Ali Ansari

Tehran, Iran

🗖 alians310322@gmail.com 🝖 Google Scholar 🝖 Homepage 🎧 <u>Github</u>

Education

Sharif University of Technology

B.Sc. in Computer Engineering - Fully funded

- Overall GPA: 19.26/20 (3.985/4.0) GPA in Major: 19.50/20 (3.97/4.0)
- 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

Diploma in Mathematics and Physics

Publications

RODEO: Robust Outlier Detection via Exposing Adaptive Out-of-**Distribution Samples**

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

Scanning Trojaned Models Using Out-of-Distribution Samples

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

A Contrastive Teacher-Student Framework for Novelty Detection under Style Shifts

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

Research Interests

| Trustworthy & Safe AIGenerative AI | Large Language Models Computer Vision | Representation Learning Algorithms |
|---|---|--|
|---|---|--|

Honors and Awards

| Ranked 1st as a team in a nation-wide competition on developing Persian LLM Worked on the problem of efficient inference of Falcon model on CPU. | 2024 |
|--|------|
| Bronze Medal in Regional ICPC Contest | 2022 |
| Ranked 3^{rd} among more than 150,000 students, National University Entrance Exam of Iran (Konkur) | 2020 |
| Received silver medal among over 10000 students, Iran National Olympiad in Informatics | |
| Research Experiences | |

| Sharif University of Technology | ${\bf Aug} \ {\bf 2022-present}$ | |
|---|----------------------------------|--|
| Research Assistant, supervised by Prof. M.H. Rohban | Tehran, Iran | |
| • Research areas: Computer Vision, Trustworthy AI (Adversarial Robustness, Backdoor Attacks, Out-of-Distribution Detection) | | |
| | | |

Projects

NeurIPS 2024

Tehran, Iran Oct. 2020 - present

Submitted to ICLR 2025

Mashhad, Iran Sept. 2017 - June 2020

ICML 2024

- RODEO: Robust Outlier Detection via Exposing Adaptive Out-of-Distribution Samples (ICML 2024)
- TRODO: Scanning Trojaned Models Using Out-of-Distribution Samples (NeurIPS 2024)
- A Contrastive Teacher-Student Framework for Novelty Detection under Style Shifts (submitted to ICLR 2025)

Chinese University of Hong Kong

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

- Conducted a literature review on transformers architecture and LLMs security
- Develop a method to detect jailbreaks in LLMs both effectively and efficiently

Hong Kong University of Science And Technology

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 $July\ 2023-Sep\ 2023$

Hong Kong

July 2024 – present Hong Kong

\sim 41 Б •

| Other Projects | |
|---|-------------------------------|
| TinyNeRF Python, Pytorch 🎧 Github | Winter 2024 |
| A simplified version of NeRF, implemented using PyTorchThere is also an implementation of it in NeRF repository using TensorFlowThis 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 CThis was the final project of Compilers Design course |) |
| YuGiOh Java 🔿 Github | January 2021, June 2021 |
| Implemented YuGiOh game in JavaUsed LibGDX as the main library for the game | |
| Work Experiences | |
| Software Engineer at Divar Worked with Django to develop the performance evaluation system for emp Tools & Frameworks: Django Python Kubernetes Docker GitLa | |
| 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 ChenPrincipal Research Staff Member- IBM Research AIpin-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