Mona Pouresmaeil

AI/ML Developer · Machine Learning & Data Science

Turin, Italy

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Professional Summary

- Practical experience building end-to-end ML, DL, and NLP systems using Python, PyTorch, TensorFlow, and scikit-learn.
- **M.Sc. Computer Engineering** student specializing in **Artificial Intelligence & Data Analytics** at **Politecnico di Torino**

Education

Politecnico di Torino	*Turin, Italy*	2023 - Present

- **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

Freelance Web Developer	*Remote*	2021 - Present

- Developed full-stack web apps for multiple clients (React, Node.js, SQL)
- Delivered full-stack features and maintainable code for client projects

Software Engineering Intern	*Tehran, Iran*	Summer 2021

- Customized enterprise software for 500+ clients
- Optimized SQL queries to improve performance
- Adapted features to meet client requirements
- Contributed to Agile development of new features

AI & Machine Learning Projects

- **Fake News Detection System** — Built end-to-end NLP pipeline with text preprocessing, TF-IDF vectorization, and comparative analysis of Logistic Regression, SVM, and LSTM models. Achieved F1-score of 0.92 on test dataset. *[NLP, TensorFlow, scikit-learn, LSTM]*
- **Deep Learning Handwritten Digit Classifier** — Implemented CNN architecture in PyTorch with advanced techniques including dropout, batch normalization, and data augmentation. Achieved 99.2% validation accuracy on MNIST dataset. *[PyTorch, CNN, Computer Vision]*
- **House Price Prediction (ML Pipeline)** — Engineered comprehensive ML pipeline using scikit-learn and Pandas with feature engineering, cross-validation, and ensemble methods. Achieved 15% RMSE reduction compared to baseline models. *[Python, scikit-learn, Pandas, Matplotlib]*
- **Meme Explainer (Gen AI)** — GenAI Capstone Project (2025). Explains memes by extracting tone, humor type, and core message using vision-capable generative AI model. *[Python, Gen AI, Vision Models, Pandas]*

Software & Web Development Projects

- **Enterprise Web Application (Bachelor Project)** — Developed responsive full-stack application with Django backend, SQLite database, and modern frontend. Features include user authentication, real-time data visualization, and RESTful API. *[Django, SQLite, HTML/CSS, JavaScript]*

- **Interactive Meme Game (Master's Project)** — Built full-stack React application with Node.js backend featuring real-time gameplay, user authentication, and comprehensive game history tracking. *[React, Node.js, SQLite, Express.js]*

Technical Skills

- **Programming:** Python, SQL, JavaScript, Java, HTML/CSS
- **Machine Learning:** PyTorch, TensorFlow, scikit-learn, Keras, OpenCV, spaCy
- **Data:** Pandas, NumPy, Matplotlib, Seaborn, Feature Engineering
- **Web:** Django, React, Node.js, Express.js, REST APIs
- **Tools:** Git/GitHub, Docker, Linux, VS Code, AWS, Google Colab, Kaggle

Certifications & Achievements

- Introduction to TensorFlow for AI, ML, DL (Coursera)
- Intermediate Machine Learning (Kaggle)
- Feature Engineering (Kaggle)
- GenAI Intensive Program (Kaggle)

Languages

- **Persian** — Native
- **English** — Fluent
- **Italian** — A1/A2