTHBIWEIGHT

This test can be found at "`./raven/tests/framework/ROM/MSR/test_smooth_biweight.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothBiweight
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothBiweight
```

- Test Description:

  - An example of using the Morse-Smale regression reduced order model with a biweight kernel function for the kernel density estimator. This is a smoothed version of MSR where local models are blended together.

    Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

  - maljdan

- Creation date:

  - 2015-10-06

- The classes tested in this test are:

  - SupervisedLearning.MSR

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- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2015-10-21
     - description: Converting AMSR test files using the provided conversion script.

  2. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: first update, looking for more failing tests to add

  3. revision info:
     - author : maljdan
     - date : 2016-02-10
     - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.

  4. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.

  5. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.420 FRAMEWORK ROM MSR.SMOOTHCOSINE

This test can be found at "`./raven/tests/framework/ROM/MSR/test_smooth_cosine.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothCosine
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothCosine
```

- Test Description:

- An example of using the Morse-Smale regression reduced order model with a cosine kernel function for the kernel density estimator. This is a smoothed version of MSR where local models are blended together.

  Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

  - maljdan

- Creation date:

  - 2015-10-06

- The classes tested in this test are:

  - SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2015-10-21
     - description: Converting AMSR test files using the provided conversion script.
  2. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: first update, looking for more failing tests to add
  3. revision info:
     - author : maljdan
     - date : 2016-02-10
     - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
  4. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.
  5. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.421 FRAMEWORK ROM MSR.SMOOTHEPANECHNIKOV

This test can be found at "`./raven/tests/framework/ROM/MSR/test_smooth_Epanechnikov.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothEpanechnikov
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothEpanechnikov
```

- Test Description:

    - An example of using the Morse-Smale regression reduced order model with an Epanechnikov kernel function for the kernel density estimator. This is a smoothed version of MSR where local models are blended together.

      Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

    - maljdan

- Creation date:

    - 2015-10-06

- The classes tested in this test are:

    - SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : maljdan
        - date : 2015-10-21
        - description: Converting AMSR test files using the provided conversion script.

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2. revision info:
   - author : talbpaul
   - date : 2016-02-08
   - description: first update, looking for more failing tests to add

3. revision info:
   - author : maljdan
   - date : 2016-02-10
   - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.

4. revision info:
   - author : maljdan
   - date : 2016-04-06
   - description: Updating test cases to reflect the changes to the user input.

5. revision info:
   - author : maljdan
   - date : 2017-01-19
   - description: Adding this test description.

2.3.422 FRAMEWORK ROM MSR.SMOOTHEXPONENTIAL

This test can be found at "`./raven/tests/framework/ROM/MSR/test_smooth_exponential.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothExponential
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothExponential
```

- Test Description:

  - An example of using the Morse-Smale regression reduced order model with an exponential kernel function for the kernel density estimator. This is a smoothed version of MSR where local models are blended together.

    Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

  – maljdan

- Creation date:

  – 2015-10-06

- The classes tested in this test are:

  – SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : maljdan
     – date : 2015-10-21
     – description: Converting AMSR test files using the provided conversion script.
  2. revision info:
     – author : talbpaul
     – date : 2016-02-08
     – description: first update, looking for more failing tests to add
  3. revision info:
     – author : maljdan
     – date : 2016-02-10
     – description: Adding functionality to allow a user to specify a filename for an Out-stream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
  4. revision info:
     – author : maljdan
     – date : 2016-04-06
     – description: Updating test cases to reflect the changes to the user input.
  5. revision info:
     – author : maljdan
     – date : 2017-01-19
     – description: Adding this test description.

2.3.423 FRAMEWORK ROM MSR.SMOOTHGAUSSIAN

This test can be found at "`./raven/tests/framework/ROM/MSR/test_smooth_Gaussian.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothGaussian
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothGaussian
```

- Test Description:

    - An example of using the Morse-Smale regression reduced order model with a Gaussian kernel function for the kernel density estimator. This is a smoothed version of MSR where local models are blended together.

        Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

    - maljdan

- Creation date:

    - 2015-10-06

- The classes tested in this test are:

    - SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : maljdan
        - date : 2015-10-21
        - description: Converting AMSR test files using the provided conversion script.
    2. revision info:
        - author : talbpaul
        - date : 2016-02-08
        - description: first update, looking for more failing tests to add

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3. revision info:

   – author : maljdan
   – date : 2016-02-10
   – description: Adding functionality to allow a user to specify a filename for an Out-stream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.

4. revision info:

   – author : maljdan
   – date : 2016-04-06
   – description: Updating test cases to reflect the changes to the user input.

5. revision info:

   – author : maljdan
   – date : 2017-01-19
   – description: Adding this test description.

2.3.424   FRAMEWORK ROM MSR.SMOOTHLOGISTIC

This test can be found at "`./raven/tests/framework/ROM/MSR/test_smooth_logistic.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothLogistic
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothLogistic
```

- Test Description:

  – An example of using the Morse-Smale regression reduced order model with a logistic kernel function for the kernel density estimator. This is a smoothed version of MSR where local models are blended together.

    Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

  – maljdan

- Creation date:

  - 2015-10-06

- The classes tested in this test are:

  - SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2015-10-21
     - description: Converting AMSR test files using the provided conversion script.
  2. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: first update, looking for more failing tests to add
  3. revision info:
     - author : maljdan
     - date : 2016-02-10
     - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
  4. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.
  5. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.425 FRAMEWORK ROM MSR.SMOOTHSILVERMAN

This test can be found at "`./raven/tests/framework/ROM/MSR/test_smooth_Silverman.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothSilverman
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothSilverman
```

- Test Description:

  - An example of using the Morse-Smale regression reduced order model with a Silver-man kernel function for the kernel density estimator. This is a smoothed version of MSR where local models are blended together.

    Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

  - maljdan

- Creation date:

  - 2015-10-06

- The classes tested in this test are:

  - SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2015-10-21
     - description: Converting AMSR test files using the provided conversion script.
  2. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: first update, looking for more failing tests to add
  3. revision info:
     - author : maljdan
     - date : 2016-02-10
     - description: Adding functionality to allow a user to specify a filename for an Out-stream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.

4. revision info:
   - author : maljdan
   - date : 2016-04-06
   - description: Updating test cases to reflect the changes to the user input.

5. revision info:
   - author : maljdan
   - date : 2017-01-19
   - description: Adding this test description.

2.3.426 FRAMEWORK ROM MSR.SMOOTHTRIANGULAR

This test can be found at "`./raven/tests/framework/ROM/MSR/test_smooth_triangular.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothTriangular
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothTriangular
```

- Test Description:

  - An example of using the Morse-Smale regression reduced order model with a triangular kernel function for the kernel density estimator. This is a smoothed version of MSR where local models are blended together.

    Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

  - maljdan

- Creation date:

  - 2015-10-06

- The classes tested in this test are:

  - SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : maljdan
        - date : 2015-10-21
        - description: Converting AMSR test files using the provided conversion script.

    2. revision info:
        - author : talbpaul
        - date : 2016-02-08
        - description: first update, looking for more failing tests to add

    3. revision info:
        - author : maljdan
        - date : 2016-02-10
        - description: Adding functionality to allow a user to specify a filename for an Out-stream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.

    4. revision info:
        - author : maljdan
        - date : 2016-04-06
        - description: Updating test cases to reflect the changes to the user input.

    5. revision info:
        - author : maljdan
        - date : 2017-01-19
        - description: Adding this test description.

2.3.427   FRAMEWORK ROM MSR.SMOOTHTRICUBE

This test can be found at "`./raven/tests/framework/ROM/MSR/test_smooth_tricube.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothTricube
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothTricube
```

- Test Description:

- An example of using the Morse-Smale regression reduced order model with a tricube kernel function for the kernel density estimator. This is a smoothed version of MSR where local models are blended together.

  Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

  - maljdan

- Creation date:

  - 2015-10-06

- The classes tested in this test are:

  - SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2015-10-21
     - description: Converting AMSR test files using the provided conversion script.
  2. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: first update, looking for more failing tests to add
  3. revision info:
     - author : maljdan
     - date : 2016-02-10
     - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.
  4. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.
  5. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.428   FRAMEWORK ROM MSR.SMOOTHTRIWEIGHT

This test can be found at "`./raven/tests/framework/ROM/MSR/test_smooth_triweight.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothTriweight
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothTriweight
```

- Test Description:

  - An example of using the Morse-Smale regression reduced order model with a triweight kernel function for the kernel density estimator. This is a smoothed version of MSR where local models are blended together.

    Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

  - maljdan

- Creation date:

  - 2015-10-06

- The classes tested in this test are:

  - SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2015-10-21
     - description: Converting AMSR test files using the provided conversion script.

485

2. revision info:
    - author : talbpaul
    - date : 2016-02-08
    - description: first update, looking for more failing tests to add

3. revision info:
    - author : maljdan
    - date : 2016-02-10
    - description: Adding functionality to allow a user to specify a filename for an Out-stream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.

4. revision info:
    - author : maljdan
    - date : 2016-04-06
    - description: Updating test cases to reflect the changes to the user input.

5. revision info:
    - author : maljdan
    - date : 2017-01-19
    - description: Adding this test description.

2.3.429   FRAMEWORK ROM MSR.SMOOTHUNIFORM

This test can be found at "`./raven/tests/framework/ROM/MSR/test_smooth_uniform.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.smoothUniform
```

or

```
./run_framework_tests --re=framework/ROM/MSR.smoothUniform
```

- Test Description:

    - An example of using the Morse-Smale regression reduced order model with a uniform kernel function for the kernel density estimator. This is a smoothed version of MSR where local models are blended together.

        Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

486

- Original Author:

    - maljdan

- Creation date:

    - 2015-10-06

- The classes tested in this test are:

    - SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : maljdan
        - date : 2015-10-21
        - description: Converting AMSR test files using the provided conversion script.

    2. revision info:
        - author : talbpaul
        - date : 2016-02-08
        - description: first update, looking for more failing tests to add

    3. revision info:
        - author : maljdan
        - date : 2016-02-10
        - description: Adding functionality to allow a user to specify a filename for an Out-stream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.

    4. revision info:
        - author : maljdan
        - date : 2016-04-06
        - description: Updating test cases to reflect the changes to the user input.

    5. revision info:
        - author : maljdan
        - date : 2017-01-19
        - description: Adding this test description.

2.3.430 FRAMEWORK ROM MSR.PARALLEL

This test can be found at "`./raven/tests/framework/ROM/MSR/test_local_parallel.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/MSR.parallel
```

or

```
./run_framework_tests --re=framework/ROM/MSR.parallel
```

- Test Description:

    - A copy of framework/ROM/MSR.uniform where the internal parallel system has been activated in order to test its functionality in conjunction with the MSR.

      Note, all of the tests in MSR operate on a 2D input domain with the goal of fitting a single Gaussian bump. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly.

- Original Author:

    - maljdan

- Creation date:

    - 2015-10-28

- The classes tested in this test are:

    - SupervisedLearning.MSR

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : talbpaul
        - date : 2016-02-08
        - description: first update, looking for more failing tests to add
    2. revision info:
        - author : maljdan
        - date : 2016-02-10
        - description: Adding functionality to allow a user to specify a filename for an Outstream object that is potentially different than its variable name in the RAVEN input file. Adjusting test cases to exercise this functionality.

3. revision info:

 – author : maljdan
 – date : 2016-04-06
 – description: Updating test cases to reflect the changes to the user input.

4. revision info:

 – author : maljdan
 – date : 2017-01-19
 – description: Adding this test description.

2.3.431 FRAMEWORK STOCHPOLYPICKLETEST

This test can be found at "`./raven/tests/framework/ROM/pickleTests/stochpoly_pickle.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/stochPolyPickleTest
```

or

```
./run_framework_tests --re=framework/stochPolyPickleTest
```

- Test Description:

 – This test checks the pickling and unpickling of the GaussPolynomialROM

- Original Author:

 – talbpaul

- Creation date:

 – 2015-07-07

- The classes tested in this test are:

 – SupervisedLearning.GaussPolynomialROM

2.3.432 FRAMEWORK ROM COLDRESTART

This test can be found at "`./raven/tests/framework/ROM/pickleTests/restart_stochpoly_rom.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/coldRestart
```

or

```
./run_framework_tests --re=framework/ROM/coldRestart
```

- Test Description:

  - This tests the ability of a ROM to be unpickled and used with minimal specification, and without the typically-associated Sampler for the GaussPolynomialROM.

- Original Author:

  - talbpaul

- Creation date:

  - 2016-03-21

- The classes tested in this test are:

  - SupervisedLearning.GaussPolynomialROM

2.3.433 FRAMEWORK ROM PICKLETESTS LOADUNTRAINEDERROR

This test can be found at "`./raven/tests/framework/ROM/pickleTests/untrained_error.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/pickleTests/loadUntrainedError
```

or

```
./run_framework_tests --re=framework/ROM/pickleTests/loadUntrainedError
```

- Test Description:

  - This test checks that a reasonable error is given to the user if an untrained rom is unpickled then sampled.

- Original Author:

  - talbpaul

- Creation date:

    - 2015-07-07

- The classes tested in this test are:

    - Models.ROM

2.3.434 FRAMEWORK ROM PICKLETESTS LOADNORROMERROR

This test can be found at "`./raven/tests/framework/ROM/pickleTests/not_a_`
`rom_error.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/pickleTests/loadNorROMError
```

or

```
./run_framework_tests --re=framework/ROM/pickleTests/loadNorROMError
```

- Test Description:

    - This test checks that a reasonable error is given to the user if they attempt to unpickle a pickled object that isn't a ROM.

- Original Author:

    - talbpaul

- Creation date:

    - 2015-07-07

- The classes tested in this test are:

    - Models.ROM

2.3.435 FRAMEWORK ROM PICKLETESTS LOADNORROMERROR

This test can be found at "`./raven/scripts/externalROMloader.pyload_ROM_externally.`
`xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/pickleTests/loadNorROMError
```

or

```
./run_framework_tests --re=framework/ROM/pickleTests/loadNorROMError
```

- Test Description:

  - This test checks that a reasonable error is given to the user if they attempt to unpickle a pickled object that isn't a ROM.

- Original Author:

  - talbpaul

- Creation date:

  - 2015-07-07

- The classes tested in this test are:

  - Models.ROM

2.3.436 FRAMEWORK ROM SKLEARN.LINEARSVC

This test can be found at "./raven/tests/framework/ROM/SKLearn/linearSVC. xml". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearSVC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearSVC
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the svm—LinearSVC model is tested here.
    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

- maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2016-05-02
     - description: Fixing the random_state of the SVMs.
  2. revision info:
     - author : maljdan
     - date : 2016-05-02
     - description: Fixing another SVC case for older scikit-learn versions.
  3. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  4. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.437   FRAMEWORK ROM SKLEARN.SVC

This test can be found at "`./raven/tests/framework/ROM/SKLearn/svc.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.SVC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.SVC
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the svm—SVC model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2016-05-02
     - description: Fixing the random_state of the SVMs.
  2. revision info:
     - author : maljdan
     - date : 2016-05-02
     - description: There is an issue with version compatibility in sklearn, so I am disabling one of the parameters in the input and documenting it.
  3. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  4. revision info:
     - author : cogljj
     - date : 2016-11-18
     - description: Switching floats to integers because they are.

5. revision info:

  – author : maljdan
  – date : 2017-01-19
  – description: Adding this test description.

2.3.438 FRAMEWORK ROM SKLEARN.NUSVC

This test can be found at "`./raven/tests/framework/ROM/SKLearn/nuSVC.xml`".
This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.NuSVC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.NuSVC
```

• Test Description:

  – An example exercising supervised sklearn methods, specifically the svm—NuSVC
    model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting
    a paraboloid function. The input dimensions are of largely different scales and one
    dimension is off-centered from the origin to ensure that normalization is being handled
    correctly. Classifiers will use this same function to determine if a point is above 0.25,
    and multitask methods will additionally fit an additive model (x+y).

• Original Author:

  – maljdan

• Creation date:

  – 2016-04-28

• The classes tested in this test are:

  – SupervisedLearning.SciKitLearn

• Since the creation of this test, the following main revisions have been performed:

  1. revision info:
    – author : maljdan
    – date : 2016-05-02

– description: Fixing the random_state of the SVMs.

2. revision info:
   – author : maljdan
   – date : 2016-05-02
   – description: There is an issue with version compatibility in sklearn, so I am disabling one of the parameters in the input and documenting it.

3. revision info:
   – author : talbpaul
   – date : 2016-09-15
   – description: other test updates

4. revision info:
   – author : cogljj
   – date : 2016-11-18
   – description: Switching floats to integers because they are.

5. revision info:
   – author : maljdan
   – date : 2017-01-19
   – description: Adding this test description.

2.3.439 FRAMEWORK ROM SKLEARN.OCC

This test can be found at "`./raven/tests/framework/ROM/SKLearn/occ.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.OCC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.OCC
```

- Test Description:

  – An example exercising supervised sklearn methods, specifically the linear_model—LinearRegression model is tested here.
  Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:
  - maljdan
- Creation date:
  - 2016-04-28
- The classes tested in this test are:
  - SupervisedLearning.SciKitLearn
- Since the creation of this test, the following main revisions have been performed:
  1. revision info:
     - author : maljdan
     - date : 2016-04-28
     - description: Fixing the multiclass SKL types to allow for embedded estimators.
  2. revision info:
     - author : alfoa
     - date : 2016-07-13
     - description: removed renormalization
  3. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  4. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.440   FRAMEWORK ROM SKLEARN.KNC

This test can be found at "`./raven/tests/framework/ROM/SKLearn/knc.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.KNC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.KNC
```

- Test Description:

  – An example exercising supervised sklearn methods, specifically the neighbors—KNeighborsClassifier model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  – maljdan

- Creation date:

  – 2016-04-28

- The classes tested in this test are:

  – SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  2. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.441 FRAMEWORK ROM SKLEARN.RNC

This test can be found at "`./raven/tests/framework/ROM/SKLearn/rnc.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.RNC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.RNC
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the neighbors—RadiusNeighbors model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  2. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.442 FRAMEWORK ROM SKLEARN.NCC

This test can be found at "`./raven/tests/framework/ROM/SKLearn/ncc.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.NCC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.NCC
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the neighbors—NearestCentroid model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  2. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.443 FRAMEWORK ROM SKLEARN.OVR

This test can be found at "`./raven/tests/framework/ROM/SKLearn/ovr.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.OVR
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.OVR
```

- Test Description:

    - An example exercising supervised sklearn methods, specifically the linear_model—LinearRegression model is tested here.

      Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

    - maljdan

- Creation date:

    - 2016-04-28

- The classes tested in this test are:

    - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : maljdan
        - date : 2016-04-28
        - description: Fixing the multiclass SKL types to allow for embedded estimators.
    2. revision info:
        - author : alfoa
        - date : 2016-07-13
        - description: removed renormalization
    3. revision info:
        - author : talbpaul
        - date : 2016-09-15
        - description: other test updates
    4. revision info:
        - author : maljdan
        - date : 2017-01-19
        - description: Adding this test description.

2.3.444 FRAMEWORK ROM SKLEARN.OVO

This test can be found at "`./raven/tests/framework/ROM/SKLearn/ovo.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.OVO
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.OVO
```

- Test Description:

    - An example exercising supervised sklearn methods, specifically the linear_model—LinearRegression model is tested here.

      Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

    - maljdan

- Creation date:

    - 2016-04-28

- The classes tested in this test are:

    - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : maljdan
        - date : 2016-04-28
        - description: Fixing the multiclass SKL types to allow for embedded estimators.
    2. revision info:
        - author : alfoa
        - date : 2016-07-13
        - description: removed renormalization

3. revision info:

    – author : talbpaul
    – date : 2016-09-15
    – description: other test updates

4. revision info:

    – author : maljdan
    – date : 2017-01-19
    – description: Adding this test description.

2.3.445 FRAMEWORK ROM SKLEARN.GAUSSIANNB

This test can be found at "`./raven/tests/framework/ROM/SKLearn/gaussianNB.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.GaussianNB
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.GaussianNB
```

- Test Description:

    – An example exercising supervised sklearn methods, specifically the naiveBayes—GaussianNB model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

    – maljdan

- Creation date:

    – 2016-04-28

- The classes tested in this test are:

    – SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  2. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.446   FRAMEWORK ROM SKLEARN.BERNOULLINB

This test can be found at "`./raven/tests/framework/ROM/SKLearn/bernoulliNB.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.BernoulliNB
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.BernoulliNB
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the naiveBayes—BernoulliNB model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

- SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates

  2. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.447   FRAMEWORK ROM SKLEARN.LINEARRIDGEC

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearRidgeC.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearRidgeC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearRidgeC
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the linear_model—RidgeClassifier model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2016-07-13
     - description: removed renormalization

  2. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates

  3. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.448 FRAMEWORK ROM SKLEARN.LINEARRIDGECCV

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearRidgeCCV.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearRidgeCCV
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearRidgeCCV
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the linear_model—RidgeClassifierCV model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2016-07-13
     - description: removed renormalization
  2. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  3. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.449 FRAMEWORK ROM SKLEARN.LINEARPAC

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearPAC.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearPAC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearPAC
```

- Test Description:

- An example exercising supervised sklearn methods, specifically the linear_model—PassiveAggressiveC model is tested here.

  Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2016-05-02
     - description: Adding a fixed random_state value to a few of the ROM tests to ensure reproducibility.
  2. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  3. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.450 FRAMEWORK ROM SKLEARN.LINEARSGDC

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearSGDC.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearSGDC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearSGDC
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the linear_model—SGDClassifier model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2016-05-02
     - description: Adding a fixed random_state value to a few of the ROM tests to ensure reproducibility.
  2. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  3. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

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2.3.451 FRAMEWORK ROM SKLEARN.MULTINOMIALNB

This test can be found at "`./raven/tests/framework/ROM/SKLearn/multinomialNB.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.MultinomialNB
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.MultinomialNB
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the naiveBayes—MultinomialNB model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2016-04-28
     - description: Checkpointing. Only a few failing cases left.
  2. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates

3. revision info:

   – author : maljdan
   – date : 2017-01-19
   – description: Adding this test description.

4. revision info:

   – author : wangc
   – date : 2018-08-08
   – description: change the grid values that will within the bounds of distribution

2.3.452 FRAMEWORK ROM SKLEARN.DTC

This test can be found at "`./raven/tests/framework/ROM/SKLearn/dtc.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.DTC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.DTC
```

- Test Description:

  – An example exercising supervised sklearn methods, specifically the tree—DecisionTreeClassifier model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  – maljdan

- Creation date:

  – 2016-04-28

- The classes tested in this test are:

  – SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2016-05-02
     - description: Adding a fixed random_state value to a few of the ROM tests to ensure reproducibility.

  2. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates

  3. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.453 FRAMEWORK ROM SKLEARN.ETC

This test can be found at "`./raven/tests/framework/ROM/SKLearn/etc.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.ETC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.ETC
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the tree—ExtraTreeClassifier model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

    - 2016-04-28

- The classes tested in this test are:

    - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : maljdan
        - date : 2016-05-02
        - description: Adding a fixed random_state value to a few of the ROM tests to ensure reproducibility.
    2. revision info:
        - author : talbpaul
        - date : 2016-09-15
        - description: other test updates
    3. revision info:
        - author : maljdan
        - date : 2017-01-19
        - description: Adding this test description.

2.3.454 FRAMEWORK ROM SKLEARN.MLPCLASSIFIER

This test can be found at "`./raven/tests/framework/ROM/SKLearn/mlpClassifier.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.MLPClassifier
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.MLPClassifier
```

- Test Description:

    - An example exercising supervised sklearn methods, specifically the neural_network.MLPRegressor model is tested here.
    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one

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dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - wangc

- Creation date:

  - 2017-10-25

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

2.3.455 FRAMEWORK ROM SKLEARN.SVR

This test can be found at "./raven/tests/framework/ROM/SKLearn/svr.xml". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.SVR
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.SVR
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the svm—SVR model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2016-05-02
     - description: There is an issue with version compatibility in sklearn, so I am disabling one of the parameters in the input and documenting it.

  2. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates

  3. revision info:
     - author : cogljj
     - date : 2016-11-18
     - description: Switching floats to integers because they are.

  4. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.456 FRAMEWORK ROM SKLEARN.KNR

This test can be found at "`./raven/tests/framework/ROM/SKLearn/knr.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.KNR
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.KNR
```

- Test Description:

– An example exercising supervised sklearn methods, specifically the neighbors—KNeighborsRegressor model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  – maljdan

- Creation date:

  – 2016-04-28

- The classes tested in this test are:

  – SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : talbpaul
     – date : 2016-09-15
     – description: other test updates

  2. revision info:
     – author : maljdan
     – date : 2017-01-19
     – description: Adding this test description.

2.3.457 FRAMEWORK ROM SKLEARN.RNR

This test can be found at "`./raven/tests/framework/ROM/SKLearn/rnr.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.RNR
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.RNR
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the neighbors—RadiusNeighborsRegr
    model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting
    a paraboloid function. The input dimensions are of largely different scales and one
    dimension is off-centered from the origin to ensure that normalization is being handled
    correctly. Classifiers will use this same function to determine if a point is above 0.25,
    and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2016-04-28
     - description: Fixing RadiusNeigbhorsRegressor test case to use the correct SKL-
       type in the input file.
  2. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  3. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.458 FRAMEWORK ROM SKLEARN.QDA

This test can be found at "./raven/tests/framework/ROM/SKLearn/qda.xml". This
test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.QDA
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.QDA
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the qda—QDA model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  2. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.459 FRAMEWORK ROM SKLEARN.GP

This test can be found at "./raven/tests/framework/ROM/SKLearn/gp.xml". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.GP
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.GP
```

- Test Description:

    - An example exercising supervised sklearn methods, specifically the GaussianProcess—GaussianProces model is tested here.

      Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

    - maljdan

- Creation date:

    - 2016-04-28

- The classes tested in this test are:

    - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : talbpaul
        - date : 2016-09-15
        - description: other test updates
    2. revision info:
        - author : maljdan
        - date : 2017-01-19
        - description: Adding this test description.

2.3.460 FRAMEWORK ROM SKLEARN.LINEARARD

This test can be found at "./raven/tests/framework/ROM/SKLearn/linearARD.xml". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearARD
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearARD
```

- Test Description:

    - An example exercising supervised sklearn methods, specifically the linear_model—ARDRegression model is tested here.

      Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

    - maljdan

- Creation date:

    - 2016-04-28

- The classes tested in this test are:

    - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2016-07-13
        - description: removed renormalization
    2. revision info:
        - author : talbpaul
        - date : 2016-09-15
        - description: other test updates

3. revision info:

- author : maljdan
- date : 2017-01-19
- description: Adding this test description.

2.3.461 FRAMEWORK ROM SKLEARN.LINEARBAYESIANRIDGE

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearBayesianRidge.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearBayesianRidge
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearBayesianRidge
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the linear_model—BayesianRidge model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:

     - author : talbpaul
     - date : 2016-09-15

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- – description: other test updates

2. revision info:
   - – author : maljdan
   - – date : 2017-01-19
   - – description: Adding this test description.

2.3.462 FRAMEWORK ROM SKLEARN.LINEARELASTICNET

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearElasticNet.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearElasticNet
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearElasticNet
```

- • Test Description:

  - – An example exercising supervised sklearn methods, specifically the linear_model—ElasticNet model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- • Original Author:

  - – maljdan

- • Creation date:

  - – 2016-04-28

- • The classes tested in this test are:

  - – SupervisedLearning.SciKitLearn

- • Since the creation of this test, the following main revisions have been performed:

  1. revision info:

- author : alfoa
- date : 2016-07-13
- description: removed renormalization

2. revision info:

   - author : talbpaul
   - date : 2016-09-15
   - description: other test updates

3. revision info:

   - author : maljdan
   - date : 2017-01-19
   - description: Adding this test description.

2.3.463 FRAMEWORK ROM SKLEARN.LINEARELASTICNETCV

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearElasticNetCV.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearElasticNetCV
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearElasticNetCV
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the linear_model—ElasticNetCV model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-28

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- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates

  2. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.464 FRAMEWORK ROM SKLEARN.LINEARLARS

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearLARS.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearLARS
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearLARS
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the linear_model—Lars model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

– 2016-04-28

- The classes tested in this test are:

  – SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : talbpaul
     – date : 2016-09-15
     – description: other test updates
  2. revision info:
     – author : maljdan
     – date : 2017-01-19
     – description: Adding this test description.

2.3.465 FRAMEWORK ROM SKLEARN.LINEARLARSCV

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearLARSCV.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearLARSCV
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearLARSCV
```

- Test Description:

  – An example exercising supervised sklearn methods, specifically the linear_model—LarsCV model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  – maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  2. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.466   FRAMEWORK ROM SKLEARN.LINEARLASSO

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearLasso.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearLasso
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearLasso
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the linear_model—Lasso model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

- maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2016-07-13
     - description: removed renormalization
  2. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  3. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.467 FRAMEWORK ROM SKLEARN.LINEARLASSOCV

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearLassoCV.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearLassoCV
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearLassoCV
```

- Test Description:

– An example exercising supervised sklearn methods, specifically the linear_model—LassoCV model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  – maljdan

- Creation date:

  – 2016-04-28

- The classes tested in this test are:

  – SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : talbpaul
     – date : 2016-09-15
     – description: other test updates

  2. revision info:
     – author : maljdan
     – date : 2017-01-19
     – description: Adding this test description.

2.3.468   FRAMEWORK ROM SKLEARN.LINEARLASSOLARS

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearLassoLARS.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearLassoLARS
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearLassoLARS
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the linear_model—LassoLars model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  2. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.469 FRAMEWORK ROM SKLEARN.LINEARLASSOLARSCV

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearLassoLARSCV.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearLassoLARSCV
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearLassoLARSCV
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the linear_model—LassoLarsCV model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  2. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.470 FRAMEWORK ROM SKLEARN.LINEARLASSOLARSIC

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearLassoLARSIC.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearLassoLARSIC
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearLassoLARSIC
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the linear_model—LassoLarsIC model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  2. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.471 FRAMEWORK ROM SKLEARN.LINEARREGRESSION

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearRegression.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearRegression
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearRegression
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the linear_model—LinearRegression model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2016-07-13
     - description: removed renormalization

  2. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates

  3. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.472 FRAMEWORK ROM SKLEARN.LINEARLOGISTICREGRESSION

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearLogisticRegressi`
`xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearLogisticRegression
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearLogisticRegression
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the linear_model—LogisticRegression model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  2. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.473 FRAMEWORK ROM SKLEARN.LINEARMULTITASKLASSO

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearMultiTaskLasso.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearMultiTaskLasso
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearMultiTaskLasso
```

- Test Description:

    - An example exercising supervised sklearn methods, specifically the linear_model—MultiTaskLasso model is tested here.

      Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

    - maljdan

- Creation date:

    - 2016-04-28

- The classes tested in this test are:

    - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2016-07-13
        - description: removed renormalization
    2. revision info:
        - author : talbpaul
        - date : 2016-09-15
        - description: other test updates

3. revision info:
    – author : maljdan
    – date : 2017-01-19
    – description: Adding this test description.

2.3.474 FRAMEWORK ROM SKLEARN.LINEARMULTITASKELASTICNET

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearMultiTaskElasticN`
`xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearMultiTaskElasticNet
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearMultiTaskElasticNet
```

- Test Description:

    – An example exercising supervised sklearn methods, specifically the linear_model—MultiTaskElasticN
    model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting
    a paraboloid function. The input dimensions are of largely different scales and one
    dimension is off-centered from the origin to ensure that normalization is being handled
    correctly. Classifiers will use this same function to determine if a point is above 0.25,
    and multitask methods will additionally fit an additive model (x+y).

- Original Author:

    – maljdan

- Creation date:

    – 2016-04-28

- The classes tested in this test are:

    – SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : maljdan
        – date : 2016-04-28

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– description: Adding gold files and fixing MultiTaskElasticNet

2. revision info:

   – author : alfoa
   – date : 2016-07-13
   – description: removed renormalization

3. revision info:

   – author : talbpaul
   – date : 2016-09-15
   – description: other test updates

4. revision info:

   – author : maljdan
   – date : 2017-01-19
   – description: Adding this test description.

2.3.475 FRAMEWORK ROM SKLEARN.LINEAROMP

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearOMP.`
`xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearOMP
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearOMP
```

• Test Description:

   – An example exercising supervised sklearn methods, specifically the linear_model—OrthogonalMatchin
     model is tested here.

     Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting
     a paraboloid function. The input dimensions are of largely different scales and one
     dimension is off-centered from the origin to ensure that normalization is being handled
     correctly. Classifiers will use this same function to determine if a point is above 0.25,
     and multitask methods will additionally fit an additive model (x+y).

• Original Author:

   – maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  2. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.476 FRAMEWORK ROM SKLEARN.LINEAROMPCV

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearOMPCV.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearOMPCV
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearOMPCV
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the linear_model—OrthogonalMatchin model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

- maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  2. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.477 FRAMEWORK ROM SKLEARN.LINEARPERCEPTRON

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearPerceptron.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearPerceptron
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearPerceptron
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the linear_model—Perceptron model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  2. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.478   FRAMEWORK ROM SKLEARN.LINEARRIDGER

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearRidgeR.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearRidgeR
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearRidgeR
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the linear_model—Ridge model is tested here.
    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:

     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates

  2. revision info:

     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.479   FRAMEWORK ROM SKLEARN.LINEARRIDGERCV

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearRidgeRCV.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearRidgeRCV
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearRidgeRCV
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the linear_model—RidgeCV model is tested here.
    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

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- Original Author:

    - maljdan

- Creation date:

    - 2016-04-28

- The classes tested in this test are:

    - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2016-07-13
        - description: removed renormalization
    2. revision info:
        - author : talbpaul
        - date : 2016-09-15
        - description: other test updates
    3. revision info:
        - author : maljdan
        - date : 2017-01-19
        - description: Adding this test description.

2.3.480 FRAMEWORK ROM SKLEARN.LINEARPAR

This test can be found at "`./raven/tests/framework/ROM/SKLearn/linearPAR.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearPAR
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearPAR
```

- Test Description:

– An example exercising supervised sklearn methods, specifically the linear_model—PassiveAggressiveI model is tested here.

Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  – maljdan

- Creation date:

  – 2016-04-28

- The classes tested in this test are:

  – SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : maljdan
     – date : 2016-05-02
     – description: Adding a fixed random_state value to a few of the ROM tests to ensure reproducibility.
  2. revision info:
     – author : talbpaul
     – date : 2016-09-15
     – description: other test updates
  3. revision info:
     – author : maljdan
     – date : 2017-01-19
     – description: Adding this test description.

2.3.481 FRAMEWORK ROM SKLEARN.LINEARSGDR

This test can be found at "./raven/tests/framework/ROM/SKLearn/linearSGDR. xml". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.linearSGDR
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.linearSGDR
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the linear_model—SGDRegressor model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - maljdan

- Creation date:

  - 2016-04-28

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2016-05-02
     - description: Adding a fixed random_state value to a few of the ROM tests to ensure reproducibility.
  2. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: other test updates
  3. revision info:
     - author : maljdan
     - date : 2017-01-19
     - description: Adding this test description.

2.3.482 FRAMEWORK ROM SKLEARN.NEURAL NETWORK

This test can be found at "`./raven/tests/framework/ROM/SKLearn/mlpRegressor.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/SKLearn.neural_network
```

or

```
./run_framework_tests --re=framework/ROM/SKLearn.neural_network
```

- Test Description:

  - An example exercising supervised sklearn methods, specifically the neural_network—MLPRegressor model is tested here.

    Note, all of the tests in SKLearn operate on a 2D input domain with the goal of fitting a paraboloid function. The input dimensions are of largely different scales and one dimension is off-centered from the origin to ensure that normalization is being handled correctly. Classifiers will use this same function to determine if a point is above 0.25, and multitask methods will additionally fit an additive model (x+y).

- Original Author:

  - wangc

- Creation date:

  - 2017-10-25

- The classes tested in this test are:

  - SupervisedLearning.SciKitLearn

2.3.483 FRAMEWORK SAMPLERS ROM SOBOL STATICSOBOLROMSMOLYAK

This test can be found at "`./raven/tests/framework/ROM/Sobol/test_sobol_rom.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobol/staticSobolRomSmolyak
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobol/staticSobolRomSmoly
```

- Test Description:

  - This test checks the operation of the sampler and ROM together.

- Original Author:

  - talbpaul

- Creation date:

  - 2016-03-03

- The classes tested in this test are:

  - Samplers.Sobol,SupervisedLearning.HDMRRom

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2018-12-20
     - description: moved ROM metadata writing from direct-to-file to direct-to-dataobject

2.3.484 FRAMEWORK SAMPLERS ROM SOBOL STATICSOBOLROMSMOLYAK

This test can be found at "./raven/tests/framework/ROM/Sobol/test_sobol_tensor.
xml". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobol/staticSobolRomSmolyak
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobol/staticSobolRomSmoly
```

- Test Description:

  - This test checks the operation of the sampler and model, using the tensor sparse grid.

- Original Author:

  - talbpaul

- Creation date:

  - 2015-07-07

- The classes tested in this test are:

    - Samplers.Sobol,SupervisedLearning.HDMRRom

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : talbpaul
        - date : 2018-12-20
        - description: moved ROM metadata writing from direct-to-file to direct-to-dataobject

2.3.485 FRAMEWORK SAMPLERS ROM SOBOL ADAPTIVESOBOLMAXRUNS

This test can be found at "`./raven/tests/framework/ROM/Sobol/test_adapt_sobol_`
`maxruns.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobol/AdaptiveSobolMaxRuns
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobol/AdaptiveSobolMaxRuns
```

- Test Description:

    - This tests using the AdaptiveSobol sampler to construct HDMRRom ROMs, but restricted by a specified number of samples (maxRuns in the sampler).

- Original Author:

    - talbpaul

- Creation date:

    - 2016-02-08

- The classes tested in this test are:

    - Samplers.AdaptiveSobol,SupervisedLearning.HDMRRom

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : talbpaul
        - date : 2018-12-20
        - description: moved ROM metadata writing from direct-to-file to direct-to-dataobject

2.3.486 FRAMEWORK SAMPLERS ROM SOBOL ADAPTIVESOBOLPARALLEL

This test can be found at "`./raven/tests/framework/ROM/Sobol/test_adapt_sobol_parallel.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobol/AdaptiveSobolParallel
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobol/AdaptiveSobolParall
```

- Test Description:

    - This tests using the AdaptiveSobol sampler to construct HDMRRom ROMs, in parallel.

- Original Author:

    - talbpaul

- Creation date:

    - 2016-02-08

- The classes tested in this test are:

    - Samplers.AdaptiveSobol,SupervisedLearning.HDMRRom

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : talbpaul
        - date : 2018-12-20
        - description: moved ROM metadata writing from direct-to-file to direct-to-dataobject

2.3.487 FRAMEWORK SAMPLERS ROM SOBOL TIMEDEPENDENT

This test can be found at "`./raven/tests/framework/ROM/Sobol/test_time_dep_sobol.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/ROM/Sobol/TimeDependent
```

or

```
./run_framework_tests --re=framework/Samplers/ROM/Sobol/TimeDependent
```

- Test Description:

    - This test checks the construction of a time-dependent HDMRRom.

- Original Author:

    - talbpaul

- Creation date:

    - 2016-03-09

- The classes tested in this test are:

    - SupervisedLearning.HDMRRom

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2018-08-09
        - description: Add pivotParameter for time dependent ROM
    2. revision info:
        - author : talbpaul
        - date : 2018-12-20
        - description: moved ROM metadata writing from direct-to-file to direct-to-dataobject

2.3.488   FRAMEWORK ROM TENSORSPLINE.GRIDSPLINE

This test can be found at "`./raven/tests/framework/ROM/TensorSpline/tensor_spline_grid.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/TensorSpline.GridSpline
```

or

```
./run_framework_tests --re=framework/ROM/TensorSpline.GridSpline
```

- Test Description:

    - This case is aimed to test the functionalities of the Tensor Spline Surrogate Model. It trains the Tensor Spline on a grid generated sampling the "projectile" model and inquires it on a refined Grid.

- Original Author:

  – alfoa

- Creation date:

  – 2018-04-12

- The classes tested in this test are:

  – SupervisedLearning.NDSpline

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : alfoa
     – date : 2018-04-12
     – description: Created test and added description

2.3.489 FRAMEWORK ROM TENSORSPLINE.NOGRIDSPLINE

This test can be found at "`./raven/tests/framework/ROM/TensorSpline/tensor_spline_no_grid_mc.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/TensorSpline.NoGridSpline
```

or

```
./run_framework_tests --re=framework/ROM/TensorSpline.NoGridSpline
```

- Test Description:

  – This case is aimed to test the functionalities of the Tensor Spline Surrogate Model. It trains the Tensor Spline on a MC generated sampling the "projectile" model and inquires it on a Grid. This tests the capability to accept not cartesian grids as training sets. It is important to notice that this tests demonstrates that the mechanics work but does not suggest to train the NDSpline ROM on not a cartesian grid.

- Original Author:

  – alfoa

- Creation date:

– 2018-04-12

- The classes tested in this test are:

  – SupervisedLearning.NDSpline

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : alfoa
     – date : 2018-04-12
     – description: Created test and added description

2.3.490 FRAMEWORK ROM TIMESERIES ARMA.BASIC

This test can be found at "`./raven/tests/framework/ROM/TimeSeries/ARMA/basic.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/TimeSeries/ARMA.Basic
```

or

```
./run_framework_tests --re=framework/ROM/TimeSeries/ARMA.Basic
```

- Test Description:

  – This test is aimed to check the possibility to train an ARMA+Fourier model and its capability to generate intrinsically stochastic time series

- Original Author:

  – alfoa

- Creation date:

  – 2017-02-02

- The classes tested in this test are:

  – SupervisedLearning.ARMA

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:

- author : alfoa
- date : 2017-02-03
- description: Adding this test description.

2. revision info:
   - author : alfoa
   - date : 2017-12-13
   - description: adapted for new DataObject structure

3. revision info:
   - author : alfoa
   - date : 2018-04-26
   - description: Modified location of the test (ARMA folder)

4. revision info:
   - author : talbpaul
   - date : 2018-06-14
   - description: Now tests history statistics instead of points

5. revision info:
   - author : talbpaul
   - date : 2018-12-20
   - description: Renamed from ARMA to Basic and added rom printing

6. revision info:
   - author : wangc
   - date : 2018-12-18
   - description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the pointwise metadata, and will be printed out in the output csv files by default. In order to avoid regolding this test, the optional node 'what' with text values 'input, output' is added. In this case, only the user requested variables as specified in the DataObjects are printed out.

7. revision info:
   - author : talbpaul
   - date : 2018-09-13
   - description: changed Pmax and Pmin to P (same for Q)

8. revision info:
   - author : talbpaul
   - date : 2019-01-30
   - description: reduced test to match what is tested, removed stat printing in favor of rom meta XML

2.3.491 FRAMEWORK ROM TIMESERIES ARMA.ARMAPARALLEL

This test can be found at "`./raven/tests/framework/ROM/TimeSeries/ARMA/test_ARMA_parallel.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/TimeSeries/ARMA.ARMAparallel
```

or

```
./run_framework_tests --re=framework/ROM/TimeSeries/ARMA.ARMAparallel
```

- Test Description:
  - A copy of framework/ROM/TimeSeries.ARMA where the internal parallel system has been activated in order to test its functionality in conjunction with the ARMA model. This test is aimed to check the possibility to train an ARMA+Fourier model and its capability to generate intrinsically stochastic time series

- Original Author:
  - alfoa

- Creation date:
  - 2017-02-02

- The classes tested in this test are:
  - SupervisedLearning.ARMA

- Since the creation of this test, the following main revisions have been performed:
  1. revision info:
     - author : alfoa
     - date : 2017-02-03
     - description: Adding this test description.
  2. revision info:
     - author : talbpaul
     - date : 2017-07-12
     - description: Inserted "reseedCopies" option as False, batchSize to 2
  3. revision info:
     - author : alfoa

- date : 2017-12-13
- description: adapted for new DataObject structure

4. revision info:
   - author : alfoa
   - date : 2018-04-26
   - description: Modified location of the test (ARMA folder)

5. revision info:
   - author : talbpaul
   - date : 2018-09-13
   - description: changed Pmax and Pmin to P (same for Q)

2.3.492 FRAMEWORK ROM TIMESERIES ARMA.ARMAPARALLELRESEED

This test can be found at "`./raven/tests/framework/ROM/TimeSeries/ARMA/arma_reseed_precursor.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/TimeSeries/ARMA.ARMAparallelReseed
```

or

```
./run_framework_tests --re=framework/ROM/TimeSeries/ARMA.ARMAparallelReseed
```

- Test Description:
  - Builds a reseeding copy of the ARMA to test multiple evaluations return different values; this run creates the arma and pickles it, also generates gold files for the reseed test. And added sampling for the gold file as well as rommeta.

- Original Author:
  - talbpaul

- Creation date:
  - 2017-07-12

- The classes tested in this test are:
  - SupervisedLearning.ARMA

- Since the creation of this test, the following main revisions have been performed:

1. revision info:
   - author : talbpaul
   - date : 2017-07-12
   - description: created

2. revision info:
   - author : alfoa
   - date : 2017-12-13
   - description: adapted for new DataObject structure

3. revision info:
   - author : alfoa
   - date : 2018-04-26
   - description: Modified location of the test (ARMA folder)

4. revision info:
   - author : talbpaul
   - date : 2018-12-20
   - description: ROM IO to data object added

5. revision info:
   - author : talbpaul
   - date : 2018-09-13
   - description: changed Pmax and Pmin to P (same for Q)

6. revision info:
   - author : zhouj
   - date : 2019-05-06
   - description: Modified location of the test to arma reseed

2.3.493 FRAMEWORK ROM TIMESERIES ARMA.ARMARESEEDTEST

This test can be found at "`./raven/tests/framework/ROM/TimeSeries/ARMA/arma_reseed_test.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/TimeSeries/ARMA.ARMAreseedTest
```

or

```
./run_framework_tests --re=framework/ROM/TimeSeries/ARMA.ARMAreseedTest
```

- Test Description:

  - Runs an unpickled ARMA ROM and assures the histories generated are identical (by setting the batch size to 1 and internalparelle to False in precursor and reseed test). Note that the gold file is created by runing the arma_ressed_precurssor test, signals_0 signals_1 signals_2 signals_3 are gold files. results_0 results_1 results_2 results_3 are the generated unpickled histories by test,then we compare they are the same.

- Original Author:

  - talbpaul

- Creation date:

  - 2017-07-12

- The classes tested in this test are:

  - SupervisedLearning.ARMA

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2017-07-12
     - description: created

  2. revision info:
     - author : alfoa
     - date : 2017-12-13
     - description: adapted for new DataObject structure

  3. revision info:
     - author : alfoa
     - date : 2018-04-26
     - description: Modified location of the test (ARMA folder)

  4. revision info:
     - author : zhouj
     - date : 2019-05-06
     - description: Modified location of the test to the same with precursor, change batch-size to 1, delete the internal parallel option, delete distribution block

2.3.494 FRAMEWORK ROM TIMESERIES ARMA.SINGLEFOURIER

This test can be found at "`./raven/tests/framework/ROM/TimeSeries/ARMA/single_fourier.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/TimeSeries/ARMA.SingleFourier
```

or

```
./run_framework_tests --re=framework/ROM/TimeSeries/ARMA.SingleFourier
```

- Test Description:
    - Tests that an ARMA can be trained with only a single Fourier base component
- Original Author:
    - alfoa
- Creation date:
    - 2018-05-21
- The classes tested in this test are:
    - SupervisedLearning.ARMA
- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : talbpaul
        - date : 2018-09-13
        - description: changed Pmax and Pmin to P (same for Q)

2.3.495 FRAMEWORK ROM TIMESERIES ARMA.MULTIPLEARMA

This test can be found at "`./raven/tests/framework/ROM/TimeSeries/ARMA/multiple_arma.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/TimeSeries/ARMA.MultipleArma
```

or

```
./run_framework_tests --re=framework/ROM/TimeSeries/ARMA.MultipleArma
```

- Test Description:

  - Tests creation of multiple INDEPENDENT target ARMA ROMs from a single training run. While it uses the entries from the correlated ARMA (VARMA) training data, it does not consider the variables correlated.

- Original Author:

  - talbpaul

- Creation date:

  - 2018-05-09

- The classes tested in this test are:

  - SupervisedLearning.ARMA

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-12-18
     - description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the pointwise metadata, and will be printed out in the output csv files by default. In order to avoid regolding this test, the optional node 'what' with text values 'input, output' is added. In this case, only the user requested variables as specified in the DataObjects are printed out.

  2. revision info:
     - author : talbpaul
     - date : 2018-09-13
     - description: changed Pmax and Pmin to P (same for Q)

2.3.496   FRAMEWORK ROM TIMESERIES ARMA.MULTIPLEFOURIER

This test can be found at "`./raven/tests/framework/ROM/TimeSeries/ARMA/multiple_fourier.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/TimeSeries/ARMA.MultipleFourier
```

or

```
./run_framework_tests --re=framework/ROM/TimeSeries/ARMA.MultipleFourier
```

- Test Description:

  - Tests the feature of having independent Fourier modes for each training target. Original data is pure Fourier modes made with dataGenerator. This test is not analytic, but the input training set corralated_0.csv should be very nearly exactly replicated by samples_0.csv.

- Original Author:

  - talbpaul

- Creation date:

  - 2018-07-26

- The classes tested in this test are:

  - SupervisedLearning.ARMA

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2018-09-13
     - description: changed Pmax and Pmin to P (same for Q)

2.3.497 FRAMEWORK ROM TIMESERIES ARMA.VARMA

This test can be found at "`./raven/tests/framework/ROM/TimeSeries/ARMA/varma.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/TimeSeries/ARMA.VARMA
```

or

```
./run_framework_tests --re=framework/ROM/TimeSeries/ARMA.VARMA
```

- Test Description:

  - This test checks the possibility to train an correlated ARMA+Fourier model and its capability to generate intrinsically stochastic time series with correlated results. The correlation model used generated uniformly random data on [-0.5,0.5] for A, then set B = 0.9*A + 0.1*rand, with rand also on [-0.5,0.5], to ensure strong correlation. The plot output "plot_input.png" shows the original training data, while "plot_VARMA.png"

plots the sampled values. B should only be slightly off from A at all points. If this
same calculation is done without correlation, both A and B independently range over
the value space, and B can be far from A for each Time value. This provides a quick
view norm to see that the correlation is working correctly.

- Original Author:

  – talbpaul

- Creation date:

  – 2018-05-15

- The classes tested in this test are:

  – SupervisedLearning.ARMA

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-12-18
     - description: In PR #882, the standard errors on statistics moments are imple-
       mented, these quantities are stored in the pointwise metadata, and will be printed
       out in the output csv files by default. In order to avoid regolding this test, the op-
       tional node 'what' with text values 'input, output' is added. In this case, only the
       user requested variables as specified in the DataObjects are printed out.

  2. revision info:
     - author : talbpaul
     - date : 2018-09-13
     - description: changed Pmax and Pmin to P (same for Q)

2.3.498 FRAMEWORK ROM TIMESERIES ARMA.ZEROFILTER

This test can be found at "`./raven/tests/framework/ROM/TimeSeries/ARMA/zero_`
`filter.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/TimeSeries/ARMA.ZeroFilter
```

or

```
./run_framework_tests --re=framework/ROM/TimeSeries/ARMA.ZeroFilter
```

- Test Description:

  - Tests the ZeroFilter functionality of the ARMA, including as a correlated variable. Note the mean and variance especially of GHI change significantly if the zero-filtering is not working.

- Original Author:

  - talbpaul

- Creation date:

  - 2018-08-29

- The classes tested in this test are:

  - SupervisedLearning.ARMA

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-12-18
     - description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the pointwise metadata, and will be printed out in the output csv files by default. In order to avoid regolding this test, the optional node 'what' with text values 'input, output' is added. In this case, only the user requested variables as specified in the DataObjects are printed out.

  2. revision info:
     - author : talbpaul
     - date : 2018-09-13
     - description: changed Pmax and Pmin to P (same for Q)

2.3.499 FRAMEWORK ROM TIMESERIES ARMA.SEGMENTED

This test can be found at "`./raven/tests/framework/ROM/TimeSeries/ARMA/segmented.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/TimeSeries/ARMA.Segmented
```

or

```
./run_framework_tests --re=framework/ROM/TimeSeries/ARMA.Segmented
```

- Test Description:

  - Tests the mechanics of clusterering the "time" subspace of the ARMA ROM.

- Original Author:

  - talbpaul

- Creation date:

  - 2018-11-20

- The classes tested in this test are:

  - SupervisedLearning.ARMA

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : wangc
     - date : 2018-12-19
     - description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the pointwise metadata, and will be printed out in the output csv files by default. In order to avoid regolding this test, the optional node 'what' with text values 'input, output' is added. In this case, only the user requested variables as specified in the DataObjects are printed out.

  2. revision info:
     - author : talbpaul
     - date : 2019-01-30
     - description: Added a pickling step to check serialization of segmented ARMA.

  3. revision info:
     - author : JiaZhouPU
     - date : 2019-05-02
     - description: Deleted the longest Fourier period for this test, because the phase of this period would have results between PI and negative PI(a result of arctan(infinity)), and cannnot be detected from the xml check.

2.3.500   FRAMEWORK ROM TIMESERIES ARMA.SEGMENTED

This test can be found at "`./raven/tests/framework/ROM/TimeSeries/ARMA/clustered.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/TimeSeries/ARMA.Segmented
```

or

```
./run_framework_tests --re=framework/ROM/TimeSeries/ARMA.Segmented
```

- Test Description:

    - Tests the mechanics of clusterering the "time" subspace of the ARMA ROM.

- Original Author:

    - talbpaul

- Creation date:

    - 2018-11-20

- The classes tested in this test are:

    - SupervisedLearning.ARMA

2.3.501 FRAMEWORK ROM TIMESERIES ARMA.PRESERVECDF

This test can be found at "./raven/tests/framework/ROM/TimeSeries/ARMA/preserve_cdf.xml". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/TimeSeries/ARMA.PreserveCdf
```

or

```
./run_framework_tests --re=framework/ROM/TimeSeries/ARMA.PreserveCdf
```

- Test Description:

    - Tests the feature (Models.ARMA.preserveInputCDF) to preserve the CDF of the input training data when producing synthetic histories. The standard is being able to identically match the original data's ValueDuration curve. Currently, there's not a Metric for comparing a single gold standard to several samples; thus we read in a second history set with the ValueDuration curve of the training set repeated 10 times for comparison to the sample ValueDuration curves.

- Original Author:

  – talbpaul

- Creation date:

  – 2019-01-22

- The classes tested in this test are:

  – SupervisedLearning.ARMA

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : talbpaul
     – date : 2019-01-22
     – description: created

2.3.502   FRAMEWORK ROM TIMESERIES DMD.HIGHORDERDMD

This test can be found at "`./raven/tests/framework/ROM/TimeSeries/DMD/test_`
`high_order_dmd.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/TimeSeries/DMD.HighOrderDMD
```

or

```
./run_framework_tests --re=framework/ROM/TimeSeries/DMD.HighOrderDMD
```

- Test Description:

  – This test is aimed to check the mechanics of the High Order DMD ROM using the standard SVD-based algorithm

- Original Author:

  – alfoa

- Creation date:

  – 2018-04-25

- The classes tested in this test are:

563

– SupervisedLearning.DynamicModeDecomposition

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : talbpaul
        – date : 2019-01-09
        – description: moving from ROM-file to ROM-dataobject
    2. revision info:
        – author : alfoa
        – date : 2018-04-25
        – description: Adding this test description.

2.3.503 FRAMEWORK ROM TIMESERIES DMD.PICKLEDMD

This test can be found at "`./raven/tests/framework/ROM/TimeSeries/DMD/test_pickle_dmd.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/TimeSeries/DMD.PickleDMD
```

or

```
./run_framework_tests --re=framework/ROM/TimeSeries/DMD.PickleDMD
```

- Test Description:

    – This test is aimed to check that the DMD-based surrogate models can be serialized and used in a working calculation flow.

- Original Author:

    – alfoa

- Creation date:

    – 2018-06-04

- The classes tested in this test are:

    – SupervisedLearning.DynamicModeDecomposition

- Since the creation of this test, the following main revisions have been performed:

1. revision info:
   - author : alfoa
   - date : 2018-06-04
   - description: Adding this test description.

2.3.504 FRAMEWORK ROM TIMESERIES POLYEXPONENTIAL.POLYEXPNEAREST

This test can be found at "`./raven/tests/framework/ROM/TimeSeries/PolyExponential/`
`test_poly_exponential_nearest.xml`". This test can be called executing the following
command:

```
./run_tests --re=framework/ROM/TimeSeries/PolyExponential.PolyExpNearest
```

or

```
./run_framework_tests --re=framework/ROM/TimeSeries/PolyExponential.PolyExp
```

- Test Description:

  - This test is aimed to check the mechanics of the PolyExponential ROM using, for the
    coefficient regression, the nearest algorithm regression

- Original Author:

  - alfoa

- Creation date:

  - 2018-04-25

- The classes tested in this test are:

  - SupervisedLearning.PolyExponential

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2019-01-09
     - description: moving from ROM-file to ROM-dataobject
  2. revision info:
     - author : alfoa
     - date : 2018-04-25
     - description: Adding this test description.

2.3.505 FRAMEWORK ROM TIMESERIES POLYEXPONENTIAL.POLYEXPPOLY

This test can be found at "`./raven/tests/framework/ROM/TimeSeries/PolyExponential/ test_poly_exponential_poly.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/ROM/TimeSeries/PolyExponential.PolyExpPoly
```

or

```
./run_framework_tests --re=framework/ROM/TimeSeries/PolyExponential.PolyExp
```

- Test Description:

    - This test is aimed to check the mechanics of the PolyExponential ROM using, for the coefficient regression, the polynomial regression (2nd order in this case)

- Original Author:

    - alfoa

- Creation date:

    - 2018-04-25

- The classes tested in this test are:

    - SupervisedLearning.PolyExponential

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : talbpaul
        - date : 2019-01-09
        - description: moving from ROM-file to ROM-dataobject
    2. revision info:
        - author : alfoa
        - date : 2018-04-25
        - description: Adding this test description.

2.3.506 FRAMEWORK ROM TIMESERIES POLYEXPONENTIAL.POLYEXPSPLINE

This test can be found at "`./raven/tests/framework/ROM/TimeSeries/PolyExponential/`
`test_poly_exponential_spline.xml`". This test can be called executing the following
command:

```
./run_tests --re=framework/ROM/TimeSeries/PolyExponential.PolyExpSpline
```

or

```
./run_framework_tests --re=framework/ROM/TimeSeries/PolyExponential.PolyExp
```

- Test Description:

    - This test is aimed to check the mechanics of the PolyExponential ROM using, for the
      coefficient regression, the tensor spline regression

- Original Author:

    - alfoa

- Creation date:

    - 2018-04-25

- The classes tested in this test are:

    - SupervisedLearning.PolyExponential

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : talbpaul
        - date : 2019-01-09
        - description: moving from ROM-file to ROM-dataobject
    2. revision info:
        - author : alfoa
        - date : 2018-04-25
        - description: Adding this test description.

2.3.507 FRAMEWORK SAMPLERS.DATAOBJECTCONSTANTS

This test can be found at "`./raven/tests/framework/Samplers/dataobject_constants.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers.DataObjectConstants
```

or

```
./run_framework_tests --re=framework/Samplers.DataObjectConstants
```

- Test Description:

    - Tests using a DataObject external to a Step as a source of constants for a Sampler. The models are very simple, so to regold, assure the correct values pass through for the constants and final result is obtained according to the models.

- Original Author:

    - talbpaul

- Creation date:

    - 2018-11-14

- The classes tested in this test are:

    - Sampler

2.3.508 FRAMEWORK SAMPLERS ADAPTIVEBATCH.GREEDYDISTANCE

This test can be found at "`./raven/tests/framework/Samplers/AdaptiveBatch/test_greedy_d.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.GreedyDistance
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.GreedyDistance
```

- Test Description:

- – An example of using the limit surface post-processor using the greedy selection algorithm with the distance scoring function. That is, the point to be selected will be furthest from all existing points that have been or are being evaluated. Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- Original Author:

  - – maljdan

- Creation date:

  - – 2015-11-03

- The classes tested in this test are:

  - – Samplers.LimitSurfaceSearch

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - – author : maljdan
     - – date : 2015-11-20
     - – description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.

  2. revision info:
     - – author : talbpaul
     - – date : 2016-02-08
     - – description: First update, looking for more failing tests to add.

  3. revision info:
     - – author : maljdan
     - – date : 2016-04-06
     - – description: Updating test cases to reflect the changes to the user input.

  4. revision info:
     - – author : maljdan
     - – date : 2017-01-18
     - – description: Adding test description.

  5. revision info:
     - – author : alfoa
     - – date : 2019-03-07
     - – description: Modified syntax in Functions as for issue #934

2.3.509 FRAMEWORK SAMPLERS ADAPTIVEBATCH.GREEDYDISTANCEPERSISTENCE

This test can be found at "`./raven/tests/framework/Samplers/AdaptiveBatch/`
`test_greedy_dp.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.GreedyDistancePersistence
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.GreedyDistanceP
```

- Test Description:

  - An example of using the limit surface post-processor using the greedy selection algo-
    rithm with the distance+persistence scoring function. That is, the point to be selected
    will be a combination of distance from other points and it will have low persistence,
    that is to say that its label has changed frequently indicating it is in an uncertain area.
    Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of
    extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- Original Author:

  - maljdan

- Creation date:

  - 2015-11-03

- The classes tested in this test are:

  - Samplers.LimitSurfaceSearch

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2015-11-20
     - description: Collapsing the batch sampling into the limit surface class, updating
       documentation, XSD, and the test cases to reflect this change.
  2. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: First update, looking for more failing tests to add.

3. revision info:

   – author : maljdan
   – date : 2016-04-06
   – description: Updating test cases to reflect the changes to the user input.

4. revision info:

   – author : maljdan
   – date : 2017-01-18
   – description: Adding test description.

5. revision info:

   – author : alfoa
   – date : 2019-03-07
   – description: Modified syntax in Functions as for issue #934

2.3.510   FRAMEWORK SAMPLERS ADAPTIVEBATCH.MAXPDISTANCE

This test can be found at "`./raven/tests/framework/Samplers/AdaptiveBatch/
test_maxp_d.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.MaxPDistance
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.MaxPDistance
```

- Test Description:

  – An example of using the limit surface post-processor with a maximum persistence
    batch selection algorithm with the distance scoring function. That is, the points to
    be selected will be toplogically distinct maxima in terms of distance from already sam-
    pled points. This differs from the maximum value maxima as this looks at points with
    the highest topological persistence. Note, all of the tests in AdaptiveBatch operate on a
    2D input domain with the goal of extracting a circular limit surface with radius 0.5 and
    centered at the origin, (0,0).

- Original Author:

  – maljdan

- Creation date:

- – 2015-11-03

- • The classes tested in this test are:

  - – Samplers.LimitSurfaceSearch

- • Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - – author : maljdan
     - – date : 2015-11-20
     - – description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.
  2. revision info:
     - – author : talbpaul
     - – date : 2016-02-08
     - – description: First update, looking for more failing tests to add.
  3. revision info:
     - – author : maljdan
     - – date : 2016-04-06
     - – description: Updating test cases to reflect the changes to the user input.
  4. revision info:
     - – author : maljdan
     - – date : 2017-01-18
     - – description: Adding test description.
  5. revision info:
     - – author : alfoa
     - – date : 2019-03-07
     - – description: Modified syntax in Functions as for issue #934

2.3.511   FRAMEWORK SAMPLERS ADAPTIVEBATCH.MAXPDISTANCEPERSISTENCE

This test can be found at "`./raven/tests/framework/Samplers/AdaptiveBatch/test_maxp_dp.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.MaxPDistancePersistence
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.MaxPDistancePe:
```

- Test Description:

  - An example of using the limit surface post-processor with a maximum persistence batch selection algorithm with the distance+persistence scoring function. That is, the points to be selected will be toplogically distinct maxima in terms of a combination of distance from already sampled points and also the temporal inconsistency of the label for this point (points with more volatility are preferred). This differs from the maximum value maxima as this looks at points with the highest topological persistence. Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- Original Author:

  - maljdan

- Creation date:

  - 2015-11-03

- The classes tested in this test are:

  - Samplers.LimitSurfaceSearch

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2015-11-20
     - description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.
  2. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: First update, looking for more failing tests to add.
  3. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.
  4. revision info:

- author : maljdan
- date : 2017-01-18
- description: Adding test description.

5. revision info:

- author : alfoa
- date : 2019-03-07
- description: Modified syntax in Functions as for issue #934

2.3.512   FRAMEWORK SAMPLERS ADAPTIVEBATCH.MAXVDISTANCE

This test can be found at "`./raven/tests/framework/Samplers/AdaptiveBatch/`
`test_maxv_d.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.MaxVDistance
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.MaxVDistance
```

- Test Description:

  - An example of using the limit surface post-processor with a maximum value batch selection algorithm with the distance scoring function. That is, the points to be selected will be toplogically distinct maxima in terms of distance from already sampled points. This differs from the maximum persistence maxima as this looks at distinct local maxima with the highest value. Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- Original Author:

  - maljdan

- Creation date:

  - 2015-11-03

- The classes tested in this test are:

  - Samplers.LimitSurfaceSearch

- Since the creation of this test, the following main revisions have been performed:

1. revision info:
   - author : maljdan
   - date : 2015-11-20
   - description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.

2. revision info:
   - author : talbpaul
   - date : 2016-02-08
   - description: First update, looking for more failing tests to add.

3. revision info:
   - author : maljdan
   - date : 2016-04-06
   - description: Updating test cases to reflect the changes to the user input.

4. revision info:
   - author : maljdan
   - date : 2017-01-18
   - description: Adding test description.

5. revision info:
   - author : alfoa
   - date : 2019-03-07
   - description: Modified syntax in Functions as for issue #934

2.3.513 FRAMEWORK SAMPLERS ADAPTIVEBATCH.MAXVDISTANCE

This test can be found at "`./raven/tests/framework/Samplers/AdaptiveBatch/test_maxv_dp.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.MaxVDistance
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.MaxVDistance
```

- Test Description:

- An example of using the limit surface post-processor with a maximum value batch selection algorithm with the distance+persistence scoring function. That is, the points to be selected will be toplogically distinct maxima in terms of a combination of distance from already sampled points and also the temporal inconsistency of the label for this point (points with more volatility are preferred). This differs from the maximum persistence maxima as this looks at distinct local maxima with the highest value. Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- Original Author:

  - maljdan

- Creation date:

  - 2015-11-03

- The classes tested in this test are:

  - Samplers.LimitSurfaceSearch

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2015-11-20
     - description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.
  2. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: First update, looking for more failing tests to add.
  3. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.
  4. revision info:
     - author : maljdan
     - date : 2017-01-18
     - description: Adding test description.
  5. revision info:

- author : alfoa
- date : 2019-03-07
- description: Modified syntax in Functions as for issue #934

2.3.514 FRAMEWORK SAMPLERS ADAPTIVEBATCH.PRERANKINGSIMPLIFICATION

This test can be found at "`./raven/tests/framework/Samplers/AdaptiveBatch/`
`test_pre.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.PreRankingSimplification
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.PreRankingSimpl
```

- Test Description:

  - A copy of framework/Samplers/AdaptiveBatch.MaxPDistance (test_maxp_d.xml) except it has been modified to provide a simplification value which is used to set a level for persistence simplification before extracting local maximum from either the maxP or maxV batch strategies. In this example, the value is 0.5, so any persistence value less than 0.5 of the scoring function's range of values is removed and thus we may end up with very few local maxima candidates. Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- Original Author:

  - maljdan

- Creation date:

  - 2015-11-03

- The classes tested in this test are:

  - Samplers.LimitSurfaceSearch

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2015-11-20

- description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.

2. revision info:

  - author : talbpaul
  - date : 2016-02-08
  - description: First update, looking for more failing tests to add.

3. revision info:

  - author : maljdan
  - date : 2016-04-06
  - description: Updating test cases to reflect the changes to the user input.

4. revision info:

  - author : maljdan
  - date : 2017-01-18
  - description: Adding test description.

5. revision info:

  - author : alfoa
  - date : 2019-03-07
  - description: Modified syntax in Functions as for issue #934

2.3.515   FRAMEWORK SAMPLERS ADAPTIVEBATCH.POSTRANKINGTHRESHOLDING

This test can be found at "`./raven/tests/framework/Samplers/AdaptiveBatch/test_post.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.PostRankingThresholding
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.PostRankingThre
```

- Test Description:

  - A copy of framework/Samplers/AdaptiveBatch.MaxPDistance (test_maxp_d.xml) except it has been modified to provide a threshold value which is used to reject samples whose score is less than a given percentage of the scoring range. Thus, if the threshold is .75 and the scores range from 0-10, then any score less than 7.5 will be rejected. Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- Original Author:

  - maljdan

- Creation date:

  - 2015-11-03

- The classes tested in this test are:

  - Samplers.LimitSurfaceSearch

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2015-11-20
     - description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.
  2. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: First update, looking for more failing tests to add.
  3. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.
  4. revision info:
     - author : maljdan
     - date : 2017-01-18
     - description: Adding test description.
  5. revision info:
     - author : alfoa
     - date : 2019-03-07
     - description: Modified syntax in Functions as for issue #934

2.3.516 FRAMEWORK SAMPLERS ADAPTIVEBATCH.THICKENEDBAND

This test can be found at "`./raven/tests/framework/Samplers/AdaptiveBatch/test_thick.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.ThickenedBand
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.ThickenedBand
```

- Test Description:

  - A copy of framework/Samplers/AdaptiveBatch.MaxPDistance (test_maxp_d.xml) except it has been modified to provide a thickened band of candidates for scoring rather than only the points that lie on the limit surface of the current reduced order model representing the data. Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- Original Author:

  - maljdan

- Creation date:

  - 2015-11-03

- The classes tested in this test are:

  - Samplers.LimitSurfaceSearch

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2015-11-20
     - description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.
  2. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: First update, looking for more failing tests to add.

3. revision info:
   - author : maljdan
   - date : 2016-04-06
   - description: Updating test cases to reflect the changes to the user input.
4. revision info:
   - author : maljdan
   - date : 2017-01-18
   - description: Adding test description.
5. revision info:
   - author : alfoa
   - date : 2019-03-07
   - description: Modified syntax in Functions as for issue #934

2.3.517   FRAMEWORK SAMPLERS ADAPTIVEBATCH.INVALIDPRERANKINGSIMPLIFICATION

This test can be found at "`./raven/tests/framework/Samplers/AdaptiveBatch/ test_invalid_pre.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.InvalidPreRankingSimplif
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.InvalidPreRank
```

- Test Description:
  - An example of using the limit surface post-processor with an invalid simplification value. This should degrade gracefully by defaulting to a simplification of 0 and warning the user of the change made to the execution. Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- Original Author:
  - maljdan

- Creation date:
  - 2015-11-03

- The classes tested in this test are:

– Samplers.LimitSurfaceSearch

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : maljdan
     – date : 2015-11-20
     – description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.

  2. revision info:
     – author : talbpaul
     – date : 2016-02-08
     – description: First update, looking for more failing tests to add.

  3. revision info:
     – author : maljdan
     – date : 2016-04-06
     – description: Updating test cases to reflect the changes to the user input.

  4. revision info:
     – author : maljdan
     – date : 2017-01-18
     – description: Adding test description.

  5. revision info:
     – author : alfoa
     – date : 2019-03-07
     – description: Modified syntax in Functions as for issue #934

2.3.518 FRAMEWORK SAMPLERS ADAPTIVEBATCH.INVALIDPOSTRANKINGSIMPLIFICATION

This test can be found at "./raven/tests/framework/Samplers/AdaptiveBatch/
test_invalid_post.xml". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.InvalidPostRankingSimpli
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.InvalidPostRank
```

- Test Description:

582

- An example of using the limit surface post-processor with an invalid threshold value. This should degrade gracefully by defaulting to a threshold of 0 and warning the user of the change made to the execution. Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- Original Author:

  - maljdan

- Creation date:

  - 2015-11-03

- The classes tested in this test are:

  - Samplers.LimitSurfaceSearch

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2015-11-20
     - description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.

  2. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: First update, looking for more failing tests to add.

  3. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input.

  4. revision info:
     - author : maljdan
     - date : 2017-01-18
     - description: Adding test description.

  5. revision info:
     - author : alfoa
     - date : 2019-03-07
     - description: Modified syntax in Functions as for issue #934

2.3.519 FRAMEWORK SAMPLERS ADAPTIVEBATCH.INVALIDMAXBATCHSIZE

This test can be found at "`./raven/tests/framework/Samplers/AdaptiveBatch/`
`test_invalid_mbs.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.InvalidMaxBatchSize
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.InvalidMaxBatcl
```

- Test Description:

  - An example of using the limit surface post-processor with an invalid maximum batch
    size. This should degrade gracefully by defaulting to a maximum batch size of 1 and
    warning the user of the change made to the execution. Note, all of the tests in Adaptive-
    Batch operate on a 2D input domain with the goal of extracting a circular limit surface
    with radius 0.5 and centered at the origin, (0,0).

- Original Author:

  - maljdan

- Creation date:

  - 2015-11-03

- The classes tested in this test are:

  - Samplers.LimitSurfaceSearch

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2015-11-20
     - description: Collapsing the batch sampling into the limit surface class, updating
       documentation, XSD, and the test cases to reflect this change.
  2. revision info:
     - author : talbpaul
     - date : 2016-02-08
     - description: First update, looking for more failing tests to add.
  3. revision info:

- author : maljdan
- date : 2016-04-06
- description: Updating test cases to reflect the changes to the user input.

4. revision info:

  - author : maljdan
  - date : 2017-01-18
  - description: Adding test description.

5. revision info:

  - author : alfoa
  - date : 2019-03-07
  - description: Modified syntax in Functions as for issue #934

2.3.520 FRAMEWORK SAMPLERS ADAPTIVEBATCH.INVALIDSCORINGSTRATEGY

This test can be found at "`./raven/tests/framework/Samplers/AdaptiveBatch/ test_invalid_score.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.InvalidScoringStrategy
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.InvalidScoring
```

- Test Description:

  - An example of using the limit surface post-processor with an invalid scoring strategy. This should print a message and exit. Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- Original Author:

  - maljdan

- Creation date:

  - 2015-11-03

- The classes tested in this test are:

  - Samplers.LimitSurfaceSearch

585

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : maljdan
        - date : 2015-11-20
        - description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.

    2. revision info:
        - author : talbpaul
        - date : 2016-02-08
        - description: First update, looking for more failing tests to add.

    3. revision info:
        - author : maljdan
        - date : 2016-04-06
        - description: Updating test cases to reflect the changes to the user input.

    4. revision info:
        - author : maljdan
        - date : 2017-01-18
        - description: Adding test description.

    5. revision info:
        - author : alfoa
        - date : 2019-03-07
        - description: Modified syntax in Functions as for issue #934

2.3.521 FRAMEWORK SAMPLERS ADAPTIVEBATCH.INVALIDBATCHSTRATEGY

This test can be found at "`./raven/tests/framework/Samplers/AdaptiveBatch/test_invalid_batch.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.InvalidBatchStrategy
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.InvalidBatchSt
```

- Test Description:

- – An example of using the limit surface post-processor with an invalid batch strategy which will fail with an error message. Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- • Original Author:

  - – maljdan

- • Creation date:

  - – 2015-11-03

- • The classes tested in this test are:

  - – Samplers.LimitSurfaceSearch

- • Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - – author : maljdan
     - – date : 2015-11-20
     - – description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.

  2. revision info:
     - – author : talbpaul
     - – date : 2016-02-08
     - – description: First update, looking for more failing tests to add.

  3. revision info:
     - – author : maljdan
     - – date : 2017-01-18
     - – description: Adding test description.

  4. revision info:
     - – author : alfoa
     - – date : 2019-03-07
     - – description: Modified syntax in Functions as for issue #934

2.3.522 FRAMEWORK SAMPLERS ADAPTIVEBATCH.INVALIDPOSTRANKINGSIMPLIFICATION

This test can be found at "`./raven/tests/framework/Samplers/AdaptiveBatch/
test_invalid_thick.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveBatch.InvalidPostRankingSimpli
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveBatch.InvalidPostRank
```

- Test Description:

  - An example of using the limit surface post-processor with an invalid threshold value. This should degrade gracefully by defaulting to a threshold of 0 and warning the user of the change made to the execution. Note, all of the tests in AdaptiveBatch operate on a 2D input domain with the goal of extracting a circular limit surface with radius 0.5 and centered at the origin, (0,0).

- Original Author:

  - maljdan

- Creation date:

  - 2015-11-03

- The classes tested in this test are:

  - Samplers.LimitSurfaceSearch

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2015-11-20
     - description: Collapsing the batch sampling into the limit surface class, updating documentation, XSD, and the test cases to reflect this change.

  2. revision info:
     - author : maljdan
     - date : 2015-11-23
     - description: Adjusting the invalid thickness example to replicate the default distancePersistence scoring function rather than the distance scoring function (which fails on the HPC for some yet undiscovered reason).

3. revision info:
   - author : talbpaul
   - date : 2016-02-08
   - description: First update, looking for more failing tests to add.

4. revision info:
   - author : maljdan
   - date : 2016-04-06
   - description: Updating test cases to reflect the changes to the user input.

5. revision info:
   - author : maljdan
   - date : 2017-01-18
   - description: Adding test description.

6. revision info:
   - author : alfoa
   - date : 2019-03-07
   - description: Modified syntax in Functions as for issue #934

2.3.523 FRAMEWORK SAMPLERS ADAPTIVELIMITSURFACESEARCH.TESTLIMITSURFACEM

This test can be found at "`./raven/tests/framework/Samplers/AdaptiveLimitSurfaceSearch/test_limit_surface_multi_grid_acc.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveLimitSurfaceSearch.testLimitSu
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveLimitSurfaceSearch.te
```

- Test Description:

  - This test is aimed to check the capability of RAVEN to perform an adaptive sampling strategy of type LimitSurfaceSearch when using the convergence acceleration scheme of type Multi-Grid.

- Original Author:

  - alfoa

- Creation date:
    - 2015-09-10
- The classes tested in this test are:
    - Samplers.LimitSurfaceSearch, Functions.External
- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : cogljj
        - date : 2015-09-29
        - description: Modifing external modules to use relative to working directory.
    2. revision info:
        - author : alfoa
        - date : 2015-10-05
        - description: Modified multigrid test to make it faster
    3. revision info:
        - author : maljdan
        - date : 2016-05-20
        - description: Updating the test cases to remove references to Point or History.
    4. revision info:
        - author : maljdan
        - date : 2016-11-08
        - description: Serializing the adaptive tests and regolding the multigrid case since I can validate the results look good. I am still trying to understand what the correct results for the 3D case are.
    5. revision info:
        - author : alfoa
        - date : 2017-01-21
        - description: Adding this test description.
    6. revision info:
        - author : alfoa
        - date : 2017-12-12
        - description: Adapted for new DataObject structure
    7. revision info:
        - author : alfoa
        - date : 2019-03-07
        - description: Modified syntax in Functions as for issue #934

2.3.524 FRAMEWORK SAMPLERS ADAPTIVELIMITSURFACESEARCH.ADAPTIVE SAMPLER EXT MODEL

This test can be found at "`./raven/tests/framework/Samplers/AdaptiveLimitSurfaceSearch`
`test_adaptive_sampler.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveLimitSurfaceSearch.adaptive_sampler
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveLimitSurfaceSearch.adaptive
```

- Test Description:

    - This test is aimed to test the capability of RAVEN to employ a goal oriented sampling.
      It tests the LimitSurfaceSearch algorithm using an external model as "system code"

- Original Author:

    - alfoa

- Creation date:

    - 2015-04-09

- The classes tested in this test are:

    - Samplers.LimitSurfaceSearch, Models.ExternalModel, Models.ROM

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2017-12-12
        - description: Adapted for new DataObject structure

    2. revision info:
        - author : alfoa
        - date : 2019-03-07
        - description: Modified syntax in Functions as for issue #934

2.3.525 FRAMEWORK SAMPLERS ADAPTIVELIMITSURFACESEARCH.ADAPTIVE SAMPLER NO CROSSING

This test can be found at "`./raven/tests/framework/Samplers/AdaptiveLimitSurfaceSearch`
`test_limit_surface_no_crossing_transition.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveLimitSurfaceSearch.adaptive_sam
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveLimitSurfaceSearch.ad
```

- Test Description:

  - This test is aimed to test that the LimitSurfaceSearch Sampler is able to successfully detect a failure of the adaptive search (No limit surface crossed). This test is connected to the defect mitigation reported in the issue #704

- Original Author:

  - alfoa

- Creation date:

  - 2018-08-25

- The classes tested in this test are:

  - Samplers.LimitSurfaceSearch, Models.ExternalModel, Models.ROM

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2018-08-25
     - description: Added the test for testing the mitigation for the issue #704
  2. revision info:
     - author : alfoa
     - date : 2019-03-07
     - description: Modified syntax in Functions as for issue #934

2.3.526 FRAMEWORK SAMPLERS ADAPTIVELIMITSURFACESEARCH.LIMIT SUR-FACE 1 DIMENSIONAL

This test can be found at "`./raven/tests/framework/Samplers/AdaptiveLimitSurfaceSearch/`
`test_adaptive_sampler_1_d_limit_surface.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/AdaptiveLimitSurfaceSearch.limit_surfa
```

or

```
./run_framework_tests --re=framework/Samplers/AdaptiveLimitSurfaceSearch.l
```

- Test Description:

    - This test is aimed to test the capability of RAVEN to employ a goal oriented sampling. It tests the LimitSurfaceSearch algorithm using an external model as "system code". In addition it ensures that a 1Dimensional Limit surface can be generated (1 uncertanty).

- Original Author:

    - alfoa

- Creation date:

    - 2018-11-29

- The classes tested in this test are:

    - Samplers.LimitSurfaceSearch, Models.ExternalModel, Models.ROM

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2018-11-29
        - description: New test for addressing issue #864
    2. revision info:
        - author : alfoa
        - date : 2019-03-07
        - description: Modified syntax in Functions as for issue #934

2.3.527 FRAMEWORK SAMPLERS CATEGORICAL.STRINGS

This test can be found at "`./raven/tests/framework/Samplers/Categorical/string_vars.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Categorical.Strings
```

or

```
./run_framework_tests --re=framework/Samplers/Categorical.Strings
```

- Test Description:

  - Tests the ability to use the Categorical distribution along with Functions to essentially sample strings for variables. The model run is a simple projectile motion problem that can be run in either "stepper"; or "analytic" mode. The output of the model is "height"; as a time-dependent variable. The analytic mode is exact, but the stepper mode is intentionally chosen to be a poor approximation (too few steps taken).

- Original Author:

  - talbpaul

- Creation date:

  - 2018-01-31

- The classes tested in this test are:

  - Samplers.Categorical,Function

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2019-03-07
     - description: Modified syntax in Functions as for issue #934

2.3.528 FRAMEWORK SAMPLERS CATEGORICAL.RESTART

This test can be found at "`./raven/tests/framework/Samplers/Categorical/string_vars_restart.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Categorical.Restart
```

or

```
./run_framework_tests --re=framework/Samplers/Categorical.Restart
```

- Test Description:

  - Tests restarting from input spaces with string variables (from categorical+function) as well as restarting a HistorySet. The difference between input and output spaces is in the output variable "restartID". In the data being restarted from, the value is 1.0, while in the new samples taken, the value is 2.0. The restart history CSVs that should have a "1.0" restart ID are 0,2,6,8,9,11,15,17,18,20,24,26 The restart history CSVs that should have a "2.0" restart ID are 1,3,4,5,7,10,12,13,14,16,19,21,22,23,25

- Original Author:

  - talbpaul

- Creation date:

  - 2018-01-31

- The classes tested in this test are:

  - Samplers.Categorical,Function

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2019-03-07
     - description: Modified syntax in Functions as for issue #934

2.3.529   FRAMEWORK SAMPLERS CATEGORICAL.RESTARTMISSINGVARS

This test can be found at "./raven/tests/framework/Samplers/Categorical/missing_variables.xml". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Categorical.RestartMissingVars
```

or

```
./run_framework_tests --re=framework/Samplers/Categorical.RestartMissingVa
```

- Test Description:

  - Tests restarting from input spaces with string variables (from categorical+function) but with variables missing from the restart (should fail). The difference between input and output spaces is in the output variable "restartID". In the data being restarted from, the value is 1.0, while in the new samples taken, the value is 2.0. The restart history CSVs that should have a "1.0"; restart ID are 0,2,6,8,9,11,15,17,18,20,24,26 The restart history CSVs that should have a "2.0"; restart ID are 1,3,4,5,7,10,12,13,14,16,19,21,22,23,25

- Original Author:

  - talbpaul

- Creation date:

  - 2018-03-14

- The classes tested in this test are:

  - Samplers.Categorical,Function

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2019-03-07
     - description: Modified syntax in Functions as for issue #934

2.3.530 FRAMEWORK SAMPLERS CUSTOMSAMPLER.CUSTOMSAMPLERFROMFILE

This test can be found at "./raven/tests/framework/Samplers/CustomSampler/ test_Custom_Sampler_File.xml". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/CustomSampler.customSamplerFromFile
```

or

```
./run_framework_tests --re=framework/Samplers/CustomSampler.customSamplerF
```

- Test Description:

  - An example of using the Custom Sampler object. In this test the realization coordinates are collected from a Files object of type CSV.

- Original Author:

  - alfoa

- Creation date:

  - 2016-05-24

- The classes tested in this test are:

  - Samplers.CustomSampler, Files.Input

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2016-05-25
     - description: Fixed absolute path
  2. revision info:
     - author : talbpaul
     - date : 2016-09-15
     - description: Test updates
  3. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.
  4. revision info:
     - author : talbpaul
     - date : 2018-05-02
     - description: Added nameInSource test to get "x" from "xalias"

2.3.531 FRAMEWORK SAMPLERS CUSTOMSAMPLER.CUSTOMSAMPLERFROMDATAOBJECT

This test can be found at "`./raven/tests/framework/Samplers/CustomSampler/ test_Custom_Sampler_DataObject.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/CustomSampler.customSamplerFromDataObje
```

or

```
./run_framework_tests --re=framework/Samplers/CustomSampler.customSamplerF:
```

- Test Description:

  – An example of using the Custom Sampler object. In this test the realization coordinates
  are directly taken from a DataObjec of type PointSet

- Original Author:

  – alfoa

- Creation date:

  – 2016-05-25

- The classes tested in this test are:

  – Samplers.CustomSampler, DataObjects.PointSet

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : alfoa
     – date : 2016-05-25
     – description: Fixed absolute path
  2. revision info:
     – author : talbpaul
     – date : 2016-09-15
     – description: Test updates
  3. revision info:
     – author : alfoa
     – date : 2017-01-21
     – description: Adding this test description.
  4. revision info:
     – author : talbpaul
     – date : 2018-05-02
     – description: Added nameInSource test renaming "x" to "xnew"

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2.3.532 FRAMEWORK SAMPLERS CUSTOMSAMPLER.CUSTOMSAMPLERFROMDATAOBJECT

This test can be found at "`./raven/tests/framework/Samplers/CustomSampler/`
`from_dataset.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/CustomSampler.customSamplerFromDataObj
```

or

```
./run_framework_tests --re=framework/Samplers/CustomSampler.customSamplerF
```

- Test Description:

    - An example of using the Custom Sampler object. In this test the realization coordinates
      are directly taken from a DataObjec of type PointSet

- Original Author:

    - alfoa

- Creation date:

    - 2016-05-25

- The classes tested in this test are:

    - Samplers.CustomSampler, DataObjects.PointSet

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2016-05-25
        - description: Fixed absolute path
    2. revision info:
        - author : talbpaul
        - date : 2016-09-15
        - description: Test updates
    3. revision info:
        - author : alfoa
        - date : 2017-01-21
        - description: Adding this test description.

2.3.533 FRAMEWORK SAMPLERS CUSTOMSAMPLER.BYINDEX

This test can be found at "./raven/tests/framework/Samplers/CustomSampler/
by_index.xml". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/CustomSampler.ByIndex
```

or

```
./run_framework_tests --re=framework/Samplers/CustomSampler.ByIndex
```

- Test Description:

    - An example of using the Custom Sampler object. In this test we take a single realization
      by index from a data object.

- Original Author:

    - talbpaul

- Creation date:

    - 2018-11-08

- The classes tested in this test are:

    - Samplers.CustomSampler, DataObjects.PointSet

2.3.534 FRAMEWORK SAMPLERS DYNAMICEVENTTREES.TESTCLASSICDETSHORTRAVEN

This test can be found at "./raven/tests/framework/Samplers/DynamicEventTrees/
testDETshort.xml". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/DynamicEventTrees.testClassicDETshortRA
```

or

```
./run_framework_tests --re=framework/Samplers/DynamicEventTrees.testClassic
```

- Test Description:

    - An example of using the Dynamic Event Tree Methodology with an external Code
      (RELAP7-like in this case). This test is a fast executing one that is aimed to check the
      mechanics of the DET methodology.

- Original Author:

  - alfoa

- Creation date:

  - 2015-10-05

- The classes tested in this test are:

  - Samplers.DynamicEventTree, Models.Code

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : maljdan
     - date : 2016-04-06
     - description: Updating test cases to reflect the changes to the user input
  2. revision info:
     - author : talbpaul
     - date : 2016-04-26
     - description: Added check for pre-existing backup files when validating
  3. revision info:
     - author : alfoa
     - date : 2016-04-27
     - description: New subdirectories structure
  4. revision info:
     - author : maljdan
     - date : 2016-08-03
     - description: Removing PrintCSV PostProcessor from the DET test cases.
  5. revision info:
     - author : maljdan
     - date : 2016-08-08
     - description: Fixing DET test case.
  6. revision info:
     - author : alfoa
     - date : 2016-10-20
     - description: Modified XSD and removed dim attribute from all the tests
  7. revision info:

- – author : alfoa
- – date : 2017-01-21
- – description: Adding this test description.

8. revision info:

- – author : alfoa
- – date : 2018-01-24
- – description: Modification for new DataObject and new option to specify printing and plotting subdirectories (attribute "dir")

9. revision info:

- – author : talbpaul
- – date : 2018-01-26
- – description: Added maxqueuesize 1 to be consistent with historical behavior

2.3.535 FRAMEWORK SAMPLERS DYNAMICEVENTTREES.TESTHYBRIDDETSHORTRAVEN

This test can be found at "`./raven/tests/framework/Samplers/DynamicEventTrees/testHybridDET.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/DynamicEventTrees.testHybridDETshortRA
```

or

```
./run_framework_tests --re=framework/Samplers/DynamicEventTrees.testHybridD
```

- Test Description:

  - – An example of using the Dynamic Event Tree Methodology (Hybrid Dynamic Event Tree) with an external Code (RELAP7-like in this case). This test is a fast executing one that is aimed to check the mechanics of the DET methodology, when epistemic uncertanties need to be modeled.

- Original Author:

  - – alfoa

- Creation date:

  - – 2015-10-05

- The classes tested in this test are:

- – Samplers.DynamicEventTree, Models.Code

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - – author : cogljj
     - – date : 2016-03-21
     - – description: Fixing dynamic event tree RELAP-7 inputs.

  2. revision info:
     - – author : maljdan
     - – date : 2016-04-06
     - – description: Updating test cases to reflect the changes to the user input.

  3. revision info:
     - – author : talbpaul
     - – date : 2016-04-26
     - – description: Added check for pre-existing backup files when validating

  4. revision info:
     - – author : alfoa
     - – date : 2016-04-27
     - – description: New subdirectories structure

  5. revision info:
     - – author : maljdan
     - – date : 2016-08-03
     - – description: Removing PrintCSV PostProcessor from the DET test cases.

  6. revision info:
     - – author : alfoa
     - – date : 2016-10-20
     - – description: Modified XSD and removed dim attribute from all the tests

  7. revision info:
     - – author : alfoa
     - – date : 2017-01-21
     - – description: Adding this test description.

2.3.536 FRAMEWORK TESTADAPTIVEDYNAMICEVENTTREERAVEN

This test can be found at "`./raven/tests/framework/Samplers/DynamicEventTrees/ test_adaptive_det_simple.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/testAdaptiveDynamicEventTreeRAVEN
```

or

```
./run_framework_tests --re=framework/testAdaptiveDynamicEventTreeRAVEN
```

- Test Description:

    - This test is aimed to test the capability of RAVEN to employ the Adaptive Dynamic Event Tree Sampling strategy (using RELAP7 as system code)

- Original Author:

    - @alfoa

- Creation date:

    - 2015-01-26

- The classes tested in this test are:

    - Samplers.AdaptiveDET

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : @alfoa
        - date : 2016-04-27
        - description: Updating the test in order to accept the new subdirectories' structure
    2. revision info:
        - author : alfoa
        - date : 2019-03-07
        - description: Modified syntax in Functions as for issue #934

2.3.537 FRAMEWORK TESTADAPTIVEHYBRIDDYNAMICEVENTTREERAVEN

This test can be found at "`./raven/tests/framework/Samplers/DynamicEventTrees/test_adaptive_hybrid_det.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/testAdaptiveHybridDynamicEventTreeRAVEN
```

or

```
./run_framework_tests --re=framework/testAdaptiveHybridDynamicEventTreeRAVI
```

- Test Description:

    - This test is aimed to test the capability of RAVEN to employ the Adaptive Hybrid Dynamic Event Tree Sampling strategy (using RELAP7 as system code)

- Original Author:

    - @alfoa

- Creation date:

    - 2015-01-26

- The classes tested in this test are:

    - Samplers.AdaptiveDET

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : @alfoa
        - date : 2016-04-27
        - description: Updating the test in order to accept the new subdirectories' structure
    2. revision info:
        - author : alfoa
        - date : 2019-03-07
        - description: Modified syntax in Functions as for issue #934

2.3.538 FRAMEWORK SAMPLERS ENSEMBLEDSAMPLER.ENSEMBLESAMPLERDUMMY

This test can be found at "`./raven/tests/framework/Samplers/EnsembledSampler/`
`test_EnsembleSamplerDummy.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/EnsembledSampler.EnsembleSamplerDummy
```

or

```
./run_framework_tests --re=framework/Samplers/EnsembledSampler.EnsembleSamp
```

- Test Description:

  - An example of using the EnsembleForward sampler aimed to combine multiple forward sampling tecniques (MonteCarlo, Grid, Stratified, etc.). This test uses a Dummy Model in order to check that the sampled values are correcly passed to the Model entity.

- Original Author:

  - alfoa

- Creation date:

  - 2016-04-20

- The classes tested in this test are:

  - Samplers.EnsembleForward, Models.Dummy

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2016-04-20
     - description: Finalized EnsembleSampler
  2. revision info:
     - author : alfoa
     - date : 2016-05-25
     - description: Finalized merge request. Closes #559
  3. revision info:
     - author : talbpaul

- – date : 2016-09-15
- – description: Test updates

4. revision info:
   - – author : alfoa
   - – date : 2017-01-21
   - – description: Adding this test description.

5. revision info:
   - – author : talbpaul
   - – date : 2017-09-27
   - – description: Added seed to samplerInit for testing

6. revision info:
   - – author : talbpaul
   - – date : 2018-01-02
   - – description: added input data object to prevent same-input-as-output error

2.3.539   FRAMEWORK SAMPLERS ENSEMBLEDSAMPLER.ENSEMBLESAMPLEREXTMODEL

This test can be found at "`./raven/tests/framework/Samplers/EnsembledSampler/`
`test_EnsembleSamplerExtModel.xml`". This test can be called executing the following
command:

```
./run_tests --re=framework/Samplers/EnsembledSampler.EnsembleSamplerExtMode
```

or

```
./run_framework_tests --re=framework/Samplers/EnsembledSampler.EnsembleSamp
```

- • Test Description:
  - – An example of using the EnsembleForward sampler aimed to combine multiple forward sampling tecniques (MonteCarlo, Grid, Stratified, etc.). This test uses an ExternalModel in order to testify that this sampling strategy can work with RAVEN internal developed Models.

- • Original Author:
  - – alfoa

- • Creation date:

607

- – 2016-04-20

- • The classes tested in this test are:

    - – Samplers.EnsembleForward, Models.ExternalModel

- • Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - – author : alfoa
        - – date : 2016-04-20
        - – description: Finalized EnsembleForward Sampler
    2. revision info:
        - – author : talbpaul
        - – date : 2016-09-15
        - – description: Test updates
    3. revision info:
        - – author : alfoa
        - – date : 2017-01-21
        - – description: Adding this test description.

2.3.540   FRAMEWORK SAMPLERS ENSEMBLEDSAMPLER.ENSEMBLESAMPLERDUMMY

This test can be found at "`./raven/tests/framework/Samplers/EnsembledSampler/`
`test_EnsembleSamplerFunctions.xml`". This test can be called executing the following
command:

```
./run_tests --re=framework/Samplers/EnsembledSampler.EnsembleSamplerDummy
```

or

```
./run_framework_tests --re=framework/Samplers/EnsembledSampler.EnsembleSamp
```

- • Test Description:

    - – This test uses a Dummy Model in order to check that the values generated by functions
        in the ensemble sampler are correctly passed to the Model entity.

- • Original Author:

    - – mandd

- Creation date:

  - 2017-05-25

- The classes tested in this test are:

  - Samplers.EnsembleForward, Models.Dummy

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2018-01-02
     - description: added input data object to prevent same-input-as-output error
  2. revision info:
     - author : alfoa
     - date : 2019-03-07
     - description: Modified syntax in Functions as for issue #934

2.3.541   FRAMEWORK SAMPLERS ENSEMBLEDSAMPLER.ENSEMBLESAMPLERCONSTANTS

This test can be found at "`./raven/tests/framework/Samplers/EnsembledSampler/`
`test_EnsembleSamplerConstants.xml`". This test can be called executing the following
command:

```
./run_tests --re=framework/Samplers/EnsembledSampler.EnsembleSamplerConstar
```

or

```
./run_framework_tests --re=framework/Samplers/EnsembledSampler.EnsembleSamp
```

- Test Description:

  - Tests the use of constants in the EnsembleForward sampler.

- Original Author:

  - talbpaul

- Creation date:

  - 2017-08-30

- The classes tested in this test are:

  - Samplers.EnsembleForward

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2018-01-02
     - description: added input data object to prevent same-input-as-output error

2.3.542 FRAMEWORK SAMPLERS RESTART.STOCHPOLY

This test can be found at "`./raven/tests/framework/Samplers/Restart/test_restart_stochpoly.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Restart.StochPoly
```

or

```
./run_framework_tests --re=framework/Samplers/Restart.StochPoly
```

- Test Description:

  - The essence of this test is to demonstrate the input space when generated from restart or from scratch are identical. The external models are organized so that outputs from the restart data have an output value of 1.0, and from the higher-fidelity sampler have an output value of 2.0. Obviously using different models with restarts is a terrible idea in general, but makes this test work. In the end, "fine.csv" and "restart.csv" should have identical input space, but different output space; all the output of "fine.csv" should be 2.0, while the restarted points in "restart.csv" should be 1.0

- Original Author:

  - talbpaul

- Creation date:

  - 2015-07-07

- The classes tested in this test are:

  - Samplers.SparseGridCollocation

2.3.543 FRAMEWORK SAMPLERS RESTART.SOBOL

This test can be found at "`./raven/tests/framework/Samplers/Restart/test_restart_sobol.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Restart.Sobol
```

or

```
./run_framework_tests --re=framework/Samplers/Restart.Sobol
```

- Test Description:

  - The essence of this test is to demonstrate the input space when generated from restart or from scratch are identical. The external models are organized so that outputs from the restart data have an output value of 1.0, and from the higher-fidelity sampler have an output value of 2.0. Obviously using different models with restarts is a terrible idea in general, but makes this test work. In the end, "fine.csv" and "restart.csv" should have identical input space, but different output space; all the output of "fine.csv" should be 2.0, while the restarted points in "restart.csv" should be 1.0

- Original Author:

  - talbpaul

- Creation date:

  - 2015-07-07

- The classes tested in this test are:

  - Samplers.Sobol

2.3.544 FRAMEWORK SAMPLERS RESTART.GRID

This test can be found at "`./raven/tests/framework/Samplers/Restart/test_restart_Grid.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Restart.Grid
```

or

```
./run_framework_tests --re=framework/Samplers/Restart.Grid
```

- Test Description:

  - The essence of this test is to demonstrate the input space when generated from restart or from scratch are identical. The external models are organized so that outputs from the restart data have an output value of 1.0, and from the higher-fidelity sampler have an output value of 2.0. Obviously using different models with restarts is a terrible idea in general, but makes this test work. In the end, "fine.csv" and "restart.csv" should have identical input space, but different output space; all the output of "fine.csv" should be 2.0, while the restarted points in "restart.csv" should be 1.0

- Original Author:

  - talbpaul

- Creation date:

  - 2015-07-07

- The classes tested in this test are:

  - Samplers.Grid

2.3.545 FRAMEWORK SAMPLERS RESTART.LOADFROMLARGECSV

This test can be found at "`./raven/tests/framework/Samplers/Restart/large_load_from_csv.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Restart.LoadFromLargeCSV
```

or

```
./run_framework_tests --re=framework/Samplers/Restart.LoadFromLargeCSV
```

- Test Description:

  - At one point there was performance issues restarting from a large amount of data that is loaded from a CSV. This test exists to ensure loading from a large CSV behaves consistently.

- Original Author:

  - talbpaul

- Creation date:

– 2016-06-30

- The classes tested in this test are:

  – Samplers.Grid

2.3.546 FRAMEWORK SAMPLERS SOBOL SOBOL

This test can be found at "`./raven/tests/framework/Samplers/Sobol/test_sobol_sampler.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/Sobol/Sobol
```

or

```
./run_framework_tests --re=framework/Samplers/Sobol/Sobol
```

- Test Description:

  – This tests using the Sobol static sampler with the basic syntax.

- Original Author:

  – talbpaul

- Creation date:

  – 2015-09-14

- The classes tested in this test are:

  – Samplers.Sobol

2.3.547 FRAMEWORK SAMPLERS SPARSEGRID SMOLYAKGRIDTEST

This test can be found at "`./raven/tests/framework/Samplers/SparseGrid/test_sparse_grid.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/SmolyakGridTest
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/SmolyakGridTest
```

- Test Description:

    – This tests using Smolyak-style SparseGridCollocation.

- Original Author:

    – talbpaul

- Creation date:

    – 2015-07-07

- The classes tested in this test are:

    – Samplers.SparseGridCollocation

2.3.548 FRAMEWORK SAMPLERS SPARSEGRID TENSORGRIDTEST

This test can be found at "`./raven/tests/framework/Samplers/SparseGrid/test_tensor_grid.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/TensorGridTest
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/TensorGridTest
```

- Test Description:

    – This tests using non-sparse tensor collocation.

- Original Author:

    – talbpaul

- Creation date:

    – 2015-07-07

- The classes tested in this test are:

    – Samplers.SparseGridCollocation

2.3.549 FRAMEWORK SAMPLERS SPARSEGRID TENSORPRDUCTGRID

This test can be found at "`./raven/tests/framework/Samplers/SparseGrid/test_index_TP.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/tensorPrductGrid
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/tensorPrductGrid
```

- Test Description:
    - This tests the creation of a TensorProduct construction sparse grid.
- Original Author:
    - talbpaul
- Creation date:
    - 2015-09-11
- The classes tested in this test are:
    - IndexSets.TensorProduct

2.3.550 FRAMEWORK SAMPLERS SPARSEGRID TOTALDEGREEGRID

This test can be found at "`./raven/tests/framework/Samplers/SparseGrid/test_index_TD.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/totalDegreeGrid
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/totalDegreeGrid
```

- Test Description:
    - This tests the creation of a TotalDegree construction sparse grid.
- Original Author:

- talbpaul

- Creation date:

  - 2015-09-11

- The classes tested in this test are:

  - IndexSets.TotalDegree

2.3.551 FRAMEWORK SAMPLERS SPARSEGRID HYPERBOLICCROSSGRID

This test can be found at "`./raven/tests/framework/Samplers/SparseGrid/test_index_HC.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/hyperbolicCrossGrid
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/hyperbolicCrossGr:
```

- Test Description:

  - This tests the creation of a HyperbolicCross construction sparse grid.

- Original Author:

  - talbpaul

- Creation date:

  - 2015-09-11

- The classes tested in this test are:

  - IndexSets.HyperbolicCross

2.3.552 FRAMEWORK SAMPLERS SPARSEGRID CUSTOMGRID

This test can be found at "`./raven/tests/framework/Samplers/SparseGrid/test_index_custom.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/customGrid
```

616

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/customGrid
```

- Test Description:
  - This tests the creation of a Custom sparse grid.
- Original Author:
  - talbpaul
- Creation date:
  - 2015-09-11
- The classes tested in this test are:
  - IndexSets.Custom

2.3.553   FRAMEWORK SAMPLERS SPARSEGRID ANISOTROPICGRID

This test can be found at "`./raven/tests/framework/Samplers/SparseGrid/test_index_anisotropic.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/anisotropicGrid
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/anisotropicGrid
```

- Test Description:
  - This tests the creation of an anisotropic sparse grid (using the interpolation weights in the ROM).
- Original Author:
  - talbpaul
- Creation date:
  - 2015-09-11
- The classes tested in this test are:
  - IndexSets

2.3.554 FRAMEWORK SAMPLERS SPARSEGRID UNIFORM

This test can be found at "`./raven/tests/framework/Samplers/SparseGrid/test_scgpc_uniform.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/uniform
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/uniform
```

- Test Description:
    - This tests using SparseGridCollocation with uniformly-distributed inputs.
- Original Author:
    - talbpaul
- Creation date:
    - 2015-09-11
- The classes tested in this test are:
    - Samplers.SparseGridCollocation

2.3.555 FRAMEWORK SAMPLERS SPARSEGRID UNIFORM CC

This test can be found at "`./raven/tests/framework/Samplers/SparseGrid/test_scgpc_uniform_cc.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/uniform_cc
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/uniform_cc
```

- Test Description:
    - This tests using SparseGridCollocation with Clenshaw Curtis points and weights (on uniformly-distributed variables).

- Original Author:

  - talbpaul

- Creation date:

  - 2015-09-11

- The classes tested in this test are:

  - Samplers.SparseGridCollocation

2.3.556   FRAMEWORK SAMPLERS SPARSEGRID NORMAL

This test can be found at "`./raven/tests/framework/Samplers/SparseGrid/test_scgpc_normal.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/normal
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/normal
```

- Test Description:

  - This tests using SparseGridCollocation with normally-distributed inputs.

- Original Author:

  - talbpaul

- Creation date:

  - 2015-09-11

- The classes tested in this test are:

  - Samplers.SparseGridCollocation

2.3.557 FRAMEWORK SAMPLERS SPARSEGRID GAMMA

This test can be found at "`./raven/tests/framework/Samplers/SparseGrid/test_scgpc_gamma.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/gamma
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/gamma
```

- Test Description:

    - This tests using SparseGridCollocation with gamma-distributed inputs.

- Original Author:

    - talbpaul

- Creation date:

    - 2015-09-11

- The classes tested in this test are:

    - Samplers.SparseGridCollocation

2.3.558 FRAMEWORK SAMPLERS SPARSEGRID BETA

This test can be found at "`./raven/tests/framework/Samplers/SparseGrid/test_scgpc_beta.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/beta
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/beta
```

- Test Description:

    - This tests using SparseGridCollocation with beta-distributed inputs.

- Original Author:

– talbpaul

• Creation date:

– 2015-09-11

• The classes tested in this test are:

– Samplers.SparseGridCollocation

2.3.559   FRAMEWORK SAMPLERS SPARSEGRID BETANORM

This test can be found at "`./raven/tests/framework/Samplers/SparseGrid/test_scgpc_betanorm.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/betanorm
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/betanorm
```

• Test Description:

– This tests using SparseGridCollocation with truncated-normal-beta distributed inputs.

• Original Author:

– talbpaul

• Creation date:

– 2015-09-11

• The classes tested in this test are:

– Samplers.SparseGridCollocation

2.3.560   FRAMEWORK SAMPLERS SPARSEGRID TRIANG

This test can be found at "`./raven/tests/framework/Samplers/SparseGrid/test_scgpc_triang.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/triang
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/triang
```

- Test Description:

    - This tests using SparseGridCollocation with triangular-distributed inputs.

- Original Author:

    - talbpaul

- Creation date:

    - 2015-09-11

- The classes tested in this test are:

    - Samplers.SparseGridCollocation

2.3.561 FRAMEWORK SAMPLERS SPARSEGRID EXPONENTIAL

This test can be found at "`./raven/tests/framework/Samplers/SparseGrid/test_scgpc_expon.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/exponential
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/exponential
```

- Test Description:

    - This tests using SparseGridCollocation with exponential-distributed inputs.

- Original Author:

    - talbpaul

- Creation date:

    - 2015-09-11

- The classes tested in this test are:

    - Samplers.SparseGridCollocation

2.3.562 FRAMEWORK SAMPLERS SPARSEGRID ADAPTIVEONVARIANCE

This test can be found at "`./raven/tests/framework/Samplers/SparseGrid/test_adaptive_stochpoly_var.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/SparseGrid/AdaptiveOnVariance
```

or

```
./run_framework_tests --re=framework/Samplers/SparseGrid/AdaptiveOnVariance
```

- Test Description:

    - This tests the adaptive sparse grid with adaptive samples chosen and converged according to variance.

- Original Author:

    - talbpaul

- Creation date:

    - 2015-07-07

- The classes tested in this test are:

    - Samplers.AdaptiveSparseGrid

2.3.563 FRAMEWORK SAMPLERS VECTORSAMPLES MC

This test can be found at "`./raven/tests/framework/Samplers/VectorSamples/mc.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/Samplers/VectorSamples/MC
```

or

```
./run_framework_tests --re=framework/Samplers/VectorSamples/MC
```

- Test Description:

    - Tests sampling a vector variable.

- Original Author:

  – talbpaul

- Creation date:

  – 2018-03-21

- The classes tested in this test are:

  – Samplers.MonteCarlo

2.3.564 FRAMEWORK SINGLERUNS CODEMODEL

This test can be found at "`./raven/tests/framework/SingleRuns/withCode.xml`".
This test can be called executing the following command:

```
./run_tests --re=framework/SingleRuns/codeModel
```

or

```
./run_framework_tests --re=framework/SingleRuns/codeModel
```

- Test Description:

  – This test assures the SingleRun works in conjunction with the Code model.

- Original Author:

  – talbpw

- Creation date:

  – 2017-02-02

- The classes tested in this test are:

  – Steps.SingleRun,Model.Code

2.3.565 FRAMEWORK SINGLERUNS EXTERNALMODELFAILS

This test can be found at "`./raven/tests/framework/SingleRuns/withExternalModel.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/SingleRuns/externalModelFails
```

or

```
./run_framework_tests --re=framework/SingleRuns/externalModelFails
```

- Test Description:
    - This test assures the SingleRun produces the correct error when paired with the External model.

- Original Author:
    - talbpw

- Creation date:
    - 2017-01-27

- The classes tested in this test are:
    - Steps.SingleRun,Model.ExternalModel

2.3.566 FRAMEWORK SINGLERUNS ROMFAILS

This test can be found at "`./raven/tests/framework/SingleRuns/withROM.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/SingleRuns/ROMFails
```

or

```
./run_framework_tests --re=framework/SingleRuns/ROMFails
```

- Test Description:
    - This test assures the SingleRun produces the correct error when paired with the ROM model.

- Original Author:

  - talbpw

- Creation date:

  - 2017-01-27

- The classes tested in this test are:

  - Steps.SingleRun,Model.ROM

2.3.567 FRAMEWORK SINGLERUNS POSTPROCESSORFAILS

This test can be found at "`./raven/tests/framework/SingleRuns/withPP.xml`".
This test can be called executing the following command:

```
./run_tests --re=framework/SingleRuns/postProcessorFails
```

or

```
./run_framework_tests --re=framework/SingleRuns/postProcessorFails
```

- Test Description:

  - This test assures the SingleRun produces the correct error when paired with the Post-Processor model.

- Original Author:

  - talbpw

- Creation date:

  - 2017-01-27

- The classes tested in this test are:

  - Steps.SingleRun,Model.PostProcessor

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2.3.568 FRAMEWORK SINGLERUNS DUMMYFAILS

This test can be found at "`./raven/tests/framework/SingleRuns/withDummy.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/SingleRuns/dummyFails
```

or

```
./run_framework_tests --re=framework/SingleRuns/dummyFails
```

- Test Description:

    - This test assures the SingleRun produces the correct error when paired with the Dummy model.

- Original Author:

    - talbpw

- Creation date:

    - 2017-01-27

- The classes tested in this test are:

    - Steps.SingleRun,Model.Dummy

2.3.569 FRAMEWORK.TEST TRYCATCH

This test can be found at "`./raven/tests/framework/TestedScripts/test_trycatch.py`". This test can be called executing the following command:

```
./run_tests --re=framework.test_trycatch
```

or

```
./run_framework_tests --re=framework.test_trycatch
```

- Test Description:

    - This test is aimed to perform Unit test on the MessageHandler It can not be considered as active part of the code but of the regression test system

- Original Author:

    - talbpaul

- Creation date:

    - 2016-02-26

- The classes tested in this test are:

    - MessageHandler

2.3.570 FRAMEWORK.TEST XSD INPUT DATA

This test can be found at "`./raven/tests/framework/TestXSD/TestDataRead.py`".
This test can be called executing the following command:

```
./run_tests --re=framework.test_xsd_input_data
```

or

```
./run_framework_tests --re=framework.test_xsd_input_data
```

- Test Description:

    - This test is aimed to check the functionality of the XSD python validator

- Original Author:

    - cogljj

- Creation date:

    - 2016-04-11

- The classes tested in this test are:

    - None

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : cogljj
        - date : 2016-04-12
        - description: Adding a findFirst function to the xml reader.

2. revision info:

   – author : cogljj
   – date : 2016-04-12
   – description: Renaming text to value in ParameterInput

3. revision info:

   – author : cogljj
   – date : 2016-07-05
   – description: Add ability to run without lxml. The first checkes for lxml and skips the test if missing. The second checkes for lxml before running part of the test.

4. revision info:

   – author : alfoa
   – date : 2017-01-21
   – description: Adding this test description.

5. revision info:

   – author : alfoa
   – date : 2018-01-31
   – description: Modified for new dataobject and correct check of boolean types

2.3.571   CROW.TEST NORMAL

This test can be found at "`./raven/tests/framework/TestXSD/TestStrictCheck.py`". This test can be called executing the following command:

```
./run_tests --re=crow.test_normal
```

or

```
./run_framework_tests --re=crow.test_normal
```

- Test Description:

  – This test is a Unit Test for the RAVEN input checker. This test is aimed to check that the input checker (Strict mode) is able to detect input errors.

- Original Author:

  – cogljj

- Creation date:

629

- – 2017-08-30

- • The classes tested in this test are:

  - –

- • Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - – author : alfoa
     - – date : 2018-05-15
     - – description: Adding this test description.

2.3.572 FRAMEWORK.TEST XSD INPUT FAILS

This test can be found at "`./raven/tests/framework/TestXSD/TestFails.py`". This test can be called executing the following command:

```
./run_tests --re=framework.test_xsd_input_fails
```

or

```
./run_framework_tests --re=framework.test_xsd_input_fails
```

- • Test Description:

  - – This test is aimed to check the functionality of the XSD python validator (failure)

- • Original Author:

  - – cogljj

- • Creation date:

  - – 2016-04-11

- • The classes tested in this test are:

  - –

- • Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - – author : alfoa
     - – date : 2017-01-21
     - – description: Adding this test description.

2.3.573 FRAMEWORK.TEST DATASETS

This test can be found at "`./raven/tests/framework/unit_tests/DataObjects/`
`TestDataSet.py`". This test can be called executing the following command:

```
./run_tests --re=framework.test_datasets
```

or

```
./run_framework_tests --re=framework.test_datasets
```

- Test Description:

    - This test is a Unit Test for the DataSet classes.

- Original Author:

    - talbpaul

- Creation date:

    - 2017-10-20

- The classes tested in this test are:

    - DataSet

2.3.574 FRAMEWORK.TEST DATASETS

This test can be found at "`./raven/tests/framework/unit_tests/DataObjects/`
`TestHistorySet.py`". This test can be called executing the following command:

```
./run_tests --re=framework.test_datasets
```

or

```
./run_framework_tests --re=framework.test_datasets
```

- Test Description:

    - This test is a Unit Test for the HistorySet classes.

- Original Author:

– talbpaul

- Creation date:

    – 2017-10-20

- The classes tested in this test are:

    – HistorySet

2.3.575 FRAMEWORK.TEST DATASETS

This test can be found at "`./raven/tests/framework/unit_tests/DataObjects/TestPointSet.py`". This test can be called executing the following command:

```
./run_tests --re=framework.test_datasets
```

or

```
./run_framework_tests --re=framework.test_datasets
```

- Test Description:

    – This test is a Unit Test for the DataSet classes.

- Original Author:

    – talbpaul

- Creation date:

    – 2017-10-20

- The classes tested in this test are:

    – DataSet

2.3.576 FRAMEWORK.TEST DATASETS

This test can be found at "`./raven/tests/framework/unit_tests/DataObjects/TestHierarchal.py`". This test can be called executing the following command:

```
./run_tests --re=framework.test_datasets
```

or

```
./run_framework_tests --re=framework.test_datasets
```

- Test Description:

    - This test is a Unit Test for the DataSet classes.

- Original Author:

    - talbpaul

- Creation date:

    - 2017-10-20

- The classes tested in this test are:

    - DataSet

2.3.577 FRAMEWORK.TEST DATASETS

This test can be found at "`./raven/tests/framework/unit_tests/SupervisedLearning/ARMA.py`". This test can be called executing the following command:

```
./run_tests --re=framework.test_datasets
```

or

```
./run_framework_tests --re=framework.test_datasets
```

- Test Description:

    - This test is a Unit Test for the DataSet classes.

- Original Author:

    - talbpaul

- Creation date:

    - 2017-10-20

- The classes tested in this test are:

    - DataSet

2.3.578 FRAMEWORK.UTILS

This test can be found at "`./raven/tests/framework/unit_tests/utils/testUtils.py`". This test can be called executing the following command:

```
./run_tests --re=framework.utils
```

or

```
./run_framework_tests --re=framework.utils
```

- Test Description:

    - This test performs Unit Tests for the utils class. It cannot be considered part of the active code but of the regression test system

- Original Author:

    - talbpaul

- Creation date:

    - 2017-11-01

- The classes tested in this test are:

    - utils.utils

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2018-05-15
        - description: Adding this test description.
    2. revision info:
        - author : alfoa
        - date : 2019-03-04
        - description: Moved methods isAString, isAFloat, isAInteger, isABoolean from mathUtils to utils

2.3.579 FRAMEWORK.MATHUTILS

This test can be found at "`./raven/tests/framework/unit_tests/utils/testMathUtils.`
`py`". This test can be called executing the following command:

```
./run_tests --re=framework.mathUtils
```

or

```
./run_framework_tests --re=framework.mathUtils
```

- Test Description:
  - This test performs Unit Tests for the mathUtils methods It cannot be considered part of the active code but of the regression test system

- Original Author:
  - talbpaul

- Creation date:
  - 2016-11-01

- The classes tested in this test are:
  - utils.mathUtils

- Since the creation of this test, the following main revisions have been performed:
  1. revision info:
     - author : talbpaul
     - date : 2016-11-08
     - description: Relocated utils tests
  2. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.
  3. revision info:
     - author : alfoa
     - date : 2019-03-04
     - description: Moved methods isAString, isAFloat, isAInteger, isABoolean from mathUtils to utils

2.3.580 FRAMEWORK.RANDOMUTILS

This test can be found at "`./raven/tests/framework/unit_tests/utils/testRandomUtils.`
`py`". This test can be called executing the following command:

```
./run_tests --re=framework.randomUtils
```

or

```
./run_framework_tests --re=framework.randomUtils
```

- Test Description:
    - This test performs Unit Tests for the randomUtils methods
- Original Author:
    - talbpaul
- Creation date:
    - 2017-06-16
- The classes tested in this test are:
    - utils.randomUtils

2.3.581 FRAMEWORK.XMLUTILS

This test can be found at "`./raven/tests/framework/unit_tests/utils/testXmlUtils.`
`py`". This test can be called executing the following command:

```
./run_tests --re=framework.xmlUtils
```

or

```
./run_framework_tests --re=framework.xmlUtils
```

- Test Description:
    - This test performs Unit Tests for the xmlUtils class It cannot be considered part of the active code but of the regression test system

- Original Author:

  - talbpaul

- Creation date:

  - 2016-11-01

- The classes tested in this test are:

  - utils.xmlUtils

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-11-08
     - description: Relocated utils tests
  2. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.582 FRAMEWORK.CACHEDNDARRAY

This test can be found at "./raven/tests/framework/unit_tests/utils/testCachedNDArray.
py". This test can be called executing the following command:

```
./run_tests --re=framework.cachedNDArray
```

or

```
./run_framework_tests --re=framework.cachedNDArray
```

- Test Description:

  - This test performs Unit Tests for the cached_ndarray module It cannot be considered part of the active code but of the regression test system

- Original Author:

  - talbpaul

- Creation date:

  - 2016-11-01

- The classes tested in this test are:

  - utils.cachedNDArray

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : talbpaul
     - date : 2016-11-08
     - description: Relocated utils tests
  2. revision info:
     - author : alfoa
     - date : 2017-01-21
     - description: Adding this test description.

2.3.583 FRAMEWORK.TREESTRUCTURE

This test can be found at "`./raven/tests/framework/unit_tests/utils/testTreeStructure.py`". This test can be called executing the following command:

```
./run_tests --re=framework.treeStructure
```

or

```
./run_framework_tests --re=framework.treeStructure
```

- Test Description:

  - This test performs Unit Tests for the TreeStructure classes It cannot be considered part of the active code but of the regression test system

- Original Author:

  - talbpaul

- Creation date:

  - 2016-11-01

- The classes tested in this test are:

  – utils.TreeStructure

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : talbpaul
     – date : 2016-11-08
     – description: Relocated utils tests

  2. revision info:
     – author : alfoa
     – date : 2017-01-21
     – description: Adding this test description.

2.3.584 FRAMEWORK.INPUTPARSING

This test can be found at "`./raven/tests/framework/unit_tests/utils/testParse.`
`py`". This test can be called executing the following command:

```
./run_tests --re=framework.inputParsing
```

or

```
./run_framework_tests --re=framework.inputParsing
```

- Test Description:

  – This test performs Unit Tests for the utils class (TreeStructure) It cannot be considered part of the active code but of the regression test system

- Original Author:

  – talbpaul

- Creation date:

  – 2017-11-01

- The classes tested in this test are:

  – utils.utils.TreeStructure

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2018-05-15
     - description: Adding this test description.

2.3.585 FRAMEWORK USER GUIDE ADAPTIVESAMPLINGSTRATEGIES LIMITSUR-FACESEARCH

This test can be found at "`./raven/tests/framework/user_guide/AdaptiveSamplingStrategi adaptiveSamplingLSsearch.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/AdaptiveSamplingStrategies/limitSurf
```

or

```
./run_framework_tests --re=framework/user_guide/AdaptiveSamplingStrategies,
```

- Test Description:
  - This test is an example for the user guide to draw from. It demonstrates a typical work-flow for using the LimitSurface capabilities of RAVEN (both the LimitSurfaceSearch sampler and the LimitSurfaceIntegral postprocessor.

- Original Author:
  - talbpw

- Creation date:
  - 2017-01-26

- The classes tested in this test are:
  - Samplers.LimitSurfaceSearch,PostProcessors.LimitSurfaceIntegral

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2019-03-07
     - description: Modified syntax in Functions as for issue #934

2.3.586 FRAMEWORK USER GUIDE DATAMINING DATAMININGANALYSIS

This test can be found at "`./raven/tests/framework/user_guide/DataMining/dataMiningAnalysis.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/DataMining/dataMiningAnalysis
```

or

```
./run_framework_tests --re=framework/user_guide/DataMining/dataMiningAnalys
```

- Test Description:
    - This test is an example for the user guide to draw from. It demonstrates a typical workflow for sampling then making use of the DataMining postprocessor.

- Original Author:
    - talbpw

- Creation date:
    - 2017-01-30

- The classes tested in this test are:
    - PostProcessor.DataMining

- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : burlip
        - date : 2019-04-17
        - description: modified file to replace the Analyticalbateman example with the projectile example

2.3.587 FRAMEWORK USER GUIDE SIMPLE

This test can be found at "`./raven/tests/framework/user_guide/EnsembleModel/basic.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/Simple
```

or

```
./run_framework_tests --re=framework/user_guide/Simple
```

- Test Description:

    - Provides a user case of a simple ensemble model.

- Original Author:

    - talbpaul

- Creation date:

    - 2018-02-07

- The classes tested in this test are:

    - Models.EnsembleModel

2.3.588 FRAMEWORK USER GUIDE FORWARDSAMPLINGSTRATEGIES MONTE-CARLO

This test can be found at "./raven/tests/framework/user_guide/ForwardSamplingStrategie
forwardSamplingMontecarlo.xml". This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/ForwardSamplingStrategies/MonteCarlo
```

or

```
./run_framework_tests --re=framework/user_guide/ForwardSamplingStrategies/N
```

- Test Description:

    - This test is an example for the user guide to draw from. It demonstrates typical usage
      of the MonteCarlo sampler to sample a Code model.

- Original Author:

    - talbpw

- Creation date:

– 2017-01-26

- The classes tested in this test are:

  – Samplers.MonteCarlo

2.3.589 FRAMEWORK USER GUIDE FORWARDSAMPLINGSTRATEGIES GRID

This test can be found at "`./raven/tests/framework/user_guide/ForwardSamplingStrategie`
`forwardSamplingGrid.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/ForwardSamplingStrategies/Grid
```

or

```
./run_framework_tests --re=framework/user_guide/ForwardSamplingStrategies/G
```

- Test Description:

  – This test is an example for the user guide to draw from. It demonstrates typical usage
    of the Grid sampler to sample a Code model.

- Original Author:

  – talbpw

- Creation date:

  – 2017-01-26

- The classes tested in this test are:

  – Samplers.Grid

2.3.590 FRAMEWORK USER GUIDE FORWARDSAMPLINGSTRATEGIES STRATI-FIED

This test can be found at "`./raven/tests/framework/user_guide/ForwardSamplingStrategie`
`forwardSamplingStratified.xml`". This test can be called executing the following com-
mand:

```
./run_tests --re=framework/user_guide/ForwardSamplingStrategies/Stratified
```

or

```
./run_framework_tests --re=framework/user_guide/ForwardSamplingStrategies/S
```

- Test Description:

  - This test is an example for the user guide to draw from. It exemplifies using the Strati-
    fied sampler on a Code model (the Analytic Bateman in this case).

- Original Author:

  - talbpw

- Creation date:

  - 2017-01-26

- The classes tested in this test are:

  - Samplers.Stratified

2.3.591   FRAMEWORK USER GUIDE FORWARDSAMPLINGSTRATEGIES SPARSEG-RID

This test can be found at "`./raven/tests/framework/user_guide/ForwardSamplingStrategie`
`forwardSamplingSparseGrid.xml`". This test can be called executing the following com-
mand:

```
./run_tests --re=framework/user_guide/ForwardSamplingStrategies/SparseGrid
```

or

```
./run_framework_tests --re=framework/user_guide/ForwardSamplingStrategies/S
```

- Test Description:

  - This test is an example for the user guide to draw from. It typifies a workflow for using
    the SparseGrid sampler, and constructing a corresponding ROM.

- Original Author:

  - talbpw

- Creation date:

– 2017-01-26

- The classes tested in this test are:

    – Samplers.SparseGrid

2.3.592 FRAMEWORK USER GUIDE RAVENTUTORIAL SINGLERUN

This test can be found at "`./raven/tests/framework/user_guide/ravenTutorial/singleRun.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/ravenTutorial/singleRun
```

or

```
./run_framework_tests --re=framework/user_guide/ravenTutorial/singleRun
```

- Test Description:

    – This test is an example for the user guide to draw from. It demonstrates typical usage of SingleRun.

- Original Author:

    – wangc

- Creation date:

    – 2017-07-24

- The classes tested in this test are:

    – Models.Code

2.3.593 FRAMEWORK USER GUIDE SINGLERUNPLOT

This test can be found at "`./raven/tests/framework/user_guide/ravenTutorial/singleRunPlotAndPrint.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/singleRunPlot
```

or

```
./run_framework_tests --re=framework/user_guide/singleRunPlot
```

- Test Description:

    - This test is an example for the user guide to draw from. It demonstrates a streamlined workflow of using the SingleRun step to take a single sample, then plot and print the results.

- Original Author:

    - wangc

- Creation date:

    - 2017-07-28

- The classes tested in this test are:

    - Steps.SingleRun

2.3.594 FRAMEWORK USER GUIDE SINGLERUNSUBPLOT

This test can be found at "`./raven/tests/framework/user_guide/ravenTutorial/singleRunSubPlotsAndSelectivePrint.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/singleRunSubPlot
```

or

```
./run_framework_tests --re=framework/user_guide/singleRunSubPlot
```

- Test Description:

    - This test is an example for the user guide to draw from. This advances the simplest SingleRun example by selectively printing and plotting only parts of the data.

- Original Author:

    - wangc

- Creation date:

– 2017-07-28

- The classes tested in this test are:

    – Steps.SingleRun,OutStreams.Print

2.3.595   FRAMEWORK USER GUIDE RAVENTUTORIAL MONTECARLO

This test can be found at "`./raven/tests/framework/user_guide/ravenTutorial/`
`MonteCarlo.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/ravenTutorial/MonteCarlo
```

or

```
./run_framework_tests --re=framework/user_guide/ravenTutorial/MonteCarlo
```

- Test Description:

    – This test is an example for the user guide to draw from. It demonstrates typical usage
      of the MultiRun with Monte Carlo sampler.

- Original Author:

    – wangc

- Creation date:

    – 2017-07-24

- The classes tested in this test are:

    – Samplers.MonteCarlo

2.3.596   FRAMEWORK USER GUIDE RAVENTUTORIAL ROMTRAIN

This test can be found at "`./raven/tests/framework/user_guide/ravenTutorial/`
`RomTrain.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/ravenTutorial/RomTrain
```

or

```
./run_framework_tests --re=framework/user_guide/ravenTutorial/RomTrain
```

- Test Description:

  – This test is an example for the user guide to draw from. It demonstrates the workflow for obtaining samples, then constructing the ROM and dumping the ROM .

- Original Author:

  – wangc

- Creation date:

  – 2017-07-26

- The classes tested in this test are:

  – Models.ROM

2.3.597 FRAMEWORK USER GUIDE RAVENTUTORIAL ROMLOAD

This test can be found at "`./raven/tests/framework/user_guide/ravenTutorial/ RomLoad.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/ravenTutorial/RomLoad
```

or

```
./run_framework_tests --re=framework/user_guide/ravenTutorial/RomLoad
```

- Test Description:

  – This test is an example for the user guide to draw from. It demonstrates the workflow for loading and sampling ROM.

- Original Author:

  – wangc

- Creation date:

  – 2017-07-26

- The classes tested in this test are:

  – Models.ROM

2.3.598 FRAMEWORK USER GUIDE RAVENTUTORIAL POSTPROCESS

This test can be found at "`./raven/tests/framework/user_guide/ravenTutorial/`
`PostProcess.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/ravenTutorial/PostProcess
```

or

```
./run_framework_tests --re=framework/user_guide/ravenTutorial/PostProcess
```

- Test Description:

    - This test is an example for the user guide to draw from. It performs basic statistics on data taken from the analytic bateman model, and demonstrates a typical workflow for using the PostProcess step.

- Original Author:

    - wangc

- Creation date:

    - 2017-07-27

- The classes tested in this test are:

    - PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2018-12-18
        - description: In PR #882, the standard errors on statistics moments are implemented, these quantities are stored in the pointwise metadata, and will be printed out in the output csv files by default. In order to avoid regolding this test, the optional node 'what' with text values 'input, output' is added. In this case, only the user requested variables as specified in the DataObjects are printed out.

2.3.599 FRAMEWORK USER GUIDE REDUCEDORDERMODELLING ROMCONSTRUC-TION

This test can be found at "`./raven/tests/framework/user_guide/ReducedOrderModeling/reducedOrderModeling.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/ReducedOrderModelling/ROMConstruction
```

or

```
./run_framework_tests --re=framework/user_guide/ReducedOrderModelling/ROMC
```

- Test Description:

  - This test is an example for the user guide to draw from. It demonstrates the work-flow for obtaining samples, then constructing both ScitKitLearn and NDinvDistWeight reduced-order models.

- Original Author:

  - talbpw

- Creation date:

  - 2017-01-27

- The classes tested in this test are:

  - Models.ROM

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : burlip
     - date : 2019-04-18
     - description: modified file to replaced the Analyticalbateman example with the pro-jectile example

2.3.600 FRAMEWORK USER GUIDE STATISTICALANALYSIS STATISTICALANAL-YSIS

This test can be found at "`./raven/tests/framework/user_guide/StatisticalAnalysis/statisticalAnalysis.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/user_guide/StatisticalAnalysis/StatisticalAnalys
```

or

```
./run_framework_tests --re=framework/user_guide/StatisticalAnalysis/Statist
```

- Test Description:

    - This test is an example for the user guide to draw from. It performs basic statistics on data taken from the analytic bateman model, and demonstrates a typical workflow for using the basic statistics postprocessor.

- Original Author:

    - talbpw

- Creation date:

    - 2017-01-27

- The classes tested in this test are:

    - PostProcessors.BasicStatistics

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : wangc
        - date : 2017-12-20
        - description: convert test to use the new DataObjects with the new structure of basic statistic

    2. revision info:
        - author : burlip
        - date : 2019-04-18
        - description: modified file to replaced the Analyticalbateman example with the projectile example

2.3.601 FRAMEWORK VARIABLEGROUPS SETOPERATIONS

This test can be found at "`./raven/tests/framework/VariableGroups/sets.xml`".
This test can be called executing the following command:

```
./run_tests --re=framework/VariableGroups/SetOperations
```

or

```
./run_framework_tests --re=framework/VariableGroups/SetOperations
```

- Test Description:
    - Tests complex VariableGroup construction using plus, minus, intersect, and symmetric difference operations. Uses these constructs in the DataObjects.

      To test correct operation, check the headers of the output data objects for the right variable lists, both the names themeselves and the order of the columns.

      Additional unit tests for VariableGroups are in the raven/tests/framework/unit_tests/utils/testXmlUtils.p file.

- Original Author:
    - talbpaul

- Creation date:
    - 2016-02-08

- The classes tested in this test are:
    - VariableGroups

- Since the creation of this test, the following main revisions have been performed:
    1. revision info:
        - author : talbpaul
        - date : 2018-09-25
        - description: implicit nested group usage instead of explicit

2.3.602 FRAMEWORK VARIABLEGROUPS ROM

This test can be found at "`./raven/tests/framework/VariableGroups/rom.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/VariableGroups/ROM
```

or

```
./run_framework_tests --re=framework/VariableGroups/ROM
```

- Test Description:

    - tests variable groups when used as part of a ROM or external model

- Original Author:

    - talbpaul

- Creation date:

    - 2016-02-08

- The classes tested in this test are:

    - VariableGroups

2.3.603 FRAMEWORK VARIABLEGROUPS EXTERNALNODES

This test can be found at "`./raven/tests/framework/VariableGroups/extnodes.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/VariableGroups/ExternalNodes
```

or

```
./run_framework_tests --re=framework/VariableGroups/ExternalNodes
```

- Test Description:

    - tests variable groups used in external XML

- Original Author:

– talbpaul

- Creation date:

    – 2016-02-08

- The classes tested in this test are:

    – VariableGroups

2.3.604   FRAMEWORK VARIABLEGROUPS ORDEREDVARIABLES

This test can be found at "`./raven/tests/framework/VariableGroups/ordered.xml`". This test can be called executing the following command:

```
./run_tests --re=framework/VariableGroups/OrderedVariables
```

or

```
./run_framework_tests --re=framework/VariableGroups/OrderedVariables
```

- Test Description:

    – tests order preservation of variables in variable groups

- Original Author:

    – talbpaul

- Creation date:

    – 2016-02-08

- The classes tested in this test are:

    – VariableGroups

2.3.605   CASHFLOW TEST PI

This test can be found at "`./raven/tests/plugins/CashFlow/CashFlow_test_PI.xml`". This test can be called executing the following command:

```
./run_tests --re=CashFlow_test_PI
```

or

```
./run_framework_tests --re=CashFlow_test_PI
```

- Test Description:

    - This input tests the RAVEN plugin CashFlow. The tested functionality is called PI.

- Original Author:

    - A. Epiney

- Creation date:

    - 2017-10-25

- The classes tested in this test are:

    - Models.ExternalModel.CashFlow

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        - author : alfoa
        - date : 2018-12-13
        - description: Added classTested node

2.3.606 CASHFLOW TEST NPV

This test can be found at "`./raven/tests/plugins/CashFlow/CashFlow_test_NPV.xml`". This test can be called executing the following command:

```
./run_tests --re=CashFlow_test_NPV
```

or

```
./run_framework_tests --re=CashFlow_test_NPV
```

- Test Description:

    - This input tests the RAVEN plugin CashFlow. The tested functionality is called NPV.

- Original Author:

- A. Epiney

- Creation date:

  - 2017-10-25

- The classes tested in this test are:

  - Models.ExternalModel.CashFlow

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2018-12-13
     - description: Added classTested node

2.3.607 CASHFLOW TEST NPVSEARCH

This test can be found at "`./raven/tests/plugins/CashFlow/CashFlow_test_NPVsearch.xml`". This test can be called executing the following command:

```
./run_tests --re=CashFlow_test_NPVsearch
```

or

```
./run_framework_tests --re=CashFlow_test_NPVsearch
```

- Test Description:

  - This input tests the RAVEN plugin CashFlow. The tested functionality is called NPV search.

- Original Author:

  - A. Epiney

- Creation date:

  - 2017-10-25

- The classes tested in this test are:

  - Models.ExternalModel.CashFlow

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- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : alfoa
        – date : 2018-12-13
        – description: Added classTested node

2.3.608 CASHFLOW TEST IRR

This test can be found at "`./raven/tests/plugins/CashFlow/CashFlow_test_IRR.xml`". This test can be called executing the following command:

```
./run_tests --re=CashFlow_test_IRR
```

or

```
./run_framework_tests --re=CashFlow_test_IRR
```

- Test Description:

    – This input tests the RAVEN plugin CashFlow. The tested functionality is called IRR.

- Original Author:

    – A. Epiney

- Creation date:

    – 2017-10-25

- The classes tested in this test are:

    – Models.ExternalModel.CashFlow

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : alfoa
        – date : 2018-12-13
        – description: Added classTested node

2.3.609 CASHFLOW TEST NPV MULTIPLY

This test can be found at "`./raven/tests/plugins/CashFlow/CashFlow_test_NPV_multiplier.xml`". This test can be called executing the following command:

```
./run_tests --re=CashFlow_test_NPV_multiply
```

or

```
./run_framework_tests --re=CashFlow_test_NPV_multiply
```

- Test Description:

  - This input tests the RAVEN plugin CashFlow. The tested functionality is called NPV. This test uses the "Multiplier" functionality of CashFlow.

- Original Author:

  - A. Epiney

- Creation date:

  - 2018-03-22

- The classes tested in this test are:

  - Models.ExternalModel.CashFlow

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2018-12-13
     - description: Added classTested node

2.3.610 CASHFLOW TEST NPV

This test can be found at "`./raven/tests/plugins/CashFlow/CashFlow_test_NPV_expandedDriver.xml`". This test can be called executing the following command:

```
./run_tests --re=CashFlow_test_NPV
```

or

```
./run_framework_tests --re=CashFlow_test_NPV
```

- Test Description:

  - This input tests the RAVEN plugin CashFlow. The tested functionality is called NPV. The BOP revenue is an expanded driver, i.e. values for every year are provided instead of just one value that is repeated for all years.

- Original Author:

  - A. Epiney

- Creation date:

  - 2018-03-23

- The classes tested in this test are:

  - Models.ExternalModel.CashFlow

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     - author : alfoa
     - date : 2018-12-13
     - description: Added classTested node

2.3.611 CASHFLOW TEST NPV

This test can be found at "`./raven/tests/plugins/CashFlow/CashFlow_test_NPV_
componentTax.xml`". This test can be called executing the following command:

```
./run_tests --re=CashFlow_test_NPV
```

or

```
./run_framework_tests --re=CashFlow_test_NPV
```

- Test Description:

  - This input tests the RAVEN plugin CashFlow. The tested functionality is called NPV. The functionality of different tax and inflation reates for different components is tested here.

- Original Author:

  – A. Epiney

- Creation date:

  – 2018-03-23

- The classes tested in this test are:

  – Models.ExternalModel.CashFlow

- Since the creation of this test, the following main revisions have been performed:

  1. revision info:
     – author : alfoa
     – date : 2018-12-13
     – description: Added classTested node

2.3.612 CASHFLOW TEST NPV

This test can be found at "`./raven/tests/plugins/CashFlow/CashFlow_test_NPV_customTime.xml`". This test can be called executing the following command:

```
./run_tests --re=CashFlow_test_NPV
```

or

```
./run_framework_tests --re=CashFlow_test_NPV
```

- Test Description:

  – This input tests the RAVEN plugin CashFlow. The tested functionality is called NPV. Tests the ProjectTime, StartTime and Repetition functionalities. All sub-projects, i.e. components lifetimes (including repetition) finish before the ProjectTime finishes.

- Original Author:

  – A. Epiney

- Creation date:

  – 2018-04-06

- The classes tested in this test are:

– Models.ExternalModel.CashFlow

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : alfoa
        – date : 2018-12-13
        – description: Added classTested node

2.3.613 CASHFLOW TEST NPV

This test can be found at "`./raven/tests/plugins/CashFlow/CashFlow_test_NPV_`
`customTime2.xml`". This test can be called executing the following command:

```
./run_tests --re=CashFlow_test_NPV
```

or

```
./run_framework_tests --re=CashFlow_test_NPV
```

- Test Description:

    – This input tests the RAVEN plugin CashFlow. The tested functionality is called NPV.
    Tests the ProjectTime, StartTime and Repetition functionalities. No sub-project, i.e.
    component lifetime (including repetition) finish before the ProjectTime finishes.

- Original Author:

    – A. Epiney

- Creation date:

    – 2018-04-06

- The classes tested in this test are:

    – Models.ExternalModel.CashFlow

- Since the creation of this test, the following main revisions have been performed:

    1. revision info:
        – author : alfoa
        – date : 2018-12-13
        – description: Added classTested node

3 Undocumented tests

Currently, There are 49 undocumented tests:

1. Folder: `/Users/alfoa/projects/raven_github/raven/plugins/CashFlow/tests`. Tests:

   - `./raven/plugins/CashFlow/tests/CashFlow_test_NPV_RunAsCode.py`

2. Folder: `/Users/alfoa/projects/raven_github/raven/plugins/PRAplugin/tests`. Tests:

   - `./raven/plugins/PRAplugin/tests/test_graphModel.xml`
   - `./raven/plugins/PRAplugin/tests/test_markovModel_2states.xml`
   - `./raven/plugins/PRAplugin/tests/test_markovModel_3states.xml`
   - `./raven/plugins/PRAplugin/tests/test_markovModel_3states_complexTran.xml`
   - `./raven/plugins/PRAplugin/tests/test_markovModel_3states_instantTran.xml`
   - `./raven/plugins/PRAplugin/tests/test_markovModel_2states_tau.xml`
   - `./raven/plugins/PRAplugin/tests/test_ETmodel.xml`
   - `./raven/plugins/PRAplugin/tests/test_FTmodel.xml`
   - `./raven/plugins/PRAplugin/tests/test_graphModel_TD.xml`
   - `./raven/plugins/PRAplugin/tests/test_FTmodel_TD.xml`
   - `./raven/plugins/PRAplugin/tests/test_ETmodel_TD.xml`
   - `./raven/plugins/PRAplugin/tests/test_ensemblePRAModel_discrete.xml`
   - `./raven/plugins/PRAplugin/tests/test_ensemblePRAModel_mixed.xml`

3. Folder: `/Users/alfoa/projects/raven_github/raven/tests/cluster_tests`. Tests:

   - `./raven/tests/cluster_tests/test_pbs.xmlcluster_runinfo_legacy.xml`
   - `./raven/tests/cluster_tests/test_mpiqsub_local.xmlpbspro_mpi.xmlcluster_runinfo_legacy.xml`

- `./raven/tests/cluster_tests/test_mpiqsub_flex.xmlcluster_runinfo_legacy.xml`
- `./raven/tests/cluster_tests/test_mpiqsub_limitnode.xmlcluster_runinfo_legacy.xml`
- `./raven/tests/cluster_tests/test_mpiqsub_nosplit.xmlcluster_runinfo_legacy.xml`
- `./raven/tests/cluster_tests/test_mpiqsub_forced.xmlcluster_runinfo_legacy.xml`

4. Folder: `/Users/alfoa/projects/raven_github/raven/tests/cluster_tests/AdaptiveSobol/test_adapt_sobol_parallel.xml../pbspro_mpi.xml...` Tests:

   - `./raven/tests/cluster_tests/AdaptiveSobol/test_adapt_sobol_parallel.xml../pbspro_mpi.xml../cluster_runinfo_legacy.xml`

5. Folder: `/Users/alfoa/projects/raven_github/raven/tests/cluster_tests/InternalParallel/test_internal_parallel_extModel.xml../pbspro_mpi.xml...` Tests:

   - `./raven/tests/cluster_tests/InternalParallel/test_internal_parallel_extModel.xml../pbspro_mpi.xml../cluster_runinfo_legacy.xml`

6. Folder: `/Users/alfoa/projects/raven_github/raven/tests/cluster_tests/InternalParallel/test_internal_parallel_ROM_scikit.xml../pbspro_mpi.xml...` Tests:

   - `./raven/tests/cluster_tests/InternalParallel/test_internal_parallel_ROM_scikit.xml../pbspro_mpi.xml../cluster_runinfo_legacy.xml`

7. Folder: `/Users/alfoa/projects/raven_github/raven/tests/cluster_tests/InternalParallel/test_internal_parallel_PP_LS.xml../pbspro_mpi.xml...` Tests:

   - `./raven/tests/cluster_tests/InternalParallel/test_internal_parallel_PP_LS.xml../pbspro_mpi.xml../cluster_runinfo_legacy.xml`

8. Folder: `/Users/alfoa/projects/raven_github/raven/tests/cluster_tests/InternalParallel/test_internal_MSR.xml../pbspro_mpi.xml...` Tests:

   - `./raven/tests/cluster_tests/InternalParallel/test_internal_MSR.xml../pbspro_mpi.xml../cluster_runinfo_legacy.xml`

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9. Folder: `/Users/alfoa/projects/raven_github/raven/tests/cluster_tests/` `InternalParallel/test_ensemble_model_picard_parallel.xml../pbspro_` `mpi.xml...` Tests:

   - `./raven/tests/cluster_tests/InternalParallel/test_ensemble_` `model_picard_parallel.xml../pbspro_mpi.xml../cluster_runinfo_` `legacy.xml`

10. Folder: `/Users/alfoa/projects/raven_github/raven/tests/cluster_tests/` `InternalParallel/test_ensemble_model_linear_internal_parallel.` `xml../pbspro_mpi.xml...` Tests:

    - `./raven/tests/cluster_tests/InternalParallel/test_ensemble_` `model_linear_internal_parallel.xml../pbspro_mpi.xml../cluster_` `runinfo_legacy.xml`

11. Folder: `/Users/alfoa/projects/raven_github/raven/tests/cluster_tests/` `InternalParallel/test_hybrid_model_code.xml../pbspro_mpi.xml...` Tests:

    - `./raven/tests/cluster_tests/InternalParallel/test_hybrid_model_` `code.xml../pbspro_mpi.xml../cluster_runinfo_legacy.xml`

12. Folder: `/Users/alfoa/projects/raven_github/raven/tests/cluster_tests/` `InternalParallel/test_hybrid_model_external.xml../pbspro_mpi.xml.` `..` Tests:

    - `./raven/tests/cluster_tests/InternalParallel/test_hybrid_model_` `external.xml../pbspro_mpi.xml../cluster_runinfo_legacy.xml`

13. Folder: `/Users/alfoa/projects/raven_github/raven/tests/cluster_tests/` `RavenRunsRaven/test_raven_running_raven_int_models.xml../pbspro_` `mpi.xml...` Tests:

    - `./raven/tests/cluster_tests/RavenRunsRaven/test_raven_running_` `raven_int_models.xml../pbspro_mpi.xml../cluster_runinfo_legacy.` `xml`

14. Folder: `/Users/alfoa/projects/raven_github/raven/tests/framework/` `InputTemplates.` Tests:

    - `./raven/tests/framework/InputTemplates/uq_maker.py`

15. Folder: `/Users/alfoa/projects/raven_github/raven/tests/framework/` `InputTemplates/UQTemplate.` Tests:

    - `./raven/tests/framework/InputTemplates/UQTemplate/new_uq.xml`

16. **Folder:** `/Users/alfoa/projects/raven_github/raven/tests/plugins/CashFlow.` Tests:

    - `./raven/tests/plugins/CashFlow/CashFlow_test_NPV_RunAsCode.py`

17. **Folder:** `/Users/alfoa/projects/raven_github/raven/tests/plugins/PRAplugin.` Tests:

    - `./raven/tests/plugins/PRAplugin/test_graphModel.xml`
    - `./raven/tests/plugins/PRAplugin/test_markovModel_2states.xml`
    - `./raven/tests/plugins/PRAplugin/test_markovModel_3states.xml`
    - `./raven/tests/plugins/PRAplugin/test_markovModel_3states_complexTran.xml`
    - `./raven/tests/plugins/PRAplugin/test_markovModel_3states_instantTran.xml`
    - `./raven/tests/plugins/PRAplugin/test_markovModel_2states_tau.xml`
    - `./raven/tests/plugins/PRAplugin/test_ETmodel.xml`
    - `./raven/tests/plugins/PRAplugin/test_FTmodel.xml`
    - `./raven/tests/plugins/PRAplugin/test_graphModel_TD.xml`
    - `./raven/tests/plugins/PRAplugin/test_FTmodel_TD.xml`
    - `./raven/tests/plugins/PRAplugin/test_ETmodel_TD.xml`
    - `./raven/tests/plugins/PRAplugin/test_ensemblePRAModel_discrete.xml`
    - `./raven/tests/plugins/PRAplugin/test_ensemblePRAModel_mixed.xml`
    - `./raven/tests/plugins/PRAplugin/test_dataClassifier_postprocessor.xml`
    - `./raven/tests/plugins/PRAplugin/test_dataClassifier_postprocessor_HS.xml`

18. **Folder:** `/Users/alfoa/projects/raven_github/raven/tests/reg_self_tests.` Tests:

    - `./raven/tests/reg_self_tests/test_ordered_csv.py`