

Mehrdad Aksari Mahabadi

Department of Mathematics and Computer Science Amirkabir University of Technology
Email: makmahabadi@gmail.com, mahabadi.mcs@aut.ac.ir Github: <https://github.com/mehrdad3301>
Linkedin: www.linkedin.com/in/mehrdad-aksari-mahabadi Phone: +989376720566

EDUCATION

- Bachelor of Science, Computer Science, Sept. 2020 - Aug 2024 (expected)
Amirkabir University of Technology 3rd in computer science among Iranian universities, QS ranking 2023
Cumulative GPA: 18.94/20
- High School degree, Sept. 2013 - Aug 2020
Shahid Sattari High School
Affiliated with the National Organization for the Development of Exceptional Talents (NODET)

RESEARCH INTERESTS

- Machine Learning
- Graph Representation Learning
- Bioinformatics
- Theoretical Computer Science

RESEARCH EXPERIENCE

Undergraduate Research Assistant at AGM lab Sat 2023 - Present

- Studied knowledge graph embeddings under the supervision of Dr. Zahed Rahmati
- Studied machine learning with graphs and implemented GNN architectures in Pytorch Geometric

HONORS AND AWARDS

- Ranked among **top 3** students between 70 students who began their studies in Sep. 2020 at Amirkabir University of Technology, Dept. of Comp. Sci. and consequently recognized as **outstanding** student Fall 2020 - Fall 2022
- Eligible to choose a **second major** due to outstanding performance, Spring 2021
- Ranked among the **top 2%** between all applicants in the University Entrance Nationwide Exam known as Konkur (approximately 150000 applicants) Iran, Sept. 2020

WORK EXPERIENCE

Software Engineer at Snapp Feb 2023 - Present

Snapp is a leading company in the taxi services industry with over 30 million users. I worked as a software engineer in the Routing and navigation team

- integrated historical traffic data into an in-house routing engine to support time-dependent routing
- redesigned the ETA benchmarking service to increase efficiency
- worked collaboratively with other team members to improve the accuracy of the estimated time of arrival (ETA)

TEACHING EXPERIENCE

Fall 2023	HEAD TEACHING ASSISTANCE AMIRKABIR UNIVERSITY OF TECHNOLOGY Fundamentals of Computer Programming	Dr. Zahed Rahmati
Fall 2022	TEACHING ASSISTANCE AMIRKABIR UNIVERSITY OF TECHNOLOGY Design and Analysis of Algorithms	Dr. Hamid Seyed Javadi
Fall 2021	TEACHING ASSISTANCE RAZI UNIVERSITY, Fundamentals of Computer Programming	Dr. Farzaneh Salari
Fall 2021	TEACHING ASSISTANCE AMIRKABIR UNIVERSITY OF TECHNOLOGY, Fundamentals of Computer Programming	Dr. Hossein Zeynali

TECHNICAL REPORTS

Introduction to Fuzzy Linear Algebra Used SymPy to solve fuzzy linear systems with Gaussian and Jacobian iterative methods - report for Numerical Linear Algebra course [\[Link\]](#)

Eigen Digits Used SVD to classify hand-written digits - report for Numerical Linear Algebra course [\[Link\]](#)

NOTABLE PROJECTS

Lunar Lander Solved OpenAI Lunar Lander environment using Deep-Q-Network [\[Link\]](#)

Evolucop Used evolutionary algorithms to train a neural net to play a 2-dimensional game [\[Link\]](#)

ANN Built an artificial neural network framework by implementing backpropagation, using only Numpy, and got 98% accuracy on the MNIST dataset [\[Link\]](#)

Camel Built an interpreted programming language in Go [\[Link\]](#)

Visual Cryptography Implemented Shamir and Naor method for visual cryptography paper [\[Link\]](#)

Routing Engine Built a routing engine from scratch By utilizing Open Street Map data and implemented various routing algorithms including Dijkstra, A*, ALT, and Contraction Hierarchies [\[Link\]](#)

RELATED COURSES

Advanced Programming	19.52/20	Linear Optimization	20/20
Data Structures & Algorithms	19.75/20	Artificial Intelligence	20/20
Design & Analysis of Algorithms	17.75/20	Computational Intelligence	19/20
Probability Theory	18.82/20	Cloud Computing	Audited
Numerical Linear Algebra	19.5/20	Computational Geometry*	18.75/20
Numerical Analysis	20/20	Bioinformatics*	TBD
Mathematical Analysis	20/20	Data Mining	TBD

ONLINE COURSES

Machine Learning Specialization	Stanford University	100%
Neural Networks and Deep Learning	DeepLearning.AI	100%
Fundamentals of Reinforcement Learning	University of Alberta	100%
Machine Learning With Graph	Stanford University	80%
Efficient Route Planning	University of Freiburg	80%

TECHNICAL SKILLS

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| <ul style="list-style-type: none">• Languages Python, Go, Java, C, Bash• Database Postgresql, Redis• AI PyTorch, PyTorch Geometric, Numpy, Pandas, Matplotlib | <ul style="list-style-type: none">• Cloud/MLOps Docker, Kubernetes• Monitoring Prometheus, Grafana• Tools Git, Jupyter Notebook, Vim, VsCode |
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LANGUAGES

- **Farsi** native
- **English** Full Proficiency, Toefl iBT 111: reading 28, listening 28, speaking 27, writing 28

REFERENCES

Dr. Zahed Rahmati	Head of Comp. Sci. Dept., Amirkabir University	zrahmati@aut.ac.ir
Dr. Farhad Fakhari	Professor of Applied Mathematics, Amirkabir University	f.fakhari@aut.ac.ir
Dr. Mehdi Dehghan	Professor of Applied Mathematics, Amirkabir University	mdehghan@aut.ac.ir
Dr. Farzaneh Salari	Professor of Computer Science, Razi University	f.salari@razi.ac.ir

* indicates graduate courses

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