

Education

<b>Iran University of Science and Technology</b> B.Sc. in Computer Engineering	Tehran, Iran Sep. 2020 - Apr. 2025
<ul style="list-style-type: none"><li>– Among the Top 4 Universities in Iran based on QS Ranking</li><li>– CGPA of the Last Two Years: <b>3.87/4.0</b> (<b>18.53/20.0</b> on Iranian Scale)</li><li>– Overall CGPA: <b>3.51/4.0</b> (<b>16.81/20.0</b> on Iranian Scale)</li><li>– Final Project’s Thesis: ReAct-Enhanced RAG Framework for Financial Document Question Answering, Under the Supervision of <a href="#">Dr. Reza Entezari-Maleki</a></li><li>– Selected Courses: Natural Language Processing: <b>20.0</b>, Deep Learning: <b>19.25</b>, Computer Vision: <b>18.1</b>, Signals and Systems: <b>19.0</b>, Trading Algorithms: <b>18.38</b>, Compiler Principles: <b>20.0</b></li></ul>	
<b>Harati High School</b> Diploma in Mathematics and Physics	Esfahan, Iran Sep. 2017 - May 2020
<ul style="list-style-type: none"><li>– CGPA: <b>4.0/4.0</b> (<b>19.75/20.0</b> on Iranian Scale)</li></ul>	

Research Interests

• Natural Language Processing (NLP)	• Data Mining
• Machine Learning / Deep Learning	• Information Retrieval / RAG
• NLP-based Financial Forecasting	• Large Language Models and Transformers

Publications

<b>Market-Derived Financial Sentiment Analysis</b> <a href="#">Archive</a>	Under Submission Apr. 2025
Authors: H. Moradi-Kamali, MH. Rajabi-Ghozlou, <b>M. Ghazavi</b> , A. Soltani, R. Entezari-Maleki	
<ul style="list-style-type: none"><li>– Description: Proposed market-derived labeling for Financial Sentiment Analysis, enhancing short-term trend prediction with context-aware prompt tuning and robust backtesting.</li></ul>	

Skills

• <b>Programming Languages:</b> Python (Advanced), C/C++ (Advanced), JS (Proficient), SQL (Proficient)
• <b>Frameworks:</b> React.js (Advanced), Next.js (Proficient)
• <b>Libraries:</b> Pytorch, Keras, TensorFlow, Scikit-Learn, Numpy, Pandas, NLTK, Scipy, Transformers (HuggingFace), Datasets (HuggingFace)
• <b>Tools and Platforms:</b> LaTeX, Git, Docker, Linux (Ubuntu & Kali)
• <b>Interpersonal Skills:</b> Teamwork, Teaching, Self-Learning, Problem Solving

Research Experience

<b>ReAct-Enhanced RAG Framework for Financial Document Question Answering</b> Bachelor’s Thesis, <a href="#">School of Computer Engineering</a>	<b>IUST</b> Sep. 2024 – Apr. 2025
<ul style="list-style-type: none"><li>– Supervisor: <a href="#">Dr. Reza Entezari-Maleki</a>.</li><li>– Developed a Retrieval-Augmented Generation (RAG) system for analyzing SEC filings using Large Language Models (LLMs).</li><li>– Implemented RAPTOR hierarchical indexing with recursive chunking for scalable retrieval and summarization.</li></ul>	

- Integrated a LangGraph-based ReAct agent for iterative reasoning and multi-source answer synthesis.
- Improved query relevance via expansion and cross-encoder re-ranking.

## NLP-based Financial Forecasting: Market-Aware Textual Representation of Tweets

IUST

Undergraduate Internship, [School of Computer Engineering](#)

Feb. 2024 - July. 2024

- Supervisor: [Dr. Reza Entezari-Maleki](#).
- Developed a topic modeling method for dividing market-related tweets into meaningful topical groups using NLP and Transformers.
- Analyzed tweet representations for short-term market impact (P/L bounds) and applied temporal enrichment techniques to maintain model relevance.
- Implemented hyper-parameter optimized Triple Barriers for tweet labeling and optimized LSTM for next-day market prediction using engineered features.

## Teaching Experience

### Teaching Assistant

IUST

[School of Computer Engineering](#)

Sep 2023 - Present

- **Natural Language Processing** - Instructor: [Dr. Marzieh Davoodabadi Farahani](#) Spring 2025
- **Algorithmic Trading (Head TA)** - Instructor: [Dr. Reza Entezari Maleki](#) Spring 2025 & Fall 2024 & 2025
- **Computer Architecture** - Instructor: [Dr. Amir Mahdi Hosseini Monazzah](#) Spring 2024 & 2025
- **Computational Intelligence** - Instructor: [Dr. Nasser Mozayani](#) Fall 2024
- **Deep Learning** - Instructor: [Dr. Marzieh Davoodabadi Farahani](#) Fall 2024 & 2025
- **Fundamentals of Computer Programming** - Instructor: [Dr. Marzieh Malekimajd](#) Fall 2024
- **System Design and Analysis** - Instructor: [Dr. Mehrdad Ashtiani](#) Spring & Fall 2024
- **Algorithmic Trading** - Instructor: [Dr. Reza Entezari Maleki](#) Spring 2024
- **Compiler Design Principles** - Instructor: [Dr. Saeed Parsa](#) Spring 2024
- **Operating Systems** - Instructor: [Dr. Reza Entezari Maleki](#) Fall 2023 & Spring 2024
- **Software Engineering** - Instructor: [Dr. Behrouz Minaei Bidgoli](#) & [Dr. Mehrdad Ashtiani](#) Fall 2023

## Selected Academic Projects

### RAG - Evaluation of Different Generators

IUST

Fundamentals of Natural Language Processing Course Project - [GitHub](#)

Spring 2024

- Description: Explored Retrieval-Augmented Generation (RAG) with different LLMs to address outdated or incorrect information. Judged LLM responses with another language model for accuracy.

### Text Generation Using RAG on Organizational Reports

IUST

Fundamentals of Natural Language Processing Course Project - [GitHub](#)

Spring 2024

- Description: Applied RAG to generate accurate answers from organizational reports, ensuring real-time, relevant responses based on report content.

### Anti-Spoofing System for Facial Recognition

IUST

Fundamentals of Computer Vision Course Project - [GitHub](#)

Spring 2024

- Description: Developed a facial spoofing detection system using two approaches: feature extraction for reduced dimensionality and high classification accuracy, and CNNs for deep learning-based spoof detection. Compared both methods, highlighting trade-offs between traditional machine learning and deep learning. Evaluated the model's effectiveness in detecting liveness from video data.
- Technologies: Python, OpenCV, TensorFlow, Keras, MobileNet

### Sentiment Analysis on Persian Text Using Natural Language Processing (NLP)

IUST

Deep Learning Course Project - [GitHub](#)

Fall 2023

- Description: Built a sentiment analysis model for Persian text using the XLM-RoBERTa transformer to detect six emotions (Anger, Fear, Happiness, Sadness, Wonder, Hatred). Preprocessed data using NLP techniques and fine-tuned on the ArmanEmo dataset, achieving 75.23% accuracy. Conducted experiments to validate model robustness and benchmarked performance against other architectures.

## Irangard - A Website for Finding Tours, Places and Events Throughout Iran

IUST

Software Engineering Course Project - [GitHub](#)

Feb. 2023 - Jul. 2023

- Description: Developed a comprehensive system to assist its users to build a profile, find or register places, tours and events throughout Iran.
- Implemented the Front-End application using the React.js framework and Sass and included automated CI/CD and Integrated social media features, including chat, posts, and user follow options.

## AI-Powered Solution for Lunar Lander Problem

IUST

Artificial Intelligence Course Project - [GitHub](#)

Fall 2022

- Description: Developed and implemented a reinforcement learning-based agent to solve the Gymnasium Lunar Lander Problem, optimizing for speed and convergence. Hyperparameter tuning led to significant improvements in learning efficiency and solution optimality. Project ranked in top 3 in the class.

## Honors & Certificates

### Digital Image Processing and Computer Vision

Feb. 2024

Certificate on [LinkedIn](#)

- Covered Topics about NNs, MLP, CNNs, Transfer Learning, Data Augmentation, Image Segmentation, Object Detection

### Neural Networks and Deep Learning

Feb. 2024

Certificate on [Coursera.org](#)

### Supervised Machine Learning: Regression and Classification

Oct. 2023

Certificate on [Coursera.org](#)

### Algorithmic Toolbox

Certificate on [Coursera.com](#)

Jun. 2022

### Programming for Everybody (Getting Started with Python)

Certificate on [Coursera.com](#)

Mar. 2022

### Python Data Structures

Certificate on [Coursera.com](#)

Apr. 2022

### Ranked within the top 0.5% (581st) in the Iranian University Entrance Exam

Jul. 2020

Mathematics and Physics Major

- Ranked 581st among more than 135,000 participants

## Languages

- **Persian:** Native
- **English:** Full Professional Proficiency
  - TOEFL iBT: **Overall: 105**, Reading: **27**, Listening: **26**, Speaking: **23**, Writing: **29**

## References

### Dr. Reza Entezari-Maleki

Assistant Professor in the School of Computer Engineering

[Iran University of Science & Technology](#)

- Email: entezari@iust.ac.ir

### Dr. Nasser Mozayani

Associate Professor in the School of Computer Engineering

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### Dr. Mehrdad Ashtiani

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