M.Shakib HOSSEINZADEH

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As a Machine Learning engineer in training, I'm keen on using AI algorithms to solve real-world problems in various industries and schools. Currently, I'm exploring Data Science and Computer Vision, actively learning about data analysis and image manipulation. I'm eager to advance my skills further by deploying ML models in practical applications. Additionally, I have a strong interest in algorithms and problem-solving, particularly in the realms of image and data analysis. I thoroughly enjoy coding and find it immensely satisfying to create efficient and innovative solutions. Lately, I have been enjoying participating in competitive deep learning contests as they provide invaluable learning experiences and push me to grow my skills. Working as part of a team in these contests has been especially rewarding, as it encourages me to learn more and approach problems from diverse perspectives. I'm excited to embrace new challenges that contribute to my personal and professional growth.

EDUCATION

Sep 2023 — Present

***MSc* - Computer Science** - Amirkabir University of Technology - Tehran Polytechnic, Tehran, IR
Self-supervised learning in computational histopathology: including knowledge distillation and generative diffusion-based self-supervised learning (SSL) for medical images. Aim: Improve medical diagnosis and treatment without the need for human-labeled data.

Sep 2018 — Feb 2023

***BSc* - Computer Science** - University of Science and Technology of Mazandaran, Mazandaran, IR
GPA: 3.92 / 4 — 19.1 / 20 - Rank: 1
Project: Applied an enhanced YOLO (You Only Look Once) architecture for object detection on satellite imagery, optimized to accurately detect and track multiple vehicles simultaneously. Modifications to the network architecture improved detection performance in challenging conditions, such as varying scales, occlusions, and complex backgrounds.

EXPERIENCE

Competitive Experience

Rayan International AI Contest - Top 10 Team

- focusing on building high-performance and robust AI models across diverse challenges. Tasks included classification of noisy, unlabeled images, teeth segmentation with poisoned and limited data, hierarchical group robustness targeting worst-performing categories, zero-shot anomaly detection, multi-object retrieval with text queries, and defending against backdoor attacks. These experiences showcased innovative approaches to addressing real-world problems, emphasizing robustness, security, and efficiency in AI solutions. - Oct 2024 - Dec 2024

Prediction of Obstructive Sleep Apnea Based on Respiratory Sounds - Top 6 Team

- Worked on analyzing patient respiratory sound recordings to develop predictive models for obstructive sleep apnea. This project involved advanced signal processing, feature extraction, and machine learning techniques to identify apnea events from audio data accurately. - Aug 2024 - Oct 2024

Teaching Assistant

MSc

- Machine Learning - Sep 2024 - Jan 2024

- Computational Data Mining - Sep 2024 - Jan 2024

BSc

- Introduction to Computer & Programming - Sep 2019 - Jan 2020 & Sep 2020 - Jan 2021

- Data Structures & Algorithms - Jan 2020 Jun 2020

- Foundation of Matrix and Linear Algebra - Jan 2020 Jun 2020

CERTIFICATES

Machine Learning Specialization by Andrew Ng, Coursera, August 2022

Neural Networks and Deep Learning by Andrew Ng, Coursera, Oct 2022

Learning How to Learn by Barb Oakley, Coursera, November 2023

VOLUNTEER

53th Annual Iranian Mathematics Conference - Executive Committee - Sep 2022

HONORS

BSc: Achieved the highest CGPA in Computer Science among BSc students in the past 10 years - Feb 2023

MSc: Secured the highest GPA in the first semester (19.64/20).

SKILLS

Programming Languages: Python, MATLAB/Octave, C/C++

ML Tools and Libraries: Tensorflow, Keras, PyTorch, OpenCV, Scikit-Learn, NumPy, Pandas, Matplotlib

Additional Skills: Git, Docker, Image Processing, Data Scraping, Problem Solving, Automation,

Languages: English (Fluent), Persian (Native)