Elham Abedi

elhamabedit@gmail.com | https://elhamit.com | www.github.com/elhamabedi

AI ENGINEER | DATA SCIENTIST | MACHINE LEARNING ENGINEER

AI Engineer and Data Scientist with strong foundations in data preprocessing and engineering, machine learning, deep learning, and natural language processing. Experienced in building end-to-end ML pipelines, implementing neural networks from scratch, and working with large language models using advanced prompt engineering techniques. Proven ability to translate theoretical AI concepts into practical, production-oriented solutions. Passionate about solving real-world problems using data-driven approaches.

PROFESSIONAL EXPERIENCE

Co-Founding Prompt Engineer — Homa Chat Bot Jan 2026 – Present
• Designed and optimized prompt engineering workflows to improve Gemini AI response accuracy and consistency.
• Developed automated user support workflows powered by LLMs, reducing manual intervention.
• Contributed to the development of a matchmaking system using TypeScript and behavioral logic.
• Improved overall AI response quality through prompt optimization and iterative evaluation.
Impact: Automated responses for common support scenarios using LLM-powered workflows.

PHP Backend Developer — Academic Virtual Training Center (Tehran) Jun 2021 – Aug 2021
• Developed backend components using PHP for an online education platform.
• Implemented server-side logic and database interactions.
• Gained experience working in a production software environment and team collaboration.

SELECTED PROJECTS

CNN Image Classification using TensorFlow
GitHub: https://github.com/elhamabedi/cnn-classification
• Designed and trained a Convolutional Neural Network (CNN) for image classification using TensorFlow and Keras.
• Implemented complete deep learning pipeline including data preprocessing, model architecture design, training, and evaluation.
• Applied convolutional, pooling, and fully connected layers for feature extraction and classification.
• Evaluated model performance using validation accuracy and loss metrics.
Stack: Python, TensorFlow, Keras, NumPy, Jupyter Notebook

Persian Handwritten Digit Recognition using Neural Networks
GitHub: https://github.com/elhamabedi/handwriting-recognition
• Designed and implemented a fully connected neural network from scratch without using deep learning frameworks.
• Implemented inference pipeline for predicting new handwritten digit samples.
• Implemented complete forward propagation, backpropagation, weight initialization, and training pipeline.
• Built and labeled a custom dataset of Persian handwritten digits.
• Developed preprocessing pipeline and model evaluation tools including learning curve analysis.
• Achieved 95% validation accuracy with minimal overfitting.
• Built end-to-end pipeline including training, validation, and prediction on new input samples.
Stack: Python, NumPy, Pandas, Jupyter Notebook

Large Language Model Evaluation and Prompt Engineering
GitHub: https://github.com/elhamabedi/llm-capabilities
• Evaluated multiple Large Language Models including Phi-3 and Qwen2.5-VL.

• Implemented tasks including text generation, summarization, natural language inference, image captioning, and visual question answering.
• Applied advanced prompt engineering techniques including Few-Shot Prompting and Chain-of-Thought reasoning.
• Evaluated model performance using standard NLP metrics including ROUGE and CIDEr.
Stack: Python, Pandas, NumPy, NLP, LLM, Ollama

Text-Based Recommender System using Document Embeddings (PyTorch)
GitHub: https://github.com/elhamabedi/text-based-recommender
• Built recommendation system using document embeddings and deep learning techniques in PyTorch.
• Implemented neural network model for learning semantic representations of textual reviews.
• Converted text data into vector embeddings and applied similarity modeling for recommendation.
• Developed a full pipeline including preprocessing, model training, and prediction.
• Used PyTorch for model implementation, training, and evaluation.
Stack: Python, PyTorch, Pandas, NumPy, NLP, Jupyter Notebook

CERTIFICATIONS

Python — SoloLearn Feb 2026

MATLAB — MathWorks Aug 2025
Certificate: https://matlabacademy.mathworks.com/progress/share/certificate.html?id=976a30d6-2ba1-4393-9c79-54138809241d&&trk=public_profile_see-credential

EDUCATION

M.Sc. Computer Engineering — Data Science (Coursework Completed toward Master's Degree)
Shiraz University (Shiraz) 2024 – 2025
Relevant Coursework: Mathematics for Data Science, Data Mining, Machine Learning, Neural Network and Deep Learning, Statistical Pattern Recognition, Natural Language Processing, Data Visualization, Principles and Techniques in Data Science

B.Sc. Computer Software Engineering — Shariaty Technical University (Tehran) Sep 2021
Grade:18.58/20.00
Final Project: Developed a Java desktop application for school management including student records, reporting, and administrative workflows.

TECHNICAL SKILLS

Programming:
Python, SQL, R, MATLAB
Machine Learning & Deep Learning:
Machine Learning, Neural Networks, Deep Learning
AI & NLP:
Natural Language Processing (NLP), Generative AI (LLMs), Prompt Engineering
Data Science:
Data Analysis, Data Preprocessing, Feature Engineering, Data Visualization
Tools & Libraries:
PyTorch, TensorFlow, NumPy, Jupyter Notebook, Git

LANGUAGES

English — Professional Working Proficiency