

Ali Keramati

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Education

School of Electrical and Computer Engineering, University of Tehran

Tehran, Iran

B.SC. IN COMPUTER ENGINEERING (MAJOR STUDY)

Sep. 2019 - present

- Last Year GPA: 4/4 · CGPA: 18.39/20 (3.84/4)
- Related Courses: Discrete Mathematics(20/20) · Engineering Probability and Statistics(17.8/20)
Data Structures and Algorithms(20/20) · Machines and Language Theory(18.9/20) · Artificial Intelligence(19.1/20)
Foundations of Information Technology(19.6/20) · Internet Engineering(20/20) · Large Language Models(in progress)

School of Psychology and Education, University of Tehran

Tehran, Iran

MINOR STUDY IN EDUCATIONAL SCIENCE

Sep. 2021 - Jul. 2023

- CGPA: 19.3/20 (4/4)
- Related Courses: Educational Psychology(18.75/20) · Introduction to Psychological Tests (20/20)
Patterns and Teaching Methods(20/20) · Basics of Qualitative and Quantitative Research Methods(19/20)
The Principles of Curriculum Development(20/20) · Instructional Design(19/20)

Allame Helli 4 High School

Tehran, Iran

DIPLOMA IN MATHEMATICS AND PHYSICS

Sep 2016 - Jul. 2019

- CGPA: 19.66/20
- As a part of the National Organization for Development of Exceptional Talents (NODET)

Research Interests

- Educational technology
- AI in Education
- Digital-learning design
- Large Language Models for Education
- E-Learning
- CSCL

Publications

Keramati, A., Keramati, M. R., and Arefian, M. H. (2024). "Students' Reflection on the Effect of Collaborative Learning on Learning Environment and Academic Achievement in Online Reflective Platforms". *Reflective Practice*.

Keramati, M. R., Gillies, R., Ansarizadeh, F., and Keramati, A. (2023). "The Concept of Cooperative Learning in Australia and Iran". *Iranian Journal of Comparative Education*.

Keramati, M. R., Gillies, R., Ansarizadeh, F., and Keramati, A. (2023). "Challenges and Solutions in Implementing Cooperative Learning in Classroom Environments: A Case Study of Primary School Teachers' Lived Experiences". *International Journal of Early Years Education*. (under review)

Vatandoust M., Mohajeri M. M., Keramati A., and Ahmadabadi M. N. (2024, expected). "Bridging the Educational Divide by Scaling Personalized Deep Learning with Artificial Intelligence: Opportunities and Challenges". (in preparation)

Keramati, A., Keramati, M. R., and Gillies, R. (2024, expected). a Chapter titled "Collaborative learning in the digital age: Opportunities and challenges". Book: *Communication and Collaboration: Challenges in 21 Century*. (in preparation)

Research Experience

Research Assistant at Cognitive Systems Lab

University of Tehran

UNDER THE SUPERVISION OF PROF. M. N. AHMAD ABADI

May. 2023 - present

A new pedagogy model for Deep Learning · AI tools, reinforcement learning, and platforms like Google Classroom and Discord enrich learning environment · LLMs for Personalized Learning · Self-regulated Learning · Adaptive Learning · For more details, explore our aiedut.com

Research Assistant in studying Collaborative Learning

Remote-University of Queensland

UNDER THE SUPERVISION OF PROF. R. GILLIES & PROF M. R. KERAMATI

Sep. 2021 - present

Collaborative Learning · Interactive Learning Environments · Data Analysis using ATLAS.ti · Qualitative Research

Research Assistant at E-Learning Lab

UNDER THE SUPERVISION OF PROF. F. TAGHIYAREH

Interactive Learning Object · Personalized Learning · IEEE-LOMs extraction · Avida-ED project for generating Learning Objects based on Genetic Algorithm

University of Tehran

Mar. 2023 - Aug. 2023

Member of Embodied Underground reading group

UNDER THE SUPERVISION OF PROF. D. ABRAHAMSON

Reading a paper weekly · A nice feature of these meetings is that we always have the author(s) of the paper join us for more clarification.

University of California, Berkeley

Jan. 2024 - present

Member of Large Language Models reading group

UNDER THE SUPERVISION OF PROF. M. J. DOUSTI

Reading papers weekly · Each member presents and leads a discussion on a chosen paper.

University of Tehran

Feb. 2024 - present

Teaching Experience

COURSE MENTOR

Unity Game Development Course Mentor SUMMER OF CODE AT ACM STUDENT CHAPTER

Jul. 2022 - Oct. 2022

TEACHING ASSISTANT

Reinforcement Learning

Discrete Mathematics HEAD TA

Internet Engineering HEAD TA

Data Structures SUPERVISOR

Engineering Probability and Statistics

Software Engineering HEAD TA

Algorithm Design

Database Design

Electrical Circuit

Notable Academic Projects

aiedut.com

LEARNING MANAGEMENT SYSTEM

Customized LMS to Enhance Learning Experience · Integration with Google Classroom and Chat GPT · Database Utilizes Postgres with Redis

Cognitive Systems Lab

Python, Django, Bootstrap, JavaScript

Discord Bot

TA AGENT

Gathers Students' Activity · Monitors Server · Makes Interventions to Encourage Students to be Engaged

Cognitive Systems Lab

Discord.py, Discord.js

Discord Classroom

COLLABORATIVE LEARNING ENVIRONMENT

Promotes Active Student Engagement and Collaboration · According to the Jigsaw Model · Click [here](#) to see the template.

Cognitive Systems Lab

Discord Server Template

Student Grade Management Sheet

MERGING SUB SHEETS FOR GRADE TRACKING

Multiple Features Crafted using Complex Formulas · Automated Grade Delivery with Feedback using Apps Script

TA-Discrete Mathematics

Excel, Apps Script

DM Contest Bot

CONTEST MANAGEMENT SYSTEM

Automated Question Mailing System · Group's Score Handler

TA-Discrete Mathematics

Django, Python

IEEE-LOM Extractor

COMPATIBLE WITH PPTX, DOCX, PDF

Automated IEEE-LOM Extraction · NLP algorithms · Image and Video Processing

E-Learning Lab

TexStat, NLTK, YOLO, python-pptx

Handwriting Recognition (HWR)

NEURAL NETWORK

Phase 1: Feed-Forward Neural Network from scratch · Phase 2: Neural Network model using Keras and TensorFlow

Artificial Intelligence

Keras, TensorFlow

Music Genre Prediction

MACHINE LEARNING

K-Nearest Neighbors · Decision Tree · Random Forest models

Artificial Intelligence

Scikit-Learn

Genetic Decrypto

GENETIC ALGORITHM

Generating a Population of Candidate Keys · Crossover and Mutation

Artificial Intelligence

python

Baloot

ONLINE SHOP WEBSITE

A Fully Functioning Amazon clone · Used Tools: CI/CD pipelines, JDBC, JUnit, Github Oauth apps

Internet Engineering

Java, Spring, Tomcat, React

Pong Game

ANDROID OS AND MOBILE PHONE SENSORS

Accelerometer and Gyroscope sensors · Real-World Formulas for the movement of the Ball and Paddle

Real-time Embedded Systems

Andorid Studio, Canvas

Image Filtering

SERIAL VS. MULTI-THREAD METHODS

Parallelizing the Hotspot Functions

Operating Systems

C++, pthread.h

Work Experience

Zendegiye Shad Publication

EDITOR

Tehran, Iran

Sep. 2019 - Sep. 2020

- Edited five Persian language books in the field of education, ensuring their clarity, consistency, and adherence to grammatical standards. My contributions to these books include "Implementation of Collaborative Learning," "New Approaches and Methods in Mathematics Education," "Effective Teaching-Learning in Higher Education," "Curriculum Evaluation," and "Co-Teaching."

Certifications

Introduction to EdTech EDHEC BUSINESS SCHOOL

Sep. 2023

Generative AI with Large Language Models DEEPLARNING.AI

Jul. 2022

Fundamentals of Reinforcement Learning UNIVERSITY OF ALBERTA

Aug. 2023

Game Theory STANFORD UNIVERSITY, THE UNIVERSITY OF BRITISH COLUMBIA

In Progress

Volunteer Activities

Mathematics Teacher

TEACHER

Tehran, Iran

Sep. 2019 - Sep. 2021

- Engaged in voluntary teaching of mathematics to students who can't afford it.

Skills

Programming

Advanced: C/C++, Python, Java
High Intermediate: C#, SQL, Javascript
Intermediate: R, LaTeX, Verilog, HTML/CSS

Technologies

Familiar: Stata, GoLang
ATLAS.ti, Excel, Git, Docker, Kubernetes, Maven, Makefile

Software Engineering

Familiar with multiple design patterns.

Web Development

React, TomCat, Spring

Database

MySQL, Postgres, MongoDB, Neo4j, Redis, ElasticSearch

Operating Systems

Linux (Ubuntu), Microsoft Windows, MacOS

Languages

Persian Native

English Professional working proficiency · TOEFL: 97/120 [R:25, L:23, S: 23, W:26] (Oct. 2023)

Azerbaijani Fluent

Arabic Basic