Amir Hosein Haji Mohammad Rezaie

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EDUCATION

Bachelor of Computer Engineering   **Aug 2020 - Present**
Sharif University of Technology, Iran, Tehran

current GPA: 3.97/4

Diploma at Mathematics and Physics   **Aug 2017 - July 2020**
Atomic Energy High school, Iran, Tehran

total GPA: 19.94/20

International Olympiad preparation course   **Aug 2019 - July 2020**
Young Scholar's Club, Iran, Tehran

HONORS & AWARDS

Bronze medal of 14th International Olympiad on Astronomy and Astrophysics   **Aug 2020**
Estonia(online)

Gold medal of 15th National Olympiad on Astronomy and Astrophysics   **Sep 2019**
I ranked 4th among 54 students in final step in olympiad

Member of INEF   **Aug 2020 - Present**
Awarded the Scholarship of elite students to be exempted from Iranian univeristy exam

WORK EXPERIENCE

Research Assistant   **June 2022 - Present**
Sharif University of Technology   *Iran, Tehran*

- research assistant at the RIML laboratiry supervised by Dr. Mohammad Hossein Rohban
  I work with Mohammad Azizmalayeri(PhD Student in Aritficial Intelligence supervised by Dr. Mohammad Hossein Rohban) and our studies is about developing methods to solve Spurious Correlations problems for State-of-the-Art deep learning models. the result of my work in this lab is a paper that is submitted and accepted in ICML 2023 SCIS workshop
  . you can see the submission page for paper here

Machine Learning Research Assistant   **June 2023 - Present**
L3S Research Center   *Hanover, Germany*

- research assistant at the L3S Research Center supervised by Prof. Prasenjit Mitra
  I work with Ali Rasekh(PhD Student in Aritficial Intelligence supervised by Prof. Prasenjit Mitra) and our studies is multi-modal deep neural network. More precisely, I investigate methods to make this kind of model robust againt datasets that their samples have missing modality problem which can decrease the performance of multi-modal models.

Data science intern   **July 2023 - Present**
MCI   *Tehran, Iran*

- 7th internship at MCI
  I work on several projects to develop NLP models for different tasks. currently, I'm working on main-content detection project to use NLP models for detecting main-content on html web page.

Teaching Assistant   **Sep 2022 - Present**
Sharif University of Technology   *Iran, Tehran*

- Artificial Intelligence - Spring 2022 semester (in progress) - presented by Dr. Mohammad Hosein Rohban
  I design practical PyTorch assignment for Neural Networks topic and the final course project.
- Advanced Programming - Spring 2022 semester (in progress) - presented by Dr. Mohammad Amin Fazli
  I design practical java programming assignments and also I work in the team of designing course project.
- Data Structures and Algorithms - Fall 2022 semester - presented by Mahdi Safarnejad-Boroujeni
  I design theoretical assignments and I grade midterm and quizzes exams.
- Linear Algebra course - Fall 2022 semester - presented by Dr. Samira Hosein Ghorban
  I design theoretical assignments and jupyter notebooks for lecture sessions.
- Engineering probability and statistics - Fall 2022 semester - presented by Dr. Ali Sharifi Zarchi
  I design theoretical assignments in this course and I grade the answers given to assignment.
- Engineering probability and statistics - Fall 2022 semester - presented by Dr. Abolfazl Motahari
  I grade the answers given to quizzes and assignments and I hold the quizzes.
- Fundamentals of C programming course - Fall 2022 semester - presented by Dr. Mohammad Amin Fazli
  I design C programming assignments in this course and I hold troubleshooting class for students.
- Fundamentals of python programming course - Fall 2022 semester - presented by Aria Kowsary
  I design python programming assignments in this course.

Astronomy Olympiad teacher   **Aug 2019 - June 2022**
                                                                              Iran, Tehran

I taught the Astronomy Olympiad topics such as Astrophysics, Data Analysis, Cosmolgy, ... in Irans' best high schools.

PROJECT

Image Classification   **June 2022**
Artificial Intelligence course project

In this work, I implemented the architecture of ResNet-18 neural network and trained it on CIFAR-10 dataset which achieves 90% accuracy on test time and also I visualized the feature space of the dataset which is extracted by the model.

Image Colorization   **June 2022**
Artificial Intelligence course project

In this work, I implemented the architecture of U-Net neural network and trained it on CIFAR-10 dataset which I use this model to colorize the grayscale images and you can see the results in description of the repository.

DDQN-Implementation   **June 2022**
Artificial Intelligence course project

In this project, I implemented the DDQN algorithm for doing reinforcement learning on ping-pong atari game in OpenAI-Gym environment. you can see the results of training and playing of agent in the description of repository.

YuGiOh Game   **June 2021**
Advanced Programming course project

I was one of the members of team 45 to implement YuGiOh game for the Advanced Programming course presented by Dr. Mohammad Amin Fazli. Technologies that we used for this project are: Java, JavaFX, CSS. Also we implemented this game on the network by using ngork.

PUBLICATIONS

M. Azizmalayeri*, R. Abbasi*, **A. haji Mohammad rezaie***, R. Zohrabi*, M. Amiri*, M. T. Manzuri, M. H. Rohaban, "Spuriosity Rankings for Free: A Simple Framework for Last Layer Retraining Based on Object Detection", *ICML 2023 SCIS workshop*, 2023 (*equal contribution)

SKILLS

Programming	Python, R, Java, C ,C++, Git, html, css, javascript, LaTeX, MarkDown
Python packages	Numpy Scipy, Scikit-learn, Pytorch, TensorFlow
DBMS	MongoDB, PostgreSQL
Hardware Design	Verilog, Quartus, ModelSim
Communication	Persion (native), English (professional), Arabic (intermediate)
Other	Github, Microsoft Office

COURSEWORK

Machine Learning: 20/20

Artificial Intelligence: 19.9/20

Linear Algebra: 20/20

Signals & Systems: 20/20

Computer simulation: 20/20

Engineering Probability and Statistics: 20/20

Advanced Programming: 20/20

Fundamentals Programming: 19/20

Digital System Design: 19.6/20

Algorithm Design: 18.5/20