Hamid Moradi Kamali

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Education

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

- GPA: 3.34/4.0 - 16.52/20
- Thesis title: Enhancing Trading Algorithms Performance in the Cryptocurrency Market with Explainable Textual Data Analysis
- Achieved A+ grades in 4 out of 10 courses
- Co-authored a paper on explainable Twitter content analysis for financial market prediction
- Instructed Algorithmic Trading for 3 semesters
- 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: 14.68/20
- Exceeded both department and software engineering field's GPA
- Achieved A+ in key courses such as Object Oriented Programming, Research and Presentation Methods, Programming Language Design, and Software Engineering.

Areas of Interest: Natural Language Processing, Financial Forecasting, Software Engineering, Explainable AI

Research Experiences

Revisiting Sentiment Analysis in Financial Markets: A Language Model Based Approach, IUST — Jan 2024 – Sep 2024

- Reframed the sentiment of financial classification to present actionable insights for the trading agent
- Utilized prompt fine-tuning for adding market and temporal context to the tweets
- Introduced simple, yet effective methods for aggregating daily tweet predictions
- Presented multiple backtest strategies and achieved the best risk-adjusted returns compared to the benchmarks.
- Collaborated with a team of undergrad students to design and execute the experiments
- Authored a peer-review-ready paper and submitted the work

Stock Market Dynamics Through Deep Learning Context, Interpretable AI Group — 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

Teaching Experiences

Algorithmic Trading, Iran University of Science and Technology — Sep 2022 – Jan 2024

- Designed and developed comprehensive course material covering technical analysis, automated trading, time series analysis, mean-reverting strategies, and backtesting.
- Presented the lab's work on NLP and financial analysis each semester, showcasing cutting-edge research and practical applications
- Supervised two internships focused on trading algorithms, providing hands-on experience and mentorship to students

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.

Publications

Revisiting Sentiment Analysis in Financial Markets: A Language Model Based Approach   Sep 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 arXiv.org

Certificates

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

Presenter at the INOTEX 2020 Exhibition - Introduced Fitex, a fitness mobile application, for the first time

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