MARTINA BAIARDI

PhD Student @ University of Bologna

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github.com/anitvam in linkedin.com/in/martina-baiardi
Cesena, Italy

EDUCATION

Ph.D. in Computer Science
University of Bologna
Supervisor: Danilo Pianini
Co-Supervisor: Mirko Viroli

📅 2023–now   📍 Cesena, Italy

M.Sc. in Engineering and Computer Science
University of Bologna
110L/110
Thesis: JACOP: Programming BDI Agents with Pluggable Concurrency Model
Supervisor: Giovanni Ciatto
Co-Supervisors: Andrea Omicini, Jomi F. Hübner

📅 2020–2023   📍 Cesena, Italy

Curricular Internship
University of Bologna
Study of a Kubernetes cluster: main aspects, tools and realization of a cluster on virtual machines

📅 03–05/2020   📍 Cesena, Italy

B.Sc. in Engineering and Computer Science
University of Bologna
110L/110
Thesis: Kubernetes cluster autoscaling and management: a case study
Supervisor: Vittorio Ghini

📅 2017–2020   📍 Cesena, Italy

Accounting degree in Business Information Systems
ITE "R. Serra"
100/100

📅 2017   📍 Cesena, Italy

PUBLICATIONS

[1] Martina Baiardi, Giovanni Ciatto, and Danilo Pianini. Infrastructures for the edge-cloud continuum on a small scale: A practical case study. In *IEEE International Conference on Autonomic Computing and Self-Organizing Systems, ACSOS 2023 - Companion, Toronto, ON, Canada, September 25-29, 2023*, pages 128–133. IEEE, 2023. doi: 10.1109/ACSOS-C58168.2023.00052. URL https://doi.org/10.1109/ACSOS-C58168.2023.00052.

[2] Martina Baiardi, Samuele Burattini, Giovanni Ciatto, and Danilo Pianini. Jakta: BDI agent-oriented programming in pure kotlin. In Vadim Malvone and Aniello Murano, editors, *Multi-Agent Systems - 20th European Conference, EUMAS 2023, Naples, Italy, September 14-15, 2023, Proceedings*, volume 14282 of *Lecture Notes in Computer Science*, pages 49–65. Springer, 2023. doi: 10.1007/978-3-031-43264-4_4. URL https://doi.org/10.1007/978-3-031-43264-4_4.

[3] Martina Baiardi. A step forward to widespread BDI AOP: jakta. In Vadim Malvone and Aniello Murano, editors, *Multi-Agent Systems - 20th European Conference, EUMAS 2023, Naples, Italy, September 14-15, 2023, Proceedings*, volume 14282 of *Lecture Notes in Computer Science*, pages 452–457. Springer, 2023. doi: 10.1007/978-3-031-43264-4_31. URL https://doi.org/10.1007/978-3-031-43264-4_31.

[4] Martina Baiardi, Samuele Burattini, Giovanni Ciatto, Danilo Pianini, Andrea Omicini, and Alessandro Ricci. Concurrency model of BDI programming frameworks: Why should we control it? In Mehdi Dastani, Jaime Simão Sichman, Natasha Alechina, and Virginia Dignum, editors, *Proceedings of the 23rd International Conference on Autonomous Agents and Multiagent Systems, AAMAS 2024, Auckland, New Zealand, May 6-10, 2024*, pages 2147–2149. ACM, 2024. doi: 10.5555/3635637.3663089. URL https://dl.acm.org/doi/10.5555/3635637.3663089.

AWARDS

Phd Track Special Mention
EUMAS 2023
20th European Conference of Multi-Agent Systems
📅 15 Sep 2023   📍 Naples, Italy

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Best Paper Award
EMAS 2024
12th International Workshop on Engineering Multi-Agent Systems
📅 07 May 2024   📍 Auckland, New Zealand

RESEARCH CONTRACTS

Research Fellowship
"Systems, tools, and methodologies for deploying and updating industrial software in the cloud-edge continuum"
DISI - University of Bologna
Supervisor: Danilo Pianini
📅 07-10/2023   📍 Cesena, Italy

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Research Scholarship for software integration and service administration for StairwAI project
DISI - University of Bologna
Supervisors: Andrea Borghesi, Giovanni Ciatto
📅 01–07/2023   📍 Cesena, Italy

TUTORING

Tutor for the course
"Object-Oriented Programming"
DISI - Laurea in Ingegneria e Scienze Informatiche University of Bologna
Supervisor: Mirko Viroli
📅 A.Y. 2022/2023, A.Y. 2023/2024   📍 Cesena, Italy

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Tutor for the course "Virtualised Systems"
DISI - Laurea in Tecnologie dei Sistemi Informatici University of Bologna
Supervisor: Vittorio Ghini
📅 A.Y. 2021/2022, A.Y. 2022/2023   📍 Cesena, Italy

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Tutor for the course "Numerical Methods"
DISI - Laurea in Ingegneria e Scienze Informatiche University of Bologna
Supervisor: Lucia Romani
📅 A.Y. 2021/2022   📍 Cesena, Italy

PROFESSIONAL SKILLS

Programming Languages	Kotlin, Java, Scala, Javascript, C, Bash, Python, PHP, Sql, Prolog, C#, C++
Other Languages	Markdown, YAML, LaTeX, HTML, CSS, XML, JSON
Technologies	Git, Docker, Kubernetes, Ansible, Android, Vue, Spring, Jacamo, Jason
Programming Paradigms	Object Oriented Programming, Functional Programming, Agent Oriented Programming, Logic Programming, Event Driven Programming, Imperative/Procedural Programming
Project Management	Scrum, Agile

PREVIOUS WORK EXPERIENCE

Web Developer
Blockvision
🗓 2020–2022   📍 Cesena, Italy
Website implementation with prototype 3D graphic rendered in-browser
Keywords: Vue.js, HTML, CSS, Javascript, PrimeVue, Three.js

PORTFOLIO

JaKtA
 github.com/jakta-bdi
10/2022–03/2023

Jason-like Kotlin Agents (JaKtA): a Kotlin internal DSL meant to seamlessly integrate BDI agents into a mainstream programming language, thus adding AOP to Kotlin as an additional paradigm, retaining its toolchain, libraries, and OOP/FP abstractions. The project was made for academic purposes for the "Intelligent System Engineering" course and then extended for the Master Degree Thesis.

ℹ Paper published to EUMAS 2023

Language: Kotlin
Keywords: Domain Specific Language, Gradle Multi-Project, Domain Driven Design

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Smart Waste Collection
 github.com/SmartWasteCollection
 smartwastecollection.github.io/documentation
04–10/2022

The aim of the project was to optimize the management of waste collection using **Digital Twins** over a simulated environment. The project was made for academic purposes for "Laboratorio dei Sistemi Software" and "Pervasive Computing" courses.

Language: Kotlin
Keywords: Digital Twins, Microservices, Azure Cloud, CI/CD, Domain Driven Design

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Smart Subway
01–02/2022

The objective was to create a smart system for the management and monitoring of metropolitan stations. The topic was used for the development of two projects for two different Master Degree courses: the first was "Smart City e Tecnologie Mobili" course regarding an implementation using AWS technologies, the second was "Project Management" course to carry out all Project Management Lifecycle phases.

Keywords: AWS Cloud, IoT, RFID

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Bunny Survival
 github.com/anitvam/pps-bunny
08–10/2021

An open-source simulator of a bunny population made for academic purposes under the course "Paradigmi di Programmazione e Sviluppo" inspired from the interactive simulator Natural Selection developed by University of Colorado.

Language: Scala
Keywords: Scrum

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Ca' Foscari Jisho
 jisho.unive.it
05–07/2021

Web application for italian-japanese translations made for academic purposes under the course "Applicazioni and Servizi Web" in collaboration with the research group **EDRDG** of **Ca' Foscari University** in Venice, Italy.

Keywords: Vue, Docker, Ansible, Javascript, Agile

INTERESTS

| Kubernetes | CI & CD | Microservices | User Experience and User Interface | Design |