Mohammad Mashreghi

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Education

Over six years, I earned three academic degrees simultaneously: dual B.Sc. degrees in CE and EE from Tehran Polytechnic, and a M.Sc. degree in EE (dual level) from the University of Tehran (2016-2023, excl. 2022).

Tehran University — Tehran, Iran
Bachelor of Electrical Engineering — *2020 – 2024*
- Grade: 18.07/20 **US GPA: 3.88/4**

Derkhshande Sarraf High School — Yazd, Iran
Diploma in mathematics and physics — *2017 – 2020*
- Grade: 19.07/20

Top Awards / Honours

1. 17th Place among 103 Electrical Engineering B.Sc. students, University of Tehran 2023
Degrees: Electrical Eng.

2. Ranked 1016th in the National B.S Entrance Exam 2020
among more than 155,000 participants.

3. Full Scholarship from the University of Tehran. 2020

Articles

"Risk Sensitivity in Multi Agent Reinforcement Learning Review"
- **Authors**: Hafez Ghaemi, Mohammad Mashreghi , and Shirin Jamshidi — **Status**: In progress

Experience

- **Teaching Assistant — Tehran University**
  - Electrical Introduction — Spring 2022, Spring 2023 — Dr. Samimi
  - General workshop — Spring 2022, Spring 2023 — Dr. Samimi
  - Engineering Probability and Statistics — Spring 2023 — Dr. A. Dehaqani
  - Linear Control Systems — Fall 2023 — Dr. Yaghmaei
  - Engineering Mathematics — Fall 2023 — Dr. Nasiri
  - Digital Systems 2 — Fall 2023 — Dr. Safari

Skills

Programming Languages: Teamwork, Time Management,adaptability, Critical thinking
Programming Languages: Python, Java, C, C++, Matlab, HTML/CSS, Verilog
Embedded Systems: Arduino UNO/NANO/Pro mini, STM32F103
Miscellaneous: Ping Pong, Billiards, Swimming, Traveling

Current Research Interests

1. Federated Learning — 2. Adversarial ML — 3. Reinforcement Learning
4. Analyze Finance Market — 5. Dynamic Systems

Course Projects

- **Robust-Federated-Primal-Dual-Learning-for-Android-Malware-Classification-via-Adversarial-Robustness** | In this project, the goal is to achieve robust federated learning for Android malware classification through adversarial robustness.
- **Detect fake picture with ML** | In this project, fake and real pictures of mountains, sea, and forests are used to detect fake ones.
- **Food Hunting** | A simple code for getting food faster than others, from students who don't want their food in university.
- **Deep Learning and Neural Network project** | MLP, Transfer Learning, Object Detection, Image Captioning, Intent Classification, Extractive QA System, Vision Transformer Image Classification
- **Trade bot** | A simple bot to buy and sell in forex, analyze candles with MACD 12, SMA, EMA 7 with complicated conditions.
- **Electromagnetic Levitation System Modeling** | A simple simulation in Matlab.
- **Designing an online market with C++ with different facilities** | An online market designed using C++ with various facilities.
- **Booth Multiplier** | A 5-bit booth multiplier implemented with Verilog.
- **MIPS** | An implementation of a MIPS CPU written in Verilog.
- **PacMan game** | A simple game in CMD.
- **Buffon's needle** | Buffon's needle is one of the oldest problems in geometric probability.
- **Euler's number** | Uniform sums and Euler's number.
- **Banach's matchbox** | Banach's match problem is a classic problem in probability attributed to Stefan Banach.
- **Birthday problem** | In probability theory, the birthday problem asks for the probability that, in a set of n randomly chosen people, at least two will share a birthday.
- **Image processing** | Detecting specific ICs on a PCB from its image.
- **RTL Circuits** | Design a circuit to calculate hyperbolic cosine approximately using its Taylor series.
- **UT-messenger** | A simple messenger made with C++ that works in the command line.

In addition, for more information about some of the university course project, please visit my GitHub. I haven't uploaded the codes related to the inventions and articles on GitHub as of now they are under review.

Certificates

- **Using Python to Access Web Data** | Coursera
- **Advanced Learning Algorithms** | Coursera
- **Object-Oriented Data Structures in C++** | Coursera
- **Introduction to Git and GitHub** | Coursera

Languages

Persian: Native
English: Advanced