

Amir Mohammad Kharazi

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Research Interests

- Machine Learning, Deep Learning, Data Mining, Computer Vision, Transformers
- Tensor Decompositions, Matrix Factorizations, Multilinear learning
- Complex Networks, Graph Neural Networks, Network Representation Learning
- Computational Neuroscience, Cognitive Science

Education

Tarbiat Modares University (TMU) 2022 – Present
Master of Science (M.Sc.) in Computer Science

- GPA: 4.0 / 4.0 (Ranked 1st in the department)
- **Thesis:** Investigation of Tensor Methods in Vision Transformers

Amirkabir University of Technology (AUT) 2017 – 2021
Bachelor of Science (B.Sc.) in Computer Science

Research Experience

NMA - Impact Scholar Program 2024 – 2025
As part of the [Neuromatch Academy Impact Scholar Program](#) 🔗, we conducted a comprehensive study comparing non-linear CEBRA and linear spatial filtering methods, evaluating their respective strengths and limitations when applied to ECoG data.

AI in Testing 2024 – Present
Led a pioneering team at [Digipay](#) 🔗, developing test automation frameworks using Large Language Models (LLMs) and Computer Vision techniques for intelligent UI testing and interaction.

DeepTenLab 2023 – Present
Contributing member at [DeepTenLab](#) 🔗, exploring tensor-based methods for computer vision and advanced neural architectures. Contributed to the development of modular PyTorch-based packages for layer-level substitution, enabling flexible experimentation beyond traditional architectures. Primary data modalities include images, but the work also extends to text, EEGs, and other types.

Teaching Experience

Computational Neuroscience Summer 2024
Neuromatch Academy

Deep Learning Spring 2024
Tarbiat Modares University

Machine Learning Fall 2023
Tarbiat Modares University

Special Topics in Data Science Fall 2023
Tarbiat Modares University

Data Mining Spring 2021
Amirkabir University of Technology

Other Experience

Software Test Engineer

2024 – Present

Digipay

As a Software Test Engineer at [Digipay](#), one of the leading fintech companies in the region, I worked in an Agile development environment alongside cross-functional teams to integrate AI into software testing pipelines. My responsibilities included both automated and manual testing using state-of-the-art methodologies, as well as contributing to the design and maintenance of CI/CD pipelines aligned with modern industry standards.

Publications

[Under Review] **Hierarchical Local-Global Tensor Layer(HLGTL) in Deep Convolutional Neural Networks**

2025

Expert Systems With Applications

Mansoor Rezghi, **Amir Mohammad Kharazi**, Mohammad Badzohreh

Skills

Programming: C, R, Bash, Matlab, Java, Python,

Data Science: PyTorch, TensorFlow, Keras, torch_geometric, SciPy, MNE, Numpy, Pandas,

Technologies: Swagger, Kibana, MySQL, PostgreSQL, MongoDB, Redis, Robotframework, Selenium,

Web: HTML, CSS, JavaScript, Flask

Operating System: GNU, Linux,

Others: Git, CUDA, L^AT_EX

Languages

Persian: Mother Tongue

English: Proficient (**IELTS:** Overall 7.5 – L: 9.0, R: 7.0, W: 6.5, S: 7.0)

German: Basic

Hobbies

Computer

I enjoy playing video games and creating mods for them. My favorite games include Minecraft, Skyrim, and Dota2 .

Sports

I am an avid swimmer and also enjoy hiking and late-night running.

References

Dr. Mansoor Rezghi (rezghi@modares.ac.ir [✉](#))

Associate professor at TMU Department of Computer Science.

Dr. Ali Rajaei (alirajaei@modares.ac.ir [✉](#))

Assistant professor at TMU Department of Computer Science.

Neuromatch Academy

Recommendation letters available upon request.