

Mahyar Maleki

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EDUCATION

University of Tehran

Master of Science in Computer Engineering - Artificial Intelligence

Tehran, Iran

Sep 2021 – Present

- Overall GPA: 4/4 (17.73/20)

Imam Khomeini International University

Bachelor of Science in Mechanical Engineering

Qazvin, Iran

Sep 2015 – Sep 2019

- Overall GPA: 3.3/4 (15.78/20)

RESEARCH INTERESTS

- Computational Neuroscience
- Modeling
- Data Science
- Deep Learning

EXPERIENCE

Research Assistant

Convergent Technologies Research Center, University of Tehran

Sep 2022 – Present

- Thesis: "Comparing Representation of Video and Still Images in Brain with EEG Signals"
- Supervisor: Dr. Mohammad-Reza A. Dehaqani

Teaching Assistant

Course: Computational Neuroscience

July 2023

Neuromatch Academy

- Mentoring students with course materials covering Machine Learning, Dynamical Systems, and Stochastic Processes. Additionally, offered high-level support for their final project completion.

Teaching Assistant

Course: Deep Neural Networks by Dr. Ahmad Kalhor

Spring 2023

University of Tehran

- Created instructional videos for students to effectively utilize applying advanced PyTorch skills in the context of Convolutional Neural Networks (CNNs).

Teaching Assistant

Course: Statistical Inference by Dr. Abdolhossein Vahabi

Spring 2023

University of Tehran

- Mentoring students in understanding important probability distributions and their practical applications in real-world problems (using R language).

SELECTED COURSES

- | | |
|----------------------------------|---------------------|
| • Machine Learning | GPA: 4.0,(20.00/20) |
| • Advanced Robotics | GPA: 4.0,(19.88/20) |
| • Statistical Inference | GPA: 4.0,(18.20/20) |
| • Data Analysis | GPA: 4.0,(17.75/20) |
| • Trustworthy AI | GPA: 4.0,(17.10/20) |
| • Deep Learning and Applications | GPA: 4.0,(17.00/20) |
| • Cognitive Science | GPA: 3.7,(16.93/20) |

ACADEMIC PROJECTS

Data Analysis

Autumn 2021

- Analysing Corona virus infection
- Scraping Alibaba and MrBilit tickets and analysing the prices
- Web crawling and data cleaning: Obtaining Laptop Listings from Digikala

Cognitive Science

Spring 2022

- Designing a cognitive task to explore spatial heterogeneity in face perception, collecting data from participants, and conducting in-depth data analysis.
- Implementation of various dynamical neuronal models to explore and analyze functional patterns of neurons.
- Analysing neural data gathered by methods of EEG, LFP, fMRI and single cell recording

Deep Learning and Applications

Spring 2022

- Saliency map prediction using deep neural networks
- Implementation of a deep fully connected network for inverting visual representations of a Convolutional Network
- Medical image segmentation Using U-net architecture
- Implementing Hubert architecture for automatic speech recognition
- Replicating "DeepGUM: Learning Deep Robust Regression with a Gaussian-Uniform Mixture Model" paper
- Musical instruments' audio classification and clustering by classical machine learning methods

Trustworthy AI

Spring 2023

- Robust Representation using Angular loss
- Enhancing Model Interpretability by leveraging LIME and SHAP for Comprehensive Explanations
- Out-of-Distribution Detection: Enhancing Model Robustness and Generalization

AWARDS

- Ranked 42nd in The Masters Level University Entrance Exam (Among Approximately Twelve Thousand People)
- Among the top 2% of Iran Universities Entrance Exam
- Exemption from tuition fees for master's level studies

TECHNICAL SKILLS

Programing Languages: Python, Matlab, R, SQL

Libraries: Pandas, NumPy, Matplotlib, Pytorch, PsychoPy, Psychtoolbox, EEGLab, FieldTrip

Typesetting: Microsoft Office, L^AT_EX

Soft Skills: Team Work, Problem-Solving, Time Management, Adaptability/Flexibility

Languages: Persian(Native), English(TOEFL IBT exam will be taken on Nov. 2023)