

# Keivan Rezaei

## Curriculum Vitae

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Homepage

### 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 1<sup>ST</sup>, GPA: 19.85/20  
Computer Engineering  
Sharif University of Technology

### RESEARCH INTEREST

GenAI interpretability   unlearning   vision-language models

### 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*
- FEBRUARY 2025 – APRIL 2025  
*Student Researcher, OMEGA, Google AI*  
Research on data selection for the task of LLM pretraining; developing a classifier 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*

### TEACHING EXPERIENCE

- Teaching Assistant  
FALL 2022 *Design and Analysis of Algorithms (UMD)*

### AWARDS

#### International Collegiate Programming Contest (ICPC)

- 2023 ICPC World Finalist (unable to attend due to visa issues)  
2023 Ranked 3<sup>rd</sup>, ICPC North America Championship  
2020 Ranked 33<sup>rd</sup>, ICPC World Finals  
2019 Ranked 1<sup>st</sup>, Asian Regional Contest  
2018 Ranked 2<sup>nd</sup>, Asian Regional Contest

#### Olympiad in Informatics

- 2018 Silver Medal, 30<sup>th</sup> International Olympiad in Informatics  
2018 Silver Medal, 11<sup>th</sup> Asia-Pacific Informatics Olympiad  
2017 Gold Medal, 27<sup>th</sup> Iranian National Olympiad in Informatics  
2016 Silver Medal, 26<sup>th</sup> Iranian National Olympiad in Informatics

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

### PUBLICATIONS

- 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  
ARXIV PREPRINT
- 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
- 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
- Run-Off Election: Improved Provable Defense against Data Poisoning Attacks  
**Keivan Rezaei\***, Kiarash Banihashem\*, Atoosa Chegini, Soheil Feizi  
ICML 2023
- 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
- Multi-agent Delegated Search  
 $\alpha, \beta$  Mohammad Hajiaghayi, **Keivan Rezaei**, Suho Shin  
EC 2023

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.

☐ 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

$\alpha, \beta$  Mohammad Hajiaghayi, Sébastien Lahaie, **Keivan Rezaei**, Suho Shin

NEURIPS 2024