

Curriculum Vitae

Ramin Barati

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Work Experience

- 2023-2025** TECHNICAL LEAD
Paya co., Tehran, Iran
▷ Lead a team of data scientists and software developers in conception and development of ML-oriented solutions, covering vision (FaceNet, YOLO), speech (Wav2Vec2) and NLP (NER).
▷ Championed Test-Driven Development (TDD) principles and applied object-oriented design patterns to ensure robust and maintainable code. ▷ Set up an automated pipeline for packaging machine learning models for deployment on public and private clouds using Nvidia Triton.
- 2021-2022** DATA ENGINEER (EXTERNAL CONSULTANT)
CarNext.com, Remote
▷ Developed Scala applications to parse Kafka topics from Confluence cloud and feature them in the delta lake format using Spark for a datamesh solution on Amazon S3.
- 2017-2020** LEAD ALGORITHM SOFTWARE ENGINEER
Mahan Airlines, Tehran, Iran
▷ Modeled and solved flight planning and crew assignment optimization problems using MIP and CSP. ▷ Developed a Python/NodeJS software solution, leveraging object-oriented programming, to enable human-machine collaboration which decreased planning time by 3 folds.
▷ Supervised new developers and instructed them in coding conventions, design patterns, and standards using Git.
- 2013-2014** SOFTWARE DEVELOPER
Resaneh Pooneh Pasargad, Isfahan, Iran
▷ Built a web-based inventory management software using the .Net framework and Visual Studio 2013. ▷ Developed a persian calendar plug-in for Sharepoint.

Selected Freelance & Voluntary Contributions

- 2025** EvolutionId, Germany
▷ Enhanced a face analysis pipeline by integrating a SOTA age prediction model and developing modules for face detection and animal vs. human face classification.
- 2021** Areatak, Tehran, Iran
▷ Designed an agent-oriented solution to simulate user interactions with a crypto exchange and led a team of two developers. ▷ Implemented a multithreaded agent simulation using a framework synchronized via a Redis message bus to test system concurrency.
- 2013** Opencog, Open source project
▷ Developed a fuzzy temporal inference engine in Python by generalizing Allen's interval algebra. ▷ Engineered core components in C++11 for the CogServer, creating Python bindings via CMake to enable external scripting.

Skills and Expertise (Competency *Expert, †Advanced, ‡limited experience)

- Programming** Python*, C#*, Matlab*, Javascript*, HTML and CSS*, C++†, Scala†, Go‡
- Frameworks** PyTorch*, OR-tools*, Numpy/Scipy*, .Net*, ReactJS*, JAX*, multiprocessing†, Tensorflow‡
- Database** PostgreSQL*, Mongo-DB*, Apache Spark†, Elasticsearch and Kibana†, FAISS‡

Education

- 2025-Present** MASTER: Mathematics and Business Studies
Leiden University, Leiden, Netherlands
- 2018-2024** DOCTOR OF PHILOSOPHY (PH.D.) CANDIDATE: Artificial Intelligence and Robotics
Amirkabir University of Technology, Tehran, Iran
▷ Topic: Finding methods for analyzing and training robust classifiers to mitigate the effects of adversarial examples phenomenon in machine learning. Took a graduate course in Image Processing.
- 2014-2017** MASTER OF SCIENCE (M.S.): Artificial Intelligence and Robotics | GPA: 17.16 (out of 20)
Isfahan University of Technology, Isfahan, Iran
▷ Title: Probabilistic topic modeling in continuous feature space using mixture of Gaussians.
▷ Project description: Developed a generalization of Gaussian-LDA model for music information retrieval. ▷ Improved algorithm runtime by parallelizing the Variational Inference step of the EM learning framework.

Honors and Awards

- 2017** Ranked 11th in the National Doctoral Entry exam for Artificial Intelligence.
- 2013** Ranked 182th (top 2%) in the National Masters Entry exam for Artificial Intelligence.
- 2006** Top 7% in the Iranian National Matriculation exam in Math and Physics.

Teaching and Research Activity

- 2017 & 2018** PROGRAMMING ASSISTANT
University of Tehran (International Campus), Kish, Iran
▷ Supporting 40+ number of design students in their interactive prototyping, during two Interaction Design Workshops given by Aadjan van der Helm and Bahareh Barati (TU Delft).
- 2014-2015** TEACHING ASSISTANT
Islamic Azad University of Isfahan (Khorasgan), Isfahan, Iran
▷ Lab instructor for Software Engineering course.

Publications

- 2021** Ramin Barati, Reza Safabakhsh, and Mohammad Rahmati. Towards explaining adversarial examples phenomenon in artificial neural networks. In *2020 25th International Conference on Pattern Recognition (ICPR)*, pages 7036–7042

Language

- Persian** Native
- English** Fluent (TOEFL iBT score: 105)
- German** Elementary (A1)

References

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|---|---|
| Ben Goertzel
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