

Mostafa Alavi

Senior Data Scientist

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Summary

AI and Data Science Specialist with **over 5 years** of hands-on experience in developing cutting-edge generative AI solutions and advanced search systems. Recognized for strong problem-solving abilities, excellent time management, and a robust theoretical foundation, I have successfully led projects that deliver measurable innovation. Eager to leverage my expertise and passion for technology, I am actively seeking opportunities to drive transformative initiatives in dynamic, forward-thinking organizations.

Work Experience

SENIOR AI RESEARCHER AND DEVELOPER LIMYTD AG

2024 - Present (1 year and 2 months)

Remote, Switzerland

Speax-AI is an innovative startup in the dubbing industry, utilizing AI to translate videos across multiple languages, providing high-quality, culturally appropriate dubbing solutions.

- **Delivered** an MVP for a multilingual lip-syncing application, **improving audio-visual alignment by 45% and visual quality by 30%.**
- **Enhanced** the translation and paraphrasing accuracy for over 10 language pairs, contributing to a **25% increase in user engagement and satisfaction.**

DATA(QUANT) SCIENTIST MOFID SECURITIES

2022 - 2024 (2 years)

Tehran, Iran

Mofid Securities is Iran's largest private financial institution in the stock market exchange and the leading brokerage, serving over **15 million users with an annual income of over 500 million dollars.** The company tackles diverse AI challenges to enhance financial services and customer experience.

- **Reduced algorithm validation time by 50%** and **improved team productivity by 25%** by developing and launching a backtester module for ML and DL evaluation.
- **Increased predictive accuracy by 15% and portfolio returns by 20%** across multiple markets (including stocks and gold) by providing actionable insights to a 10-member AI and Finance team.

DATA SCIENTIST MOHAYMEN

2021 - 2022 (1 year)

Tehran, Iran

Mohaymen is a leading company in Iran, specializing in data infrastructure and big-data analytics, with a focus on projects related to taxes and financial transactions.

- **Reduced fraudulent transaction attempts by 40%** and enhanced security for over 1,000 users by designing a Face Authentication engine with 99% accuracy in detection and 90% success in anti-spoofing (ISO level 1).
- Advanced the Face Anti-spoofing module with deep learning, enhancing dataset integrity for robust detection of ISO 30107-3 levels 1 and 2 attacks.

ML ENGINEER RASA SALAMAT

2020-2021 (1 year)

Tehran, Iran

Rasa Salamat is a health tech startup specializing in digital pathology, developing AI and image processing solutions to assist pathologists in cancer detection. Their technology is actively used by leading pathologists in Tehran's most prominent hospitals.

- **Tripled image stitching speed** by optimizing C++ algorithms with GPU acceleration, ensuring seamless image integration.
- **Halved upload times by optimizing image compression algorithms**, boosting data handling efficiency.

ML ENGINEER FARAZ ERTEBAT

📅 2019 - 2020 (1 year and 8 months)

📍 Tehran, Iran

A leading telecom solution provider in Iran, ranked among the top three in the industry.

- Developed and implemented advanced Automatic Modulation Recognition (AMR) techniques using machine learning and deep learning models, **achieving a 20% improvement in signal modulation detection accuracy**. This enhancement enabled the replacement of legacy communication modules in receivers, thereby **reducing device power consumption**.

Education

SHARIF UNIVERSITY OF TECHNOLOGY (RANKED 1ST IN IRAN)

M.SC. IN ELECTRICAL ENGINEERING (COMMUNICATION SYSTEMS)

📅 2022 - 2024

📍 Tehran, Iran

- Ranked **19th** among **10,000** M.Sc. university entrance exam
- **GPA: 3.6/4**

SHARIF UNIVERSITY OF TECHNOLOGY (RANKED 1ST IN IRAN)

B.SC. IN ELECTRICAL ENGINEERING

📅 2016 - 2020

📍 Tehran, Iran

- Ranked **70th** among **160,000** B.Sc. university entrance exam
- Ranked among the **top 30%** of graduated students.
- **GPA: 3.6/4**

Skills

AI

- **Theoretical and Practical ML, DL and Statistical Learning** (Pytorch, Tensorflow, Keras, Scikit-Learn, Statsmodels), **Deployment and MLOps**(FastAPI, Flask, MLFlow, Optimization, Scalability)
- **NLP , Computer Vision, Voice Processing, Time Series , Generative AI** (LLM, Diffusion Models, Text-to-Image, Text-to-Video, Audio-to-Video, ...)
- **Vector Databases** (Elasticsearch, Faiss, HNSW) and Familiar with **Big data technologies** (Spark, Hadoop)

SOFTWARE DEVELOPMENT

- Proficient in **Python** and **C**;Familiar with **C++**, **R**
- Proficient in Vector Databases (Elasticsearch) ;Familiar with (SQLite ,SQL Server, PostgreSQL)
- **Version Control** and **CI/CD pipelines**(Git); Containerization tools **Docker**
- Familiar with cloud platforms (AWS, Google Cloud, Azure)

Notable Projects

FOOTBALL VIDEO SUMMARIZATION

IRAN'S NATIONAL ELITES FOUNDATION

📅 2019 - 2020

📍 Tehran, Iran

Demo| Website| GitHub

- Engineered deep learning perspective transformation techniques, **boosting player tracking accuracy by 30%** and **reducing data processing time by 40%**, aiding coaches and reporters in decision-making.

LARGE-SCALE IMAGE SEARCH SYSTEM

📅 2023 - 2024

📍 Tehran, Iran

- **Developed an image-search system with a 90% recall**. Optimized the vector database and metadata detection modules, achieving **a mean finding time of 0.1 seconds per image**.
- Enhanced system efficiency and performance by leading a team of 5 AI developers.