

ZAHRA AHMADI

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Tehran, Iran

EDUCATION

Guilan University

Bachelor of Science, Computer Engineering

Sep 2019 – Aug 2023

Rasht, Iran

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

RESEARCH PAPERS

Sperm Analysis

In progress

- Zahra Ahmadi, Yazdan Haghi, Seyed Abolghasem Mirroshandel, Yasaman Boreshban
- Under Dr. Mirroshandel's guidance, I led a research initiative focused on enhancing sperm abnormality detection using Meta-learning. Our exploration involved testing models like VIT and Swin transformers, resulting in impressive accuracy rates: 75% for acrosome, 97% for head, and 90% for vacuole abnormalities.

INTERESTS

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

PROJECTS

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.

Four In Row | *Python, PyGame*

GitHub

- The game is in single-player mode, with an AI Agent using the Negamax algorithm.

EXPERIENCES

Artificial Intelligence | *University of Guilan | Head TA*

Fall 2022

- Instructor: Dr. Y. Boreshban
- I oversaw assignments, guided projects, and created informative neural network videos to enhance learning and comprehension.

Algorithm Design | *University of Guilan | Head TA*

Fall 2021

- Instructor: Dr. A. Khozaei
- I planned and assessed programming assignments for students.

Data Structure | *University of Guilan | Head TA*

Fall 2021

- Instructor: Dr. F. Feyzi
- 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* | *Head TA*

Fall 2020 | **Fall 2021**

- Instructor : Dr. S. M. Shekarian
- I created weekly assignments and provided assessments with valuable feedback to help students

Digital Circuits | *University of Guilan* | *Head TA*

Fall 2021

- Instructor: Dr. M. Aminian
- It was my responsibility to develop projects and assess assignments.

Computer Aided Design | *University of Guilan* | *Head TA*

Fall 2022

- Instructor: Dr. M. Aminian
- I evaluated weekly assignments, designed the final project working with the FPGA board, and resolved the student's problem.

Microelectronic Circuits | *University of Guilan*

Spring 2023

- Instructor: Dr. M. Aminian
- My responsibilities were to solve students' problems and assess assignments.

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**

SKILLS

Programming Languages: Python, Java, C++

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

Data Visualization: Numpy, Pandas, Matplotlib, Seaborn

Web Development: HTML, CSS, MySQL

Operating Systems: Linux(Ubuntu), Windows, macOS

Extra Tools: Git, Latex

AWARDS AND ACHIEVEMENTS

Full Scholarship, B.Sc, University of Guilan

Ranked 10th among B.Sc Computer Engineering Students

LANGUAGES

- **English:** Fluent (IELTS: Overall 7)
- **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