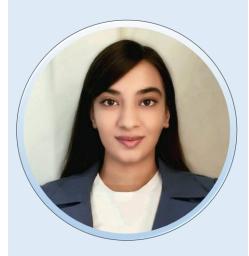# SAMIRA ABEDINI

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LinkedIn:

https://www.linkedin.com/in/samiraabedini-ai/

GitHub:

https://github.com/SamiraAbedini

EDUCATION

Master of Science in Bioinformatics — October 2024 – now
Saarland University, Saarland, Germany
Selected Courses: Neural Networks, Elements of Machine Learning

Bachelor of Science in Biomedical Engineering — September 2017 – September 2021
(GPA: 16.55/20)
University of Tabriz, Tabriz, Iran
Selected Courses: Medical Information Technology, Computer Programming, Mathematics 1 and 2, Biological and Computational Intelligence, Biostatistics, Biophysics, Biochemistry, Medical Physics
Final Project: "Designing a Digital Feedforward Dynamic Range Compressor for hearing aids" (Grade achieved: 20/20)

WORK EXPERIENCE

Research Assistant — December 2023 – September 2024
Cognitive Neuroscience Lab., Tabriz University, Tabriz, Iran
- Conducted research on Alzheimer's disease prediction in patients' offspring
- Built and evaluated machine learning models for predictive analysis

Mathematics teacher (part-time) — April 2020 – September 2023
Hallaj Mathematics Academy, Tabriz, Iran
- Guided high school students in mastering mathematics concepts to excel in university entrance exams.
- Designed and conducted problem-solving sessions to enhance critical thinking and analytical skills.

Biomedical engineer — December 2020 – January 2023
R&D team, BMGs, Tabriz, Iran
- Analyzed medical data (ECG, EEG) using machine learning techniques
- Programmed touch-screen LCDs for medical devices

INTERNSHIP

R&D team, BMG, Tabriz, Iran — August 2020 -- December 2020
Project: Designing a piezoelectric energy harvesting system for leadless heart pacemakers, transforming cardiac motion into sustainable electrical energy. (Grade achieved: 20/20)

PUBLICATION

Machine Learning **in** February 2024 – ongoing
High-Risk Offspring (*under preparation)
Authors: Samira Abedini, Farhad Farkhondeh, Soomayeh Heisiattalab
- Collecting 64 channels resting-state EEG data from two groups of subjects (offspring of Alzheimer's patients, and control group) in both eye-open and eye-close situations
- Preprocessing and creating a dataset from calculated EEG Power Spectrum Density, Relative Power, and Absolute Power of each subject
- Performing statistical analysis and training machine learning models on the dataset to diagnose the early biomarkers of Alzheimer's disease

COURSES AND CERTIFICATES

R-Programming — October 2024 – ongoing
DataCamp

Python for Genomic Data Science (Genomic Data Science Specialization) — October 2023 – January 2024
Coursera, Johns Hopkins University

Introduction to Genomic Technologies (Genomic Data Science Specialization) — October 2023 – January 2024
Coursera, Johns Hopkins University

AI for Medical Diagnosis (AI for Medicine Specialization) — June 2023 – September 2023
Coursera, Deeplearning.AI

May 2023
Sharif University of Technology

Machine Learning Specialization — July 2022 – October 2022
Coursera, Deeplearning.AI

An Intuitive Introduction to Probability — July 2022
Coursera, Karl Schmedders

Artificial intelligence school (ML, DL) — January 2022 – March 2022
U-Tech Academy, University of Tehran

SELECTED PROJECTS

ADHD diagnosis from rs-fMRI data using deep learning methods   November 2023 – December 2023
(Using Python) Dataset: ADHD-200 NYU dataset

Chest X-Ray Medical Diagnosis with Deep Learning   June 2023 – September 2023
(Using Python) Dataset: ChestX-ray8 dataset

Brain Tumor Auto-Segmentation for Magnetic Resonance Imaging   June 2023 – September 2023
(Using Python) Dataset: Decathlon 10 Challenge dataset

Object detection project: Detecting Hexbug heads in videos   July 2023
(Using Python) Dataset: AnkiLab(Traco Repository) Hexbugs dataset on GitHub

Object detection project: Real-time Vehicle detection, tracking, and counting (YOLOv8)   July 2023
(Using Python, YOLOV8) Dataset: Roboflow dataset

LANGUAGE SKILLS

English: C1
　　* TOEFL exam Score: 104 (Reading: 28   Listening: 28   Speaking: 23   Writing: 25)   Test date: April 12, 2023
German: A2
Turkish: C1
Mother tongue: Azerbaijani, Persian

SKILLS

Python Programming	●●●●●○	Matplotlib	●●●●●○
R Programming	●●○○○○	Streamlit	●●●●○○
C++	●●●●○○	Jupiter Notebook, VS Code	●●●●●○
TensorFlow	●●●●○○	GIT and GitHub	●●●●●○
Scikitlearn	●●●●○○	PyTorch	●●●○○○
Pandas	●●●●●○	MongoDB	●●●○○○
NumPy	●●●●○○	MATLAB	●●●●●○

MEMBERSHIPS

Member of Ayaz astronomical society   Ongoing

Board member of student scientific association of biomedical engineering   October 2019 – June 2020
Faculty of Electrical and Computer Engineering, University of Tabriz

Member of the executive team of the biomedical engineering conference   September 2019
 University of Tabriz

REFERENCES

Associate Professor at the University of Tabriz
Name: Soomaayeh Heysieattalab
Phone number: +989141483299
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