Mona Pouresmaeil

Computer engineer specializing in AI & Data Science

Turin, Italy

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Summary

MSc Computer Engineering student focusing on **Machine Learning**, **NLP**, and **LLM-based systems**. Hands-on experience developing **AI projects**, including **RAG workflows**, **deep learning models**, and **applied ML pipelines**. Skilled in **Python**, **ML engineering practices**, and **full-stack development**. Currently expanding expertise in **LLM applications** and seeking internship opportunities in AI/ML engineering.

Education

Politecnico di Torino *Turin, Italy* 2023 – Present (Expected July 202

- **M.Sc. in Computer Engineering** – Artificial Intelligence & Data Analytics Path

Shariaty Technical and Vocational College *Tehran, Iran* 2020 - 2022

- **B.Sc. in Computer Technology Engineering (Software)**

Shariaty Technical and Vocational College *Tehran, Iran* 2018 - 2020

- **Associate Degree in Computer Software**

Experience

Backend Developer Intern *Remote* 2020

- Developed scalable backend services using Python and Django to support high-traffic web applications
- Collaborated in Agile teams using Git and GitHub for version control and code reviews
- Designed and optimized database schemas to ensure data integrity and efficient retrieval

Software Engineering Intern *Tehran, Iran* 2019-2020

- Customized enterprise software solutions for 500+ clients to meet business needs
- Optimized SQL queries to improve database performance and reduce latency
- Adapted software features to specific client requirements and workflows

Key Projects

RAG Document Validator Framework

(GitHub)

- Developed a specialized AI framework for automatic document search and validation using Retrieval-Augmented Generation (RAG)
- Implemented hallucination mitigation with confidence scoring and compliance checking features
- **Tech:** Python, LangChain, Llama 3, ChromaDB, Flask, Ragas

Fake News Detection System
(GitHub)

- Built an NLP pipeline with preprocessing, TF-IDF, and classification models (SVM, Logistic Regression)
- Evaluated and compared model performance across datasets
- **Tech:** Python, scikit-learn, NLTK

Deep Learning Handwritten Digit Classifier
(GitHub)

- Implemented CNN architecture in PyTorch with advanced techniques including dropout and batch normalization
- Trained and evaluated CNN models on the MNIST dataset with data augmentation
- **Tech:** PyTorch, CNN, Computer Vision

House Price Prediction
(GitHub)

- Engineered a full ML pipeline using scikit-learn and PyTorch with feature engineering and cross-validation
- Compared model outputs and documented performance differences using ensemble methods
- **Tech:** Python, scikit-learn, PyTorch, NumPy, pandas

Technical Skills

- **Programming:** Python, JavaScript, Java, HTML/CSS
- **Machine Learning:** scikit-learn, NumPy, pandas, XGBoost, Feature Engineering
- **Deep Learning:** PyTorch, TensorFlow, Keras
- **NLP & LLMs:** spaCy, LangChain, RAG workflows
- **Web Development:** React, Node.js, Express, REST APIs, SQL
- **Tools & Platforms:** Git/GitHub, Docker, AWS, Google Colab, Kaggle

Certifications & Achievements

- RAG for Professionals with LangGraph, Python and OpenAI (Udemy)
- Introduction to TensorFlow for AI, ML, DL (Coursera)
- Intermediate Machine Learning (Kaggle)
- Feature Engineering (Kaggle)
- GenAI Intensive Program (Kaggle)

Languages

- **English** — Native or bilingual proficiency
- **Italian** — Limited working proficiency