Sara Rostami

M.Sc. Student of Artificial Intelligence and Robotics
University of Tehran, Tehran, Iran

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Website
GitHub Profile
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Education

•Master of Science in Artificial Intelligence and Robotics *2021-24*
University of Tehran, Iran GPA: 4.00/4.00

•Bachelor of Science in Computer Engineering *2016-21*
Babol Noshirvani University of Technology, Iran GPA: 3.67/4.00

Conference Participation

•CuttingGardens Conference - Tehran Garden *Oct 2023*
Convergent Technologies Research Center, University of Tehran, Iran
– Presentation on *Introduction to Python's MNE toolbox for EEG data analysis*
– Presentation on *Mini EEG Project*

Research Experience

•Research Assistant *Aug 2022 - Present*
Convergent Technologies Research Center, University of Tehran, Iran
– Part of the *Neural Adaptation* Project
– EEG data acquisition with in-house equipment
– Preprocessing EEG data using EEGLAB and FieldTrip
– Applying data science and statistical techniques to preprocessed data

•Research Intern *Aug 2022 - Feb 2023*
Genzel lab, Donders institute for brain, cognition and behavior, Netherlands
– Part of the *Systems Consolidation During Sleep* Project
– Applied Data Preparation, Wrangling and Visualization techniques
– Applied ML algorithms to clean data for classification

Work Experience

•Teaching Assistant, Computational Neuroscience Summer School *Jun 2023 - Jul 2023*
Neuromatch Academay
– Mentored and assisted students in the computational neuroscience course
– Led interactive sessions and discussions to enhance understanding of course material
– Collaborated with fellow TAs and instructors to ensure a valuable learning experience

•Teaching Assistant for Master's Courses *Jan 2023 - July 2023*
University of Tehran, Iran
– Statistical Inference
– Introduction to Cognitive Neuroscience

Selected Academic Projects

•Role of Frontotemporal Circuits in the Representation of Complex Objects
Master's Thesis, University of Tehran, Iran Ongoing Project
– Collecting 128-channel EEG Data from 15 subjects
– Preprocessing EEG data with EEGLAB based on Makoto's pipeline
– Applying Multivariate Pattern Analysis (MVPA) method

•Investigating the Robustness and Interpretability of a Deep Learning Model *link*, *link*
Trustworthy AI course, University of Tehran, Iran Spring 2023
– Explored model robustness by applying adversary attacks using the Fast Gradient Method
– Employed Deep SHAP and LIME techniques to investigate model interpretability

•Comparative Study of Image Generation with Stabilized DCGAN and ACGAN *link*
Deep Learning course, University of Tehran, Iran Fall 2022
– Implemented DCGAN and ACGAN for image generation based on referenced papers
– Applied Stabilizing techniques

•Comparative Study of Standard ML Algorithms on Music Genre Classification *link*
Machine Learning course, University of Tehran, Iran Fall 2021
– Collected music pieces from 5 different Irainian Instruments
– Applied dimensionality reduction techniques
– Applied ML clustering & classification algorithms

•EEG-based Emotion Recognition using Deep Reinforcement Learning *link*
Bachelor's Project, Babol Noshirvani University of Technology, Iran Summer 2021
– Applied deep reinforcement learning for recognizing emotions based on EEG signals

Honors and Awards

•Top Ranked among Master's Students *2023*
Ranked 3rd in Artificial Intelligence and Robotics Major, University of Tehran, Iran

•Awarded a Prestigious Scholarship from the University of Tehran *2021*
Chosen among 18 from 14,000+ participants in the Master's Entrance Exam

•Top Ranked among Bachelor's Students *2020*
Ranked 3rd at Computer Engineering Dept., Babol Noshirvani University of Technology, Iran

Licenses & Certifications

•Computational Neuroscience Summer School Teaching Assistant *Certificate*
Neuromatch Academy Summer 2023
– Mentored the students during the Tutorials and Project

•Computational Neuroscience Summer School Student *Certificate*
Neuromatch Academy Summer 2022
– Completed the Tutorials and Project

Selected Courses

Graduate	Undergraduate
Trustworthy AI: 19.8/20	Signals & Systems: 19.5/20
Neural Networks & Deep Learning: 19.94/20	Graph Theory: 20/20
Machine Learning: 19/20	Introduction to Programming Contests: 20/20
Statistical Inference: 18.7/20	Operating Systems: 20/20
Data Analysis: 20/20	Fundamentals of Compiler Design: 19.1/20
Introduction to Cognitive Neuroscience: 18.45/20	Language Theory & Automata: 18/20

Technical Skills and Interests

Programming Languages:: Python(Advanced), MATLAB(Proficient), R(Proficient), SQL(Proficient), Java(Familiar)
Development Tools and Frameworks:: Git, EEGLAB, FieldTrip, PsychoPy, MNE, PyTorch, TensorFlow, Scikitlearn, Matplotlib, Pandas, NumPy, SciPy, NLTK, HuggingFace, and many more.

Languages

Farsi (Native)
English (Fluent)
– TOEFL score: 110/120 *(R: 28, L: 29, S:30, W:23)*

References

Mohammadreza Abolghasemi Dehaqani	**Master's thesis Supervisor** *Assistant Professor, University of Tehran* *Electrical and Computer Engineering Department* *dehaqani@ut.ac.ir*
Abdol-hossein Vahabie	**Master's thesis Advisor** *Assistant Professor, University of Tehran* *Electrical and Computer Engineering Department* *h.vahabie@ut.ac.ir*
Hesam Omranpour	**Bachelor's thesis Supervisor** *Assistant Professor, Babol Noshirvani University of Technology* *Electrical and Computer Engineering Department* *h.omranpour@nit.ac.ir*
Lisa Genzel	**Internship Supervisor** *Associate professor, Radboud University* *Donders Centre for Neuroscience-Neurobiology* *lisa.genzel@donders.ru.nl*

Please let me know in advance if you plan to contact the references I've provided.