

Hossein Khalilian

AI Engineer | Data Scientist
Born 1994 in Tehran

About me

Experienced AI Engineer and Data Scientist with a Master's degree in Artificial Intelligence and over 5 years of specialization in machine learning and data science. Proficient in Python, PyTorch, and data visualization, with deep expertise in NLP, large language models, and speech recognition. Highly skilled in utilizing Docker, FastAPI, and vector databases for scaling applications. Demonstrated ability to enhance algorithm performance and provide actionable business insights. Dedicated to utilizing AI to tackle complex problems and improve product functionalities.

Skills

Python

SQL

PyTorch

Scikit-Learn

spaCy

Transformers

Vector Databases

Data Preprocessing

FastAPI

gRPC

Docker

Git

Label Studio


LangChain


Prompt Engineering


MongoDB


Full-text Search

Contact

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 hossein-khalilian.github.io

 hossein-khalilian

Experience

Senior AI Engineer

Mirror Group
since November 2021

- Designed and improved automatic speech recognition models for Persian using deep learning techniques, achieving a WER of 7.4% for Persian common voice and an overall improvement of 28%.
- Developed news article recommendation systems using collaborative filtering and content-based filtering, increasing website traffic by 70%.
- Conducted text summarization and keyword extraction using Sentence-Transformers, improving content retrieval accuracy by 15%.
- Solved item matching problems for products using representation learning and vector databases, reducing calculation time to 28ms for 6 million products.
- Deployed label studio for data labeling and designed a pipeline for active learning, improving labeling efficiency by 25%.
- Designed APIs for the systems and dockerized projects, reducing deployment time by 40%.
- technologies: Python, PyTorch, Sentence Transformers, spaCy, Vector Databases, FastAPI, Docker, Label Studio, Git, Prompt Engineering, Large Language Models, LangChain

Machine Learning Engineer

Mofid Securities
April 2021 - September 2021

- Gathered, cleaned, and preprocessed data for training machine learning models, ensuring high-quality datasets for model development.
- Designed and trained machine learning models for anomaly detection in images using knowledge distillation techniques, achieving an accuracy of 92% and an improvement of 26% over previous models.
- Optimized model operations by converting and compressing trained models for improved inference time on CPUs, achieving an 88% reduction in latency.
- Dockerized projects and designed APIs for model integration, enhancing system scalability and accessibility.

Education

M.Sc. Computer Engineering - Artificial Intelligence
2018 - 2021

Specialized in Artificial Intelligence with a thesis on Distributed Deep Learning. Achieved 4th rank among 53 students in the program.

B.Sc. Information Technology
2013 - 2018

Graduated as the top student, 1st rank among 83 students. Completed a significant project on the Design and Implementation of a VoIP Gateway Device.

B.Sc. Electrical Engineering
2013 - 2018

Graduated in the top 10% of the class among 120 students. Gained comprehensive knowledge in electrical engineering principles and their applications.