

Arshia Soltani Moakhar

SHARIF UNIVERSITY OF TECHNOLOGY · COMPUTER ENGINEERING

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Education

Sharif University of Technology

B.S. IN COMPUTER ENGINEERING

Tehran, Iran

Sep. 2019 - present

- Overall GPA: **18.33/20**
- Last two semesters GPA: **19.66/20**

Allameh Helli High School

DIPLOMA IN MATHEMATICS AND PHYSICS

Tehran, Iran

Sep. 2017 - Oct. 2019

- Overall GPA: **18.22/20**
- Affiliated with National Organization for Development of Exceptional Talents (NODET)

Publications

Your Out-of-Distribution Detection Method is Not Robust!

NeurIPS

ADVANCES IN NEURAL INFORMATION PROCESSING SYSTEMS

2022

- We found that Out-of-Distribution Detection methods are not robust against end-to-end attacks. In addition, We propose a method named ATD which significantly outperforms other methods.
- Second Author

Honors & Awards

2019 **Silver Medal**, International Olympiad in Informatics (same as Algorithm Design in Computer Science)

Baku, Azerbaijan

2019 **Bronze Medal**, international junior competitive programming competition, info(1)CUP

Romania

2018 **Gold Medal (First Place)**, National Olympiad in Informatics

Tehran, Iran

2017 **Silver Medal**, National Olympiad in Informatics

Tehran, Iran

2020 **First Place**, Sharif CodeJam

Tehran, Iran

Research Experience

Robust and Interpretable Machine Learning Lab

Sharif University of Technology

RESEARCH ASSISTANT

Aug. 2021 - Present

- Under Dr. Mohammad Hossein Rohban Supervision
- Publish a paper in **NeurIPS 2022** with this lab
- Research in Out-of-Distribution detection methods and Adversarial Robustness methods intersection.

Domain Incremental Continual Learning

Sharif University of Technology

RESEARCH ASSISTANT

Sep. 2021 - Mar. 2022

- Under Dr. Mahdieh Soleymani Baghshah Supervision
- Analyzing the neural networks which continually adapt to new domains.

Teaching

Main Graph Theory Instructor

Tehran, Iran

SUMMER CAMP FOR IRAN NATIONAL OLYMPIAD IN INFORMATICS

2021

- Forty students were chosen from 10000 students by three exams participated in the summer camp.

Algorithm Instructor

Tehran, Iran

NATIONAL TEAM CAMP FOR IRAN'S NATIONAL OLYMPIAD IN INFORMATICS.

2021-2022

- The national team consists of the four chosen students from 10000.
- I am responsible for some graph algorithms, e.g., maximum flow.

Game Theory Course Design, Team Leader

RASTAIHA(NGO)

Isfahan, Iran

Mar. 2021

- The team designed a two parts online course for high school students.
- The first part topic was "Truthful Allocation Mechanisms Without Payments."
- The second part was about collaboration: core Value and Shapley Value.

Algorithm tutor

HIVA KARAMI AND NEGAR ARJ PERSONAL TUTOR

Tehran, Iran

2019 - 2021

- Hiva has achieved a national gold medal in INOI.
- She was the first girl to achieve this medal in the past ten years.
- Those classes were almost free, aiming for more sexual equality in INOI.

Experience

Iran National Olympiad in Informatics

ALGORITHMIC PROBLEM DESIGN TEAM LEADER

Tehran, Iran

Jul. 2020 - Sep. 2021

- The team designed **novel** and **challenging** algorithmic problems.
- Exams chose Iran national team, sent to International Olympiad in Informatics.
- As a leader, I manage the team and meetings. Also, like other members, I evaluate problems' novelties & difficulties. Propose novel questions and create test cases for evaluating students' codes.

Related Courses

Sharif University of Technology

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| <i>Artificial Intelligence</i> | 20.0/20 |
| <i>Machine Learning</i> | 20.0/20 |
| <i>Discrete Structures</i> | 20.0/20 |
| <i>Data Struct & Algorithms</i> | 20.0/20 |
| <i>Design Of Algorithms</i> | 20.0/20 |
| <i>Game Theory</i> | 20.0/20 |
| <i>Adv Information Retrieval(NLP)</i> | 19.9/20 |
| <i>Theory Of Machines & Language</i> | 19.5/20 |
| <i>Linear Algebra</i> | 18.8/20 |
| <i>Eng Probability & Statatic</i> | 18.2/20 |

Online Courses

Deep Learning Specialization by DeepLearning.AI
Basic Generative Adversarial Networks by DeepLearning.AI
Game Theory I, II by Stanford University
Multi-Task and Meta-Learning(CS330) by Stanford University
Introduction to Deep Learning 11-785 by CMU University

Skills

Machine Learning Python, Pytorch, TensorBoeard, Numpy, Pandas, Matlab
Coding C++, Java, JavaScript, Bash, Linux, Git, Django, Racket
Writing L^AT_EX, Visio