

# ZAHRA AHMADI

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## EDUCATION

### Guilan University

B.Sc in Computer Engineering

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

Sep. 2019 – Aug 2023

Rasht, Iran

## SKILLS

**Programming Languages:** Python, Java, C++, C, VHDL, MySQL

**ML Frameworks:** Pytorch, TensorFlow, Keras, Scikit-learn, Huggingface

**Data Science Tools:** Numpy, Pandas, Matplotlib, Seaborn

**Web Development:** HTML, CSS

**Operating Systems:** Linux(Ubuntu), Windows, macOS

**Extra Tools:** Git, Latex

**Technical Expertise:** Machine Learning, Deep Learning, Computer Vision, Natural Language Processing, Data Structures, Algorithms

## RESEARCH PAPERS

### Sperm Analysis

January 2023 - Present

- Zahra Ahmadi, Yazdan Haghi, Seyed Abolghasem Mirroshandel, Yasaman Boreshban
- In this research project, we employed Meta-learning to improve the accuracy of sperm abnormality detection.

## INTERESTS

- Machine Learning
- Deep Learning
- Reinforcement Learning
- Data Mining
- Computer Vision
- Natural Language Processing
- Signal Processing

## PROJECTS

### Normal Cyst Tumor And Stone | [\[repo\]](#)

PyTorch

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

### Amazon Reviews | [\[repo\]](#)

PyTorch

- 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 | [\[repo\]](#)

PyTorch/ Python/ Librosa

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

### Multi Class Weather | [\[repo\]](#)

PyTorch

- I worked on a Multi-class Weather Dataset using computer vision, deep neural networks (e.g., ResNet, Inception), and k-fold cross-validation for evaluation.

### Analyzing Human Metaphase II Oocyte Images | [\[repo\]](#)

PyTorch

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

### NLP Subject Similarity | [\[repo\]](#)

PyTorch/ TensorFlow

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

### Students Academic Performance | [\[repo\]](#)

Python/TensorFlow

- The project aimed to predict student acceptance or rejection during an academic semester using a neural network built from scratch and TensorFlow.

### Trie | [\[repo\]](#)

Java

- I created a student management system, using a HashTable to store student data by IDs and a Trie tree for key management.

### Four In Row | [\[repo\]](#)

Python/ PyGame

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

## CERTIFICATIONS

- **Build Basic Generative Adversarial Networks (GANs)** | Coursera, by Sharon Zhou | [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** | [certificate] 2021
- **Divide and Conquer, Sorting and Searching, and Randomized Algorithms** | [certificate] 2021
- **Graph Search, Shortest Paths, and Data Structures** | [certificate] 2021
- **Introduction to HTML5** | [certificate] 2022

## TEACHING ASSISTANT EXPERIENCE

- 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
  - Providing solutions to students' problems and assessing assignments were my responsibilities.

## AWARDS AND ACHIEVEMENTS

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

## LANGUAGES

- **Persian** : Native
- **English** : Fluent (I will take my IELTS exam in November)

## 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
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