Alireza Sakhaeirad

Tehran, Iran
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Interests

My primary research interest revolves around developing reliable and robust artificial intelligence systems. I am deeply committed to exploring the theoretical foundations and practical applications of AI, seeking to advance the field by creating AI systems that can perform consistently and effectively in real-world scenarios.

Awards & Recognition

- Ranked 1st in Iran's national university entrance exam 2019 (among more than 150k participants)
- Ranked 1st in Sharif University of Technology, Electrical Engineering program 2019
- Admission to Nodet (National Organization for Development of Exceptional Talents) high school

Education

BSc in Electrical Engineering, Sharif University of Technology

Sep 2019 - Feb 2024

- Current GPA: 19.68/20
- Current Rank: 1
- Bachelorette project: Robustness analysis of computer vision models
  - Supervised by: Prof. Sajjad Amini

Research Intern, NLP lab, EPFL University

- Commonsense evaluation of large language models
- Deep analysis of educational capabilities of large language models
- Continued pretraining of large language models

July 2023 - Sep 2023

Work Experience

Danial Moj Co. - *AI engineer*

July 2022 - Nov 2022

- Worked on solving industrial problems using machine learning

Research Experience

- Robustness analysis of computer vision models

  On-going research

  Supervised by: Prof. Sajjad Amini

- GradGPT - assessment of GPT-4 educational capabilities, including question answering and exam grading.

  On-going research

  Supervised by: Prof. Antoine Bosselut

- Meditron - a biomedical large language model

  On-going research

  Supervised by: Prof. Antoine Bosselut

- Dice-Flip: A new benchmark for commonsense reasoning in large language models

  Supervised by: Prof. Antoine Bosselut

Selected Graduate-level Courses

- Reinforcement learning
- Security and privacy in machine learning
- Large Language models
- Computer Vision
- Deep learning
- Parallel computing and programming
- Graph Signal Processing
- Random processes

Selected Teaching-assistance Experience

- Machine Learning
- Deep Learning
- Digital Signal processing
- Prob & Stat
- Convex Optimization
- Mathematics for Engineering

Skills

- Programming Languages

  Python: High-Proficiency | Pytorch, Keras, sk-learn, pandas, NumPy,

  C/C++: Intermediate-Proficiency | Cuda

Java: Intermediate-Proficiency | Swing

MATLAB: Intermediate-Proficiency | Signal Processing

Verilog: Familiar

Assembly: Familiar

Javascript: Familiar

- Development Skills

  Docker

  Git/Github

  HTML/CSS

- Database management

  SQL

Languages

- Persian

  Native

- English

  Fluent

   TOEFL Score: 112/120 : Reading:30/ Listening:30/ Speaking: 26/ Writing:26