

Faridreza Momtaz Zandi

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Researchgate: ResearchGate profile with publications

Research Interests:

Deep Learning, Computer Vision, Machine Learning, Cloud Computing, Workflow Scheduling

Education:

Politecnico di Torino <i>Master of Science in Computer Engineering</i> Track: Artificial Intelligence and Data Analytics	<i>Sep 2024 - Present</i>
Ferdowsi University of Mashhad <i>Bachelor of Science in Computer Engineering</i> Thesis: Multiple Workflow Scheduling in Cloud Environment	<i>Sep 2019 - Feb 2024</i> Last two years GPA: 17.37/20.00 Score: 20.00/20.00
National Organization for Development of Exceptional Talents (Sampad) <i>Mathematics Major</i>	<i>Oct 2013 - Sep 2019</i>

Skills:

English Language: TOEFL iBT score 106/120. **Italian Language:** A2.
Programming Languages:

- Python, C#, Java, CPP, C

Artificial Intelligence:

- Deep Learning, Machine Learning, Computer Vision, Neural Network

Game Dev:

- Game Development, Game Design, Unreal Engine, Unity, Blender, Photoshop

Other Skills:

- Cloud Computing, Research Skills, Systematic Reviews, CloudSim, Object-Oriented Programming, Linux, Problem Solving, Critical Thinking, Communication and Teamwork

Research Experience:

Research Assistant <i>Ferdowsi University of Mashhad, Mashhad, Iran</i> Collaborating with Dr. Saeid Abrishami on cutting-edge research projects in Cloud Computing Lab (CCLab). Mostly focused on Workflow Scheduling in the Cloud Computing Domain and was honored to be a part of Dr. Abrishami's Systematic Literature Review (SLR) team. Co-authored the paper A Systematic Literature Review on Multiple Workflow Scheduling in Cloud Computing , preprint available on ResearchGate . Applied acquired knowledge effectively in the development and execution of my thesis.	<i>Apr 2023 - Present</i>
Research Assistant <i>Ferdowsi University of Mashhad, Mashhad, Iran</i> Focusing on the classic and modern applications of Machine Learning approaches in robotic perception field. Responsible for developing simulation environments mostly on Unreal Engine 5.	<i>Nov 2023 - Oct 2024</i>
Artificial Intelligence Personal Research Engaged in Diverse AI Fields Including Neural Networks, Deep Learning, RNN, and Computer Vision. Additionally, Employed state-of-the-art techniques from emerging Large Language Models to explore novel perspectives and enrich project outcomes.	<i>May 2023 - Present</i>

Work Experience:

Game Developer and Programmer

Mar 2020 – Mar 2023, Oct 2024 – Present

Fake Reality Game Studio · Self-employed, Mashhad, Iran · On-site

Collaborated with a Cross-Functional Team on Diverse indie projects, varied engines, and styles.

Computer Vision and Machine Learning Intern

Jul 2023 - Sep 2023 · 3 mos

[Internship Report](#)

Veerasense · Internship, Mashhad, Iran · On-site

Worked on various Computer Vision and Machine Learning projects.

Certificates:

Deep Learning Specialization by DeepLearning.AI

Issued Nov 2023

Courses: Neural Networks and Deep Learning, Convolutional Neural Networks, Structuring Machine Learning Projects, Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization, Sequence Models.

Machine Learning Specialization by DeepLearning.AI, Coursera, Stanford CPD, UVM

Issued Aug 2023

Courses: Supervised Machine Learning: Regression and Classification, Advanced Learning Algorithms, Unsupervised Learning, Recommenders, Reinforcement Learning

Achievements:

- Ranked in the top 1% of students in the nationwide Iranian University Entrance Exam. 2019
- Passed the entrance exam of SAMPAD high school and got into the best branch in Mashhad. 2016
- Passed the entrance exam of SAMPAD middle school and got into the best branch in Mashhad. 2013

Selected Projects:

Computational Intelligence Deep Learning Project

[Repository](#)

Developed a CNN-based system using EEG data for seizure detection, focusing on data preprocessing, feature engineering, and neural network design.

Cloud Computing Project

[Repository](#)

Automated deployment of a Go REST API with MySQL using Docker, Docker Compose, and Kubernetes for scalable production.

Recommender System and RAG

[Repository](#)

Created a recommender system and RAG-powered assistant using Amazon data, Elasticsearch, and a large language model.

Amazon Crawler and Elastic Search

[Repository](#)

Crawled Amazon.com to extract product data, processed it with Elasticsearch, and implemented querying capabilities for efficient data retrieval.

Data Mining Project

[Repository](#)

This data mining project, conducted in collaboration with the Conducted data cleaning, exploratory analysis, and clustering to predict asset inflows, outflows, and price trends for a financial dataset.

AI Abalone Game Project

[Repository](#)

Created an AI opponent for the game Abalone using the Minimax algorithm with alpha-beta pruning, forward pruning, and table transposition for strategic gameplay.

Cosine and Jaccard Similarity using TF-IDF

[Repository](#)

Processed English and Persian text datasets to compute TF-IDF, cosine, and Jaccard similarities, ranking top similar documents.

Parallel Image Search using CUDA

[Repository](#)

Implemented a parallel image search program using CUDA, accelerating similarity calculations with GPU-optimized features like histograms and Hu moments.

Volunteering Experience:

Member of Game Community

Feb 2022 - Mar 2023 · 1 yr 2 mos

Ferdowsi University of Mashhad

Involved in many events and educational programs as instructor or host.

Coordinator and mentor in game engine workshops.