Keivan Rezaei
Curriculum Vitae

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EDUCATION

2022 – NOW   **Doctor of Philosophy**
Computer Science
University of Maryland, College Park
Supervised by Prof. Feizi and Prof. Hajiaghayi

2022 – 2024   **Master of Science**
Computer Science
University of Maryland, College Park

2018 – 2022   **Bachelor of Science**
RANK 1ST
Computer Engineering
Sharif University of Technology

RESEARCH INTEREST

| knowledge localization | unlearning | model editing |

RESEARCH EXPERIENCE

SEP 2022 – NOW

Graduate Research Assistant, **Reliable AI Lab, University of Maryland**
Research on interpretability, robustness, failure modes, and biases in vision-language generative and discriminative models.
supervised by Prof. Soheil Feizi

MAY 2025 – AUGUST 2025

Research Intern, **Document Intelligence Lab , Adobe**
Text-image alignment
supervised by Dr. Ani Nenkova

FEBRUARY 2025 – APRIL 2025

Student Researcher, **OMEGA , Google AI**
Research on data selection for the task of LLM pretraining; developing a classifer to discard bad tokens.
supervised by Dr. Anton Tsitsulin

MAY 2024 – OCTOBER 2024

Research Intern, **MOSAIC, Allen Institute for AI (Ai2)**
Research on large language models unlearning; proposing a new benchmark for *restorative* unlearning.
supervised by Dr. Abhilasha Ravichander and Dr. Faeze Brahman

JULY 2021 – SEPTEMBER 2021

Research Intern, **Theory of Machine Learning Lab, EPFL**
Research on the convergence rate of the optimization algorithms in machine learning.
supervised by Prof. Nicolas Flammarion

JULY 2020 – SEPTEMBER 2020

Research Intern, **Max Planck Institute**
Research on solving semi-definite programming based on Physarum mathematical model.
supervised by Prof. Andreas Karrenbauer

AWARDS

International Collegiate Programming Contest (ICPC)

2023   ICPC World Finalist (unable to attend due to visa issues)

2023   Ranked 3rd, ICPC North America Championship

2020   Ranked 33rd, ICPC World Finals

2019   Ranked 1st, Asian Regional Contest

2018   Ranked 2nd, Asian Regional Contest

Olympiad in Informatics

2018   Silver Medal, 30th International Olympiad in Informatics

2018   Silver Medal, 11th Asia-Pacific Informatics Olympiad

2017   Gold Medal, 27th Iranian National Olympiad in Informatics

2016   Silver Medal, 26th Iranian National Olympiad in Informatics

Awarded the University of Maryland **Dean's Fellowship**

PUBLICATIONS

🔖 Model State Arithmetic for Machine Unlearning
Keivan Rezaei*, Mehrdad Saberi*, Abhilasha Ravichander, Soheil Feizi
ARXIV PREPRINT 2025

🔖 PRIME: Prioritizing Interpretability in Failure Mode Extraction
Keivan Rezaei*, Mehrdad Saberi*, Mazda Moayeri, Soheil Feizi
ICLR 2024

🔖 RESTOR: Knowledge Recovery through Machine Unlearning
Keivan Rezaei, Khyathi Chandu, Soheil Feizi, Yejin Choi, Faeze Brahman, Abhilasha Ravichander
TMLR 2025

🔖 On Mechanistic Knowledge Localization in Text-To-Image Generative Models
S Basu*, **Keivan Rezaei***, P Kattakinda, VI Morariu, N Zhao, RA Rossi, V Manjunatha, S Feizi
ICML 2024

🔖 Run-Off Election: Improved Provable Defense against Data Poisoning Attacks
Keivan Rezaei*, Kiarash Banihashem*, Atoosa Chegini, Soheil Feizi
ICML 2023

🔖 Text-To-Concept (and Back) via Cross-Model Alignment
Mazda Moayeri*, **Keivan Rezaei***, Maziar Sanjabi, Soheil Feizi
ICML 2023

🔖 Understanding and Mitigating Compositional Issues in Text-to-Image Generative Models
A Zarei*, **K Rezaei***, S Basu, M Saberi, M Moayeri, P Kattakinda, S Feizi
ARXIV PREPRINT

🔖 Robustness of AI-Image Detectors: Fundamental Constraints and Practical Attacks
Mehrdad Saberi, Vinu Sankar Sadasivan, **Keivan Rezaei**, Aounon Kumar, Atoosa Chegini, Wenxiao Wang, Soheil Feizi
ICLR 2024

TEACHING EXPERIENCE

Teaching Assistant

FALL 2022   *Design and Analysis of Algorithms (UMD)*

FALL 2021   *Design of Algorithms (Sharif)*

FALL 2020   *Compiler Design (Sharif)*

Algorithms and Programming Instructor

2017-2019   *Allame Helli Highschool*

OTHER EXPERIENCES

FALL 2019 - SUMMER 2022

Scientific Member, **Iranian National Olympiad in Informatics Committee**

I was Iran's team leader at the International Olympiad in Informatics 2021, with additional responsibilities including designing exams to select talented students and conducting preparation camps.

WINTER 2022 - SUMMER 2022

Data Scientist, **Torob**

Torob is a search engine that allows customers to find the cheapest price for items. I worked on improving, and analyzing Torob's search engine results along with providing some baseline solutions for Torob Challenge.

FALL 2019, FALL 2020

Technical Staff, **Sharif AI Challenge**

Developed server code and simulated the game in Fall 2019, and designed the game in Fall 2020.

SPRING 2019

Head of Quera College Data Structure Course, **Quera**

Responsible for providing educational materials.

SKILLS

Machine Learning Libraries, torch, numpy, pandas.

Linux, shell and Bash scripts.

Algorithms and Competitive Programming, as IOI and ICPC awards suggest.

Programming Languages, C++, Python, and Java.

Software Engineering, object-oriented design patterns and other development methodologies.

⌑ Multi-agent Delegated Search
α, β Mohammad Hajiaghayi, **Keivan Rezaei**, Suho Shin

EC 2023

⌑ A Regret Analysis of Repeated Delegated Choice
Mohammad Hajiaghayi, Mohammad Mahdavi, **Keivan Rezaei**, Suho Shin

AAAI 2024

⌑ Ad Auctions for LLMs via Retrieval Augmented Generation
α, β Mohammad Hajiaghayi, Sébastien Lahaie, **Keivan Rezaei**, Suho Shin

NEURIPS 2024

⌑ Online Advertisements with LLMs: Opportunities and Challenges
α, β Soheil Feizi, MohammadTaghi Hajiaghayi, **Keivan Rezaei**, Suho Shin

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