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EDUCATION

Sharif University of Technology

M.S. in Computer Engineering, Minor in Artificial Intelligence and Bioinformatics

Tehran, Iran

Sep 2023 – Present

- GPA: 18.82/20 (4.0/4.0)

University of Guilan

B.S. in Computer Engineering

Rasht, Iran

Sep 2019 – Aug 2023

- GPA: 19.26/20 (3.91/4.0)
- Rank 2 among 68 students of the 2019 computer engineering entries.

RESEARCH INTEREST

- › Machine Learning
- › Deep Learning
- › Computer Vision
- › Medical Image Analysis
- › OOD Generalization
- › Self Supervised Learning
- › Machine Learning Safety

Relevant Coursework

- Deep Learning
- Machine Learning
- Natural Language Processing
- Intelligent Analysis of Biomedical Images
- Security and Privacy of Machine Learning
- Artificial Intelligence

RESEARCH EXPERIENCE

Graduate Research Assistant

Robust and Interpretable Machine Learning lab(RIML lab)

Sharif University of Technology

Sep 2023 - Present

Supervisor: Dr. MH Rohban

- Out-of-Distribution generalization in histopathology images
- Osteoporosis risk factors estimation Collaboration with Tehran University of Medical Sciences
- Renal cancer detection and classifying type of tumors Collaboration with Iran University of Medical Sciences

Undergraduate Research Assistant

Machine Learning researcher

University of Guilan

Oct 2022 - Oct 2023

Supervisor: Dr. SA Mirroshandel

- Data-Efficient human sperm abnormality detection using Uncertainty Sampling(Active Learning)
- Human sperm abnormality detection using Meta-Learning(MAML approach)
- Producing the plural of Arabic singular words

TEACHING EXPERIENCE

Sharif University of Technology

Teaching Assistant







- Machine Learning Dr. Sharifi Zarchi — Fall 2024
- Intelligent Analysis of Biomedical Images Dr. Rohban — Fall 2024

University of Guilan

Teaching Assistant

- Microelectronic Circuits Dr. Aminian — Winter 2023
- Artificial Intelligence Dr. Boreshban — Fall 2022
- Digital Circuits Dr. Aminian — Fall 2022
- Advanced Programming (in Java) Dr. Mirroshandel — Winter 2022

PROJECTS

- Data-Efficient human sperm abnormality detection using Uncertainty Sampling** May 2024 - Sep 2024
- (Active Learning)
 -  GitHub
- Retrieval Augmented Generation with LLMs to Detect DSM-5 Disorders** July 2024
- The project focuses on improving LLM models to accurately detect psychological disorders by using a RAG (Retrieval-Augmented Generation) pipeline, with the DSM-5 as the reference for retrieval.
 -  GitHub
- Brain MRI Segmentation using Diffusion Probabilistic Model** Feb 2024
- This project implements a DPM-based model for brain tumor segmentation over MRI images based on "MedSegDiff: Medical Image Segmentation with Diffusion Probabilistic Model" paper.
 -  GitHub
- Graph-Level Classification of Histopathology Images using Graph Neural Network** Dec 2023
- This project implements nuclei extraction from histopathology images, a GCN model for node embeddings, and a GCN-based graph prediction model with global pooling for graph-level embeddings.
 -  GitHub
- Breast Cancer Classification using Multiple Instance Learning** Dec 2023
- This project employs an attention-based deep multiple instance learning architecture to classify and localize histopathology images at different magnification levels as benign or malignant tumors.
 -  GitHub
- Human Sperm Abnormality Detection using Meta-Learning** Jun 2023 - Dec 2023
- This project uses the MAML algorithm with Learn2Learn and PyTorch to create a meta-learning model that performs well on three tasks: sperm head, acrosome, and vacuole abnormality detection.
 -  GitHub




TECHNICAL SKILLS

Programming Languages: Python, Java, C++, PHP, SQL (Postgres)
ML Frameworks: PyTorch, TensorFlow, Scikit-learn, Keras
Libraries: Pandas, NumPy, Matplotlib, Seaborn, OpenCV, librosa, Hugging Face
Developer Tools: Git, Github, VS Code, Google Colab, Kaggle, Visual Studio, PyCharm, IntelliJ
Web Development: Django, Laravel, React, HTML/CSS, JavaScript

HONORS AND AWARDS

- Highly Ranked in Bachelor of Computer Engineering** July 2023
- Highly ranked among 68 students of the 2019 computer engineering entries at University of Guilan
- Highly Talented Student Admission** Apr 2023
- I was admitted to the Master's degree program in Computer Engineering with a focus on Artificial Intelligence and Bioinformatics at Sharif University of Technology. I was also accepted into other programs and universities but withdrew due to my strong passion for this field.
- Tuition Waiver, B.Sc, University of Guilan** Sep 2019

CERTIFICATIONS

- Deep Learning** | Stanford University and DeepLearning.AI |  Verification Nov 2022
- Instructor: Andrew Ng
- Reinforcement Learning** | University of Alberta |  Verification Sep 2022
- Instructor: Martha White, Adam White
- Machine Learning** | DeepLearning.AI |  Verification Sep 2022
- Instructor: Andrew Ng