

Hamid Moradi Kamali

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Education

Iran University of Science and Technology, MSc in Software Engineering Sep 2021 – Oct 2024

- GPA: 16.52/20, 3.34/4.0
- Thesis on Utilization of Large Language Models in Algorithmic Trading
- Thesis Grade: 18.25/20 (Maximum available grade at the time of presentation)
- Achieved A+ grades in 4 out of 10 courses
- Led the development of Finbright, an intelligent crypto market analyzer, based on research findings

Lorestan University, BS in Computer Engineering Sep 2017 – Aug 2021

- GPA: 14.56/20 (Exceeds the average GPA of the Department of Computer Engineering)
- Achieved A+ grades in key courses:
Object Oriented Programming, Programming Language Design, and Software Engineering.
- Final Project: "Face Detection: A Cascade Approach" Under Dr. Dowlatshahi

Research Interests: Natural Language Processing, Social Media Analysis, Software Engineering, Explainable/Interpretable AI

Research Experiences

Revisiting Sentiment Analysis in Financial Markets: A Language Model Based Approach, Algo Trading Research Lab - Dr. Entezari - IUST Jan 2024 – Sep 2024

- Proposed an all-in-one language model approach to financial sentiment analysis
- Utilized prompt fine-tuning to integrate market and temporal context into financial tweets
- Introduced simple and effective methods for aggregating daily tweets for signal generation
- Exceeded benchmarks in risk-adjusted profit with the proposed strategies based on predictions made by the language model
- Collaborated with a team of undergrad students to design and execute the experiments

Stock Market Dynamics Through Deep Learning Context, Explainable AI Group - Dr. Etemadi - IUST Oct 2022 – Mar 2023

- Interpreted feature importances in the Twitter data space, identifying key factors influencing market dynamics
- Introduced a novel feature vector for the most effective exploitation of Twitter data, enhancing predictive accuracy
- Authored the related works and introduction sections of the research paper, providing a comprehensive overview of the study's context and significance

Publications

Revisiting Sentiment Analysis in Financial Markets: A Language Model Based Approach Oct 2024

H. Moradi Kamali, R. Entezari-Maleki

Under Submission

Stock Market Dynamics through Deep Learning Context Jan 2024

A. Aminimehr, A. H. Aminimehr, *H. Moradi Kamali*, S. Eetemadi, S. Hoseinzade

Published to <https://arxiv.org/abs/2405.09932>

Teaching Experience

Algorithmic Trading, IUST - Algo Trading Research Lab

Sep 2022 – Jan 2024

- Designed the course material covering topics such as technical analysis, time series modeling, mean-reversion strategies, financial recommender systems, and backtesting techniques.
- Presented the latest advancements in textual financial analysis such as financial sentiment analysis for market forecasting, and LLMs as financial advisors in the course material, bridging research and practical applications to inspire research-oriented learning.
- Supervised two internship projects on algorithmic trading, offering mentorship and hands-on training to undergraduate students.
- Taught graduate students in one semester (10 students attendance) and undergraduate students across two semesters (30 students attendance).

Relevant Work Experiences

Tech Lead, Finbright

Nov 2022 - July 2024

- Led a team of graduate and undergraduate students in developing Finbright, an intelligent AI-based assistant for traders and investors in cryptocurrency markets
- Applied machine learning and deep learning techniques to provide a production-level software platform
- Assembled a distributed cluster of servers tailored to our specific deployment and machine learning requirements in our lab
- Designed and implemented a social media sentiment analysis pipeline to predict market volatility in real-time

Co-founder, Kahroba Creative Software Company

Oct 2019 - Jan 2022

- Co-founded Kahroba Creative Company, providing reliable software solutions for businesses
- Acted as the technical lead, overseeing the technical aspects of the company's operations and projects
- Led and mentored a team of developers, fostering a collaborative and high-performing work environment
- Developed a highly efficient video streaming system using gRPC for Fitex Application, overcoming business and marketing challenges, and presenting it at the INOTEX 2020 Exhibition
- Created software solutions for travel agencies at 3-Tour Startup, building a robust web application using Typescript and Node.js, and expanding the client base through effective negotiation and promotion.

Full Stack Engineer, Halyab

Mar 2020 - Aug 2020

- Redesigned and implemented the web application of the question-answering platform, expanding its features and improving user engagement.
- Created a user-friendly website with optimal performance using Next.js and Python Django.
- Received recognition at the Iran Web and Mobile Festival for exceptional website design.

Back End Developer, Q Company

Mar 2017 - Sep 2018

- Reengineered the Goftare platform, a startup providing online therapy, to improve efficiency, speed, and code readability.
- Transformed the backend architecture from a monolithic to a service-oriented architecture (SOA), improving scalability and maintainability.
- Collaborated closely with the development team, implementing Agile methodologies such as Scrum for effective teamwork and management.

Software Development Intern, Q Company

Jan 2017 - Mar 2017

- Gained hands-on experience in software development, learning essential skills including Scrum, Git, JavaScript, Node.js, and MongoDB.

Certificates

Introduction to Aristotle's Ethics: How to Lead a Good Life, Hillsdale College

Sep 2024

- Approximately 6.5 hours
- Subjects: Ethics, and Philosophy

Natural Language Processing Specialization, DeepLearning.AI

Jan 2024

- Consisted of 4 separate courses
- 3 months at 10 hours a week (Approximately 120 hours)
- Transformers, Attention Models, Word Embeddings, Sequence Models

Mathematics for Machine Learning: Multivariate Calculus, Imperial College

Aug 2023

- Approximately 17 hours
- Subjects: Multivariate Calculus, Gradient Descent, Regression Models

Writing in the Sciences, Stanford University

Jul 2023

- Approximately 30 hours
- Subjects: Writing, Scientific Writing, Grant Writing

Technical Skills

- **Languages:** Go, Python, Javascript, Typescript, C++
- **Libraries:** Pytorch, Tensorflow, Pandas, Scikit-learn, Numpy, NLTK, Scipy
- **Web Dev Tools:** Node.js, Django, React.js, Vue.js, Next.js, Gatsby.js
- **Databases:** MongoDB, PostgreSQL, Redis
- **Message Queue:** Apache Kafka, RabbitMQ
- **Deployment:** Docker, Docker Swarm, Gitlab CI, GitHub Actions
- **Communication Protocols:** REST API, Websockets, gRPC
- **Software Development Methodologies:** Agile, Scrum, Kanban
- **Soft Skills:** Team Management, Public Speaking, Self Learning

Achievements

Ranked in the top 3% of national contestants - Iran National Entry Exams (Konkur) for Computer Engineering (Graduate Entry), among approximately 10,000 participants in 2021

Ranked in the top 6% of national contestants - Iran National Entry Exams (Konkur) for Mathematics (Undergraduate Entry), among approximately 143,000 participants in 2017

Best Website Design Nomination for Halyab - Iran Mobile and Web Festival 2020 (The most prestigious software competition in Iran)

Presenter at the INOTEX 2020 Exhibition - Presentation on digital health, and Fitex application as an automated coaching platform

Languages

- Farsi (Native)
- English Language Testing System (IELTS): Overall Band Score: 8.0 (Aug 2023)

Listening: 9.0

Reading: 9.0

Writing: 7.0

Speaking: 7.0

References

Dr. Reza Entezari-Maleki (Supervisor)

Position: Assistant Professor
Institution: Iran University of Science and Technology
Email: entezari@iust.ac.ir

Dr. Saeed Parsa

Position: Professor
Institution: Iran University of Science and Technology
Email: parsa@iust.ac.ir

Dr. Mohammad Bagher Dowlatshahi

Position: Associate Professor
Institution: Lorestan University
Email: dowlatshahi.mb@lu.ac.ir