

Mona Pouresmaeil

AI/ML Engineer & Data Scientist

Turin, Italy

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Professional Summary

- AI/ML Engineer and Data Scientist with 3+ years of experience in machine learning, deep learning, and data analytics using Python, PyTorch, and TensorFlow
- M.Sc. Computer Engineering student specializing in Artificial Intelligence & Data Analytics at Politecnico di Torino (near graduation)

Education

Politecnico di Torino *Turin, Italy* 2023 - Present

- M.Sc. in Computer Engineering** – Artificial Intelligence & Data Analytics Path
- Relevant Coursework:** Machine Learning, Deep Learning, Data Mining, Computer Vision, Natural Language Processing
- Focus Areas:** Advanced AI algorithms, statistical modeling, big data analytics, and intelligent systems design

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

- Bachelor of Computer Technology Engineering - Software**

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

- Associate degree of Computer Software**

Experience

Freelance Web Developer *Remote* 2021 - Present

- Developed responsive web applications** using modern frontend and backend technologies
- Built full-stack solutions** for various clients with focus on user experience and performance
- Implemented database design** and API development for web applications
- Collaborated with clients** to deliver custom web solutions meeting business requirements
- Technologies:** HTML, CSS, JavaScript, React, Node.js, SQL, Git

Software Engineering Intern *Tehran, Iran* Summer 2021

- Collaborated** with development team to customize enterprise software solutions for 500+ clients
- Optimized database queries** and improved system performance through SQL optimization techniques
- Adapted software features** to meet specific client requirements and business needs
- Participated in agile development** processes and contributed to multiple feature releases
- Technologies:** SQL, Relational Databases, Java, Git

Key Projects

- Advanced House Price Prediction System** — 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]*
- 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]*
- 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]*
- 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. Awarded full grade for advanced web development implementation. *[React, Node.js, SQLite, Express.js]*

More projects available on my portfolio

Technical Skills

- **Programming Languages:** Python, SQL, JavaScript, Java, C/C++, HTML/CSS
- **AI & Machine Learning:** PyTorch, TensorFlow, scikit-learn, Keras, OpenCV, NLTK, spaCy
- **Data Science & Analytics:** Pandas, NumPy, Matplotlib, Seaborn, Jupyter Notebook, Statistical Analysis, Feature Engineering
- **Databases & Big Data:** SQLite, PostgreSQL, MySQL, MongoDB, Data Warehousing
- **Web Development:** Django, Flask, Node.js, Express.js, React.js, RESTful APIs
- **Tools & Platforms:** Git/GitHub, Linux, Docker, AWS, VS Code, Google Colab, Kaggle
- **Methodologies:** Machine Learning Pipeline Development, A/B Testing, Cross-Validation, Model Evaluation

Certifications & Achievements

- **Academic Excellence:** Rank 1 in national entrance examination for technical universities in Iran
- **Kaggle Learn Certifications:**
 - Intermediate Machine Learning
 - Feature Engineering
- **Audited Online Courses:**
 - Machine Learning by Dr. Andrew Ng (Stanford University)
 - Machine Learning with Python (IBM)

Languages

- **Persian** — Native proficiency
- **English** — Fluent (Professional working proficiency)
- **Italian** — Elementary proficiency (A1/A2, Currently improving)