

# Ali Falahati

Tehran, Iran

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## Personal Profile

Final year student majoring in Computer Science at the Sharif University of Technology towards becoming a real research scientist, not just a simple researcher. I'm a passionate student and quantitative researcher, interested in Artificial Intelligence, Graph Machine Learning, and Networks Sciences. Bringing forth a motivated attitude and a variety of powerful skills achieved through practical experience in the industry and academia.

## Education

### Sharif University of Technology

Tehran, Iran

Bsc in Computer Science

Oct 2020 - Current

- GPA 3.95/4 (US Based) Summa Cum Laude | 18.83/20 (IR Based)
- Expected to graduate in Jul 2024
- **Courses:** Massive Data Analysis, Neural Network, Machine Learning, Stochastic Processes, Networks Science, Statistical Learning, Computer Networks, Linear Algebra, Probability Theory, Statistics, Game Theory, Data Structures, Advanced Programming

## Research Experience

### California State University

California, United States

Remote Collaboration

Aug 2023 - Current

- Working on Application of Graph Machine Learning in Protein-Ligand Binding Free Energy Calculation under the supervision of Dr. Negin Forouzesh.
- Contributed new modules for extracting features from Proteins to Deepchem Library.

### Max Planck Institute for Software Systems

Saarbrücken, Germany

Research Internship

Jun 2023 - Current

- Working under the supervision of Dr. Laurent Bindshaedler at DSG lab.
- Involved in designing a new watcher node that can detect anomalies in the chain via online machine learning. Our output and paper are due to be submitted by early December

### Florida State University

Florida, United States

Research Internship (Remote)

May 2022 - Jul 2022

- Joined the Climate change and Water resources research team as their data scientist and machine learning engineer.
- Worked on multiple projects, automating computer software for water resources modeling and machine learning applications for complex natural and man-made systems.
- The projects sought to find cost-effective strategies for water quality improvement and flood mitigation using multi-objective optimization and prediction of harmful blooms in coastal water using various watershed and water body variables.
- **Technical Skills:** Python, PyTorch, NumPy, Matplotlib, Pandas, Scikit-learn, Streamlit, Git.

### Kent Business School

Canterbury, England

Research Internship (Remote)

Feb 2023 - Apr 2023

- Collaborated with a five-person team to develop a method for Forecasting the volatility of agricultural products based on hard facts and sentiment analysis of the news via FinBERT.
- Crawled and cleansed data required for feeding to model. Implemented and tested various NLP models.
- **Technical Skills:** Python, PyTorch, NLP methods, Matplotlib, Pandas, Git.

### Sharif University of Technology

Tehran, Iran

Research Assistant

Oct 2022 - Feb 2023

- Worked with professor Iman Gholampour from the EE department at the Sharif University of Technology on Tehran Traffic data.
- Implemented various big data algorithms for the project such as Apriori, LSH, CF-ALS, HITS, SVD, and PIXIE.
- **Technical Skills:** Python, Spark, Hadoop, SQL, NumPy, Matplotlib, Pandas, Docker, Ubuntu Scripting, Git.

### Sharif University of Technology

Tehran, Iran

Teaching Assistant

Apr 2022 - Current

- I was teaching assistant for multiple courses.
- **Courses:** Stochastic Processes, 2x Probability Theory, Probability and Statistics, Machine Learning, Introduction to Mathematical Thinking, Linear Algebra, Advanced Programming, Network, Data Structures

## Industrial Experiences

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### Lead Data Scientist

Tehran, Iran

Hermes Capital

Dec 2021 - Feb 2023

- Hermes Capital is a fintech company based in Tehran working toward Algorithmic Trading and Machine Learning approaches in the Iranian Stock Market and Cryptocurrency Market.
- I worked as a Data Scientist exploring Reinforcement Learning Algorithms (Specifically DQN) and developed the infrastructure for trading in Python.
- Read and implemented various papers in Finance and Machine Learning.
- **Website:** <https://hermescapital.ir/>

### Machine Learning Co-Instructor

Tehran, Iran

Hermes AI Academy

Summer 2022

- Hermes AI Academy is a branch of Hermes Capital with the sole aim of providing courses on various topics including Data Science and Machine Learning.
- I lectured 3 sessions on classic Machine Learning for over 70 students and created various course materials.
- **Website:** <https://hermesai.ir/>

## Technical Skills

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**Programming Languages** Python, Java, SQL, Matlab, R, Go

**Python Libraries** Tensorflow, PyTorch, PySpark, Sci-kit learn, PyG, Deepchem, Scipy, Statmodels, Pandas, Numpy, Matplotlib, Selenium.

**Miscellaneous** Spark, Hadoop, Linux, Shell (Bash/Zsh), LATEX(Overleaf/R Markdown), Docker, Microsoft Office, Firebase, Git.

## Achievements & Awards

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2019 **Elite**, Top 200 Among 160 Milion Participants in Iran University Entrance Exam

Iran

2023 **Elite**, 5000€ Scholarship awarded for a summer internship at Max Planck Institute for Software Systems

Germany

## References

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### Nasrin Alamdari

Florida, United States

Florida State University, Assistant Professor

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### Laurent Bindschaedler

Saarbrücken, Germany

Max Planck Institute, Assistant Professor

- **Email:** [laurent@binds.ch](mailto:laurent@binds.ch)

### Negin Forouzesh

California, United States

California State University, Assistant Professor

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### Laleh Arshadi

Tehran, Iran

Sharif University of Technology, Assistant Professor

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## Languages

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**English** Professional proficiency

**Persian** Native proficiency