# Ali Ansari

### Tehran, Iran

#### Education

# Sharif University of Technology

Tehran, Iran

B.Sc. in Computer Engineering - Fully funded

Oct. 2020 - present

• Overall GPA: 19.26/20 - GPA in Major: 19.50/20

• Thesis: A data-driven approach for robust detection of out-of-distribution data (Advised by Prof. M.H. Rohban) - Grade: 20/20

## Hasheminejad 1 High School

Mashhad, Iran

Diploma in Mathematics and Physics

Sept. 2017 - June 2020

#### **Publications**

### RODEO: Robust Outlier Detection via Exposing Adaptive Out-of-Distribution Samples ICML 2024

Hossein Mirzaei, Mohammad Jafari, Hamid Reza Dehbashi, <u>Ali Ansari</u>, Sepehr Ghobadi, Masoud Hadi, Arshia Soltani Moakhar, Mohammad Azizmalayeri, Mahdieh Soleymani Baqhshah, Mohammad Hossein Rohban

### Scanning Trojaned Models Using Out-of-Distribution Samples

Submitted to NeurIPS 2024

Hossein Mirzaei, <u>Ali Ansari</u>\*, Bahar Dibaei Nia\*, Mojtaba Nafez, Moein Madadi, Sepehr Rezaee, Zeinab Sadat Taghavi, Arad Maleki, Kian Shamsaie, Mahdi Hajialilue, Jafar Habibi, Mohammad Sabokrou, Mohammad Hossein Rohban

### Toward Robust Novelty Detection Under Style Shifts

Submitted to NeurIPS 2024

Hossein Mirzaei, Mojtaba Nafez, Moein Madadi, Arad Maleki, Mahdi Hajialilue, Zeinab Sadat Taghavi, Sepehr Rezaee, <u>Ali Ansari</u>, Bahar Dibaei Nia, Kian Shamsaie, Mohammadreza Salehi, Jafar Habibi, Mahdieh Soleymani Baghshah, Mohammad Sabokrou, Mohammad Hossein Rohban

#### Research Interests

- Trustworthy & Safe AIAdversarial Robustness
- Transformers
- Computer Vision
- Representation Learning
- Algorithms

#### Honors and Awards

Top 10% Academic Ranking, Sharif University of Technology

2024

 ${f Ranked~3^{rd}}$  among more than  ${f 150,\!000}$  students, National University Entrance Exam of Iran (Konkur)

2020

Received silver medal among over 10000 students, Iran National Olympiad in Informatics

2019

### Research Experiences

#### Sharif University of Technology

Aug 2022 - present

Research Assistant, supervised by Prof. M.H. Rohban

Tehran, Iran

• Research areas: Adversarial Robustness, Backdoor Attacks, Out-of-Distribution Detection

### Projects

- RODEO: Robust Outlier Detection via Exposing Adaptive Out-of-Distribution Samples (accepted at ICML 2024)
- TRODO: Scanning Trojaned Models Using Out-of-Distribution Samples (submitted to **NeurIPS 2024**, post-rebuttal scores: 6-6-6-5-5-4)
- Toward Robust Novelty Detection Under Style Shifts (submitted to **NeurIPS 2024**, post-rebuttal scores: 7-6-3)

#### Chinese University of Hong Kong

July 2023 - present

Research Assistant, co-supervised by Prof. Tsung-Yi. Ho and Dr. Pin-Yu Chen

Hong Kong

Hong Kong

- Conducted a literature review on transformers architecture and LLMs
- Developing a method to detect jailbreaks in LLMs both effectively and efficiently
- Preparing a submission to ICLR 2025

### Hong Kong University of Science And Technology

July 2023 – Sep 2023

July 2020

Research Assistant, supervised by Prof. A. Goharshady

- Designing parameterized algorithms that leverage tree-width and related parameters to identify the hierarchical structure of data locality in a sequence of memory accesses, with the aim of minimizing cache misses
- Became familiar with various topics in theoretical computer science including cryptography, program analysis and game theory

# Teaching Experiences

Teaching Assistant

- Machine Learning Sharif University of Technology Spring 2024
- Computer Networks Sharif University of Technology Spring 2024
- Probability and Statistics Sharif University of Technology Spring 2022
- Design & Analysis of Algorithms Sharif University of Technology (Fall 2022, Spring 2023, Fall 2023)
- Data Structures and Algorithms Sharif University of Technology (Spring 2022)
- Theory of Languages and Automata Sharif University of Technology (Spring 2023)

#### Instructor

• Algorithms and data structures to volunteers of Informatics Olympiad - 2021

#### Coursework

- Optimization for Machine Learning (Online, EPFL)
- Deep Learning for Computer Vision (Online, cs231n, Stanford University)
- Convex Optimization (Sharif University of Technology, 17.8 / 20)
- Fundamentals of 3D Computer Vision (Sharif University of Technology, 20/20)
- Machine Learning (Sharif University of Technology, 20/20)
- Design & Analysis of Algorithms (Sharif University of Technology, 20/20)
- Computer Networks (Sharif University of Technology, 20/20)
- Artificial Intelligence (Sharif University of Technology, 19.8/20)
- Linear Algebra (Sharif University of Technology, 20/20)

# Technical Skills

Languages: Python, C++, C, HTML/CSS, Java, SQL, Go, R

**Technologies**: Git, Docker, Bash

Frameworks: PyTorch, TensorFlow, Wandb, hugginface

# Other Projects

# TinyNeRF | Python, Pytorch | 7 Github

Winter 2024

- A simplified version of NeRF, implemented using PyTorch
- There is also an implementation of it in NeRF repository using TensorFlow
- This was the final project of Fundamentals of 3D Computer Vision course

# C-Minus Compiler | Python | Github

Fall 2023

- As a team, implemented a Complier for C-Minus (A simplified version of C)
- This was the final project of Compilers Design course

# YuGiOh | Java | 👩 Github

January 2021, June 2021

- Implemented YuGiOh game in Java
- Used LibGDX as the main library for the game

# Work Experiences

# Software Engineer at Divar

Tehran, Iran

 $\bullet$  Worked with Django to develop the performance evaluation system for employees of the organization May 2022

# Languages

English | Professional Proficiency

**IELTS Overall Band score: 8.0** 

Persian | Native proficiency

#### **Hobbies**

Hiking, Electronic Music, Movies, Podcasts

#### References

Mohammad Hossein Rohban

- Assistant Professor Sharif University of Technology
- rohban@sharif.edu

#### Pin-Yu Chen

- Principal Research Staff Member- IBM Research AI
- pin-yu.chen@ibm.com

# Mahdieh Soleymani Baghshah

- Associate Professor Sharif University of Technology
- soleymani@sharif.edu

#### Mohammad Sabokrou

- Staff Research Scientist Okinawa Institute of Science and Technology
- mohammad.sabokrou@oist.jp

## Amir Kafshdar Goharshady

- Assistant Professor Hong Kong University of Science and Technology
- goharshady@cse.ust.hk