

Mobin Shahidi, M.Sc.

Full-stack AI Engineer

Berlin, Germany

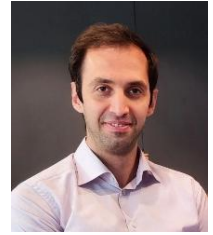
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PROFESSIONAL SUMMARY

AI Engineer with **3+ years of experience building ML, NLP, recommender systems, and data pipelines**. Brings **4+ years of full-stack** experience and hands-on **product delivery** in a startup. Strong in **Python, FastAPI**, ML modeling, and system design, currently expanding into MLOps, model deployment, and production ML infrastructure.

KEY SKILLS

AI / ML	Engineering	Backend / Frontend	Infrastructure
✓ Recommender Systems	✓ Data Pipeline	✓ Python, FastAPI	✓ Docker
✓ LLM & NLP	✓ Fine-tuning / RAG	✓ JavaScript, HTML / CSS	✓ Git / GitHub
✓ Explainable AI	✓ Performance Evaluation	✓ API Design	✓ CI/CD Pipelines
✓ TensorFlow, PyTorch, PyTest	✓ System Architecture	✓ SQL / Databases	✓ AWS

WORK EXPERIENCE

AI Research Engineer, University of Potsdam, Full-time

Feb 2024 – Feb 2026

Project: [Recommender Systems for Quality Political News Source](#)

Potsdam, Germany

- Built an end-to-end data pipeline in Python (Pandas, NumPy) converting +5M tweets into **41 engineered information-quality signals** for ML modeling and recommendation tasks.
- Implemented reproducible preprocessing and feature extraction workflows with **data validation checks and PyTest-based tests** to ensure dataset consistency and experiment repeatability.
- Trained supervised ML models using Scikit-learn for news source quality prediction using structured training pipelines, cross-validation, and hyperparameter tuning, achieving **0.58 correlation** against NewsGuard benchmark ratings.
- Applied **model versioning and experiment tracking** practices to compare runs and maintain reproducible ML experiments.
- Dockerized ML and recommendation models and deployed them on AWS, implementing performance logging and basic observability to monitor model behavior and pipeline execution.
- Designed a **quality-aware recommender system** that increased the average quality score of recommended news sources by **+3 points** across users while keeping precision unchanged versus baseline.
- Collaborated in a **cross-functional team** and presented experiment results and model performance insights to stakeholders.

Research Assistant, Bu-Ali Sina University, Full-time

Mar 2023 – Sep 2023

Project: [Explainable Recommendation System](#)

Hamedan, Iran

- Designed a large-scale **NLP + recommendation framework** over **151K reviews/ratings (14K users, 8.7K items)** using multi-task learning to jointly model user preferences and generate explainable recommendations.
- Built **text generation and processing pipelines** that produce personalized explanations by combining neural generation models with summarization, sentiment filtering, user-similarity selection, and style-conditioned rewriting.
- Implemented and evaluated neural text generation and personalization models in Python/TensorFlow, achieving **~0.97 semantic similarity** in generated explanations while improving recommendation prediction performance (**MSE 0.992**).

Full-stack Web Developer, Computer Afzar Hamedan (CAH), Co-founder

Feb 2017 - Jul 2021

Start-up Project: Cross-Platform Image Management and Privacy Solution ([PhotoCans](#))

Hamedan, Iran

- Delivered the full-stack web platform for the commercial launch of a cross-platform image management product serving **100+ users**, using ASP.NET Core, C#, JavaScript, CSS, and relational databases across product, customer, and sales modules.
- Implemented **33 REST API endpoints** and backend services for product operations, licensing, and system integration, improving responsiveness and throughput through asynchronous and non-blocking request handling.
- Designed modular system architecture and database schemas and implemented **12+ business workflows**, adding testing practices that improved application robustness and maintainability.
- Deployed and maintained the production system on IIS infrastructure across multiple releases, resolving operational issues through logging, diagnostics, and structured troubleshooting.

EDUCATION

Master	Artificial Intelligence and Robotics, Bu-Ali Sina University	Jan 2020 - Jan 2023
Bachelor	Software Engineering, Bu-Ali Sina University	Sep 2014 - Jul 2019

LANGUAGES

Persian: Native	English: Advanced (C1)	German: Conversational (B1)
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SIDE PROJECTS

News Source Quality Predictor	Jan 2026 – Present
<ul style="list-style-type: none">Built an ML regression model to estimate news source quality using engineered network and diversity features.Packaged and deployed the model as a serverless AWS SageMaker endpoint with custom Python inference code.Implemented API-based (FastAPI) inference and an interactive UI to generate real-time predictions from tabular inputs.Added production-style logging and monitoring with CloudWatch for model observability and debugging.	
Workflow-Aware AI Assistant for Applications	Nov 2025 – Jan 2026
<ul style="list-style-type: none">Built a workflow-aware AI assistant integrated into a Next.js application, responding based on application state and user action order.Implemented backend orchestration, integrating both OpenAI APIs and local LLMs (Mistral) for controlled and flexible inference, using LangChain.	
Automated Reddit Scraper for Political Discourse	Jan 2024 - Mar 2024
<ul style="list-style-type: none">Built an automated data collection pipeline to extract subreddit threads, comments, and user interaction data.Developed R-based scraping and API workflows to generate large-scale structured datasets from Reddit.Implemented data cleaning and validation checks to ensure consistency and reliability of text and metadata for downstream analysis.	
Deep Learning NLP Recommender System with Reinforcement Learning (Masters’ Thesis)	Oct 2021 - Jan 2023
<ul style="list-style-type: none">Built a deep learning explainable recommender system in Python (TensorFlow, PyTorch) trained on 151K reviews/ratings, combining NLP and multi-task learning for personalized recommendations and explanations.Implemented neural text modeling pipelines using RNN, CNN, and transformer-based encoders for review understanding and explanation generation.Applied reinforcement-learning-inspired and neural text generation methods to optimize explanation selection and reconstruction, achieving MSE 0.992 in rating prediction.Optimized end-to-end training and inference pipelines and executed large-scale model training on GPUs, significantly reducing training time and improving experimentation throughput.	

PUBLICATIONS

- Exogenous Cues to Information Quality*
- Improving News Reliability in Algorithmic Newsfeeds*
- A Framework for Accurate Recommendations and Explanation Generation Using Multi-Task Learning*

15 Feb 2026, Mobin Shahidi