

Mandana Fasounaki

AI Software Engineer

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Professional Summary

Innovative AI Software Engineer with over 6 years of experience in designing and deploying advanced machine learning solutions. Specialized in Natural Language Processing (NLP), Computer Vision, and Large Language Models (LLMs). Proven track record in driving operational efficiency, including a 98% improvement in processing optimization and 60% reduction in data integration times. Experienced in leading R&D projects and contributing to international research initiatives.

Technical Skills

AI & Machine Learning

Deep Learning, NLP, LLMs, Computer Vision, Time Series Forecasting, LangChain

Programming

Python, SQL, C#, PyTorch, TensorFlow, FastAPI, Flask

Data & Cloud

Vector Databases, MongoDB, RDBs, Cloud Platforms, Elasticsearch, Apache Spark

DevOps & Tools

Docker, Git, Kubernetes, MLOps, JupyterLab, Linux

Professional Experience

Senior Machine Learning Engineer

Donanım Haber | Istanbul, Turkey | 05/2024 - Present

- Architected and deployed ML and NLP models for forum data analysis, serving 2M+ active users across 27.5M topics
- Achieved 98% improvement in text embedding extraction, reducing processing time from 50 to 1 minute

- Developed end-to-end recommender systems processing over 5.7M annual forum messages and user interactions, analyzing historical user behavior patterns across multiple years to deliver highly personalized recommendations
- Participated in ITEA 4 and TÜBİTAK-funded research initiatives in federated recommendation systems
- Integrated LLMs into new in-house products using LangChain, resulting in enhanced user engagement and experience
- Developing a multi-layered social network analysis system, modeling user interactions in a directed graph structure using NetworkX and Neo4j

Senior Data Scientist

AirGemba (Startup) | Istanbul, Turkey | 09/2024 - 12/2024

- Incorporated LLMs into Predictive Maintenance and Vibration Analysis
- Implemented feature selection pipelines for automated multivariate anomaly detection

Senior AI Expert & NLP Engineer

Sagesse Tech | Istanbul, Turkey | 02/2024 - 05/2024

- Enhanced ERP security through ML-based fraud and anomaly detection
- Implemented and fine-tuned LLMs for SAP security virtual assistant
- Provided technical mentorship to data science team members

Data Scientist

MDP Group | Istanbul, Turkey | 11/2022 - 10/2023

- Developed AI-powered data integration tool, achieving 60% reduction in integration time
- Created B2B knowledge management solution using advanced NLP techniques
- Led three R&D projects including semantic analysis and cash flow and sales forecasting
- Proposed and developed a TÜBİTAK-funded research project

Researcher and Developer

Arçelik Global | Istanbul, Turkey | 09/2020 - 10/2021

- Developed deep learning system for text-independent speaker identification

- Published research in peer-reviewed journal and conference proceedings

Researcher

Istanbul Technical University | Istanbul, Turkey | 09/2017 - 09/2020

- Conducted research in computer vision, focusing on face and emotion recognition
- Published three papers in IEEE conferences

Education

Master's in Computer Engineering

Istanbul Technical University | Turkey | 09/2017 - 06/2021

Bachelor's in Computer Engineering

Azad University of Tabriz | Iran | 09/2010 - 09/2014

Graduated as Valedictorian

Selected Publications

- ["CNN-based Text-independent Automatic Speaker Identification Using Short Utterances" - IEEE, 2021](#)
- ["G2-VER: Geometry Guided Model Ensemble for Video-based Facial Expression Recognition" - IEEE, 2019](#)
- ["Text detection in natural and computer-generated images" - IEEE, 2018](#)
- ["Cash Flow Forecasting Based on Wavelet Transform and Neural Networks" - IEEE, 2023](#)

Languages

Native

Persian, Turkish

Professional

English (Full Professional)

Elementary

German, Spanish