

ZAHRA AHMADI

+989128494351 ✉ xahraahmadi99@gmail.com 📄 zahra-ahmadii 🌐 x1ew
🔗 x1ew.github.io 📍 Tehran, Iran

EDUCATION

B.Sc in Computer Engineering

Sep 2019 – Aug 2023

Guilan University

Rasht, Iran

- GPA: 3.66/4 (17.95/20)
- Last two years GPA: 3.8/4

INTERESTS

- Machine Learning
- Deep Learning
- Computational Neuroscience
- Computer Vision
- Natural Language Processing

RESEARCH PAPERS

Sperm Abnormalities Analysis

In progress

- Zahra Ahmadi, Amir Ezzati, Seyed Abolghasem Mirroshandel, Yasaman Boreshban
- Under Dr. Mirroshandel's guidance, I led a research initiative focused on enhancing sperm abnormality detection using various transformers models like VIT and Swin. We have recently worked on using contrastive learning and active learning on this dataset.

CSTC Circuit in the Progression from Mild Cognitive Impairment to Alzheimer's Disease

- Using Cortico-Striatum-Thalamo-Cortical Circuit in the Progression from Mild Cognitive Impairment to Alzheimer's Disease. Also, An fMRI Study Using the ADNI Database. This project is in progress

WORK EXPERIENCE

Research Assistant

Tehran, Iran

Sports Medicine Research Center

July 2024 – Present

- SMRC is one of the medical labs at Tehran University, where I conduct multiple research projects.

SKILLS

Programming Languages: Python, Java, C++

Machine Learning Frameworks: PyTorch, TensorFlow, Keras, Scikit-learn, Huggingface, LangChain

Data Visualization: Numpy, Pandas, Matplotlib, Seaborn

Web Development: HTML, CSS, MySQL

Operating Systems: Linux(Ubuntu), Windows, macOS

Extra Tools: Git, Latex

PROJECTS (Extra Projects on GitHub)

Normal Cyst Tumor And Stone | *PyTorch*

GitHub

- I've implemented Convolutional Neural Networks (CNNs), ResNet, and VGG for kidney CT image classification

Amazon Reviews | *PyTorch*

GitHub

- Sentiment analysis model with Logistic Regression on preprocessed Amazon Reviews, featuring diverse classification models (Embedding, BERT, Neural Networks) and text processing (tokenization, lemmatization, stemming).

An Odd Music Generator | *PyTorch, Python, Librosa*

GitHub

- Project explores Auto-encoders, audio processing, Seq2seq models, with Denoising, Note Recognition, Note Prediction, Noise Maker components, and an LSTM-based n-gram language model for music composition.

Analyzing Human Metaphase II Oocyte Images | *PyTorch*

GitHub

- This project showcases a robust deep learning-based multi-class semantic segmentation method designed for human metaphase II oocyte image analysis, as described in a paper

NLP Subject Similarity | *PyTorch, TensorFlow*

GitHub

- The project uses neural networks for textual similarity analysis, including Data Labeling, Multi-label RNN Classification, Text Preprocessing, and Classification Networks.

CERTIFICATIONS

- **Build Basic Generative Adversarial Networks (GANs)** | *Coursera, DeepLearning.AI* | [certificate] 2023
- **Deep Learning Specialization** | *Coursera, by Andrew Ng* | [certificate] 2023
- **Machine Learning** | *Coursera, by Andrew Ng* | [certificate] 2022
- **Introduction to TensorFlow** | *Coursera, by Laurence Moroney* | [certificate] 2022
- **Convolutional Neural Networks in TensorFlow** | *Coursera, by Laurence Moroney* | [certificate] 2022
- **Introduction to Data Science in Python** | *Coursera, by University of Michigan* | [certificate] 2021
- **Divide and Conquer, Sorting and Searching, and Randomized Algorithms** | *Coursera* | [certificate] 2021
- **Graph Search, Shortest Paths, and Data Structures** | *Coursera, by Stanford University* | [certificate] 2021

TEACHING EXPERIENCES

- Artificial Intelligence** | *University of Guilan* | *Dr. Y. Boreshban* | *Head TA* **Fall 2022**
- I oversaw assignments, guided projects, and created informative neural network videos to enhance learning and comprehension.
- Algorithm Design** | *University of Guilan* | *Dr. A. Khozaei* | *Head TA* **Fall 2021**
- I planned and assessed programming assignments for students.
- Data Structure** | *University of Guilan* | *Dr. F. Feyzi* | *Head TA* **Fall 2021**
- I designed and evaluated assignments for students to implement complex data structures and algorithms, including priority queues, hash tables, and linked lists.
- Discrete Mathematics** | *University of Guilan* | *Dr. S. M. Shekarian* | *Head TA* **Fall 2020** | **Fall 2021**
- I created weekly assignments and provided assessments with valuable feedback to help students
- Digital Circuits** | *University of Guilan* | *Dr. M. Aminian* | *Head TA* **Fall 2021**
- It was my responsibility to develop projects and assess assignments.
- Computer Aided Design** | *University of Guilan* | *Dr. M. Aminian* | *Head TA* **Fall 2022**
- I evaluated weekly assignments, designed the final project working with the FPGA board, and resolved the student's problem.
- Microelectronic Circuits** | *University of Guilan* | *Dr. M. Aminian* **Spring 2023**
- My responsibilities were to solve students' problems and assess assignments.

AWARDS AND ACHIEVEMENTS

Full Scholarship, B.Sc, University of Guilan
Ranked 10th among B.Sc Computer Engineering Students

LANGUAGES

- **English:** Fluent (IELTS Score: Overall 7 - L:7.5, R:7, S:7, W:6.5)
- **Persian:** Native

REFERENCES

- Dr. Seyed Abolghasem Mirroshandel** | *University of Guilan* **Rasht, Iran**
- Associate Professor of Computer Engineering
 - Email: mirroshandel@guilan.ac.ir
 - Google scholar
- Dr. Mahdi Aminian** | *University of Guilan* **Rasht, Iran**
- Assistant Professor of Computer Engineering
 - Email: mahdi.aminian@guilan.ac.ir
 - Google scholar
- Dr. Farid Feyzi** | *University of Guilan* **Rasht, Iran**
- Assistant Professor of Computer Engineering
 - Email: feizi@guilan.ac.ir
 - Google scholar