

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
<ul style="list-style-type: none">M.Sc. in Computer Engineering – Artificial Intelligence & Data Analytics PathRelevant Coursework: Machine Learning, Deep Learning, Data Mining, Computer Vision, Natural Language ProcessingFocus Areas: Advanced AI algorithms, statistical modeling, big data analytics, and intelligent systems design		
Shariaty Technical and Vocational College	Tehran, Iran	2020 -- 2022
<ul style="list-style-type: none">Bachelor of Computer Technology Engineering - Software		
Shariaty Technical and Vocational College	Tehran, Iran	2018 -- 2020
<ul style="list-style-type: none">Associate degree of Computer Software		

Experience

Freelance Web Developer	Remote	2021 -- Present
<ul style="list-style-type: none">Developed responsive web applications using modern frontend and backend technologiesBuilt full-stack solutions for various clients with focus on user experience and performanceImplemented database design and API development for web applicationsCollaborated with clients to deliver custom web solutions meeting business requirementsTechnologies: HTML, CSS, JavaScript, React, Node.js, SQL, Git		
Software Engineering Intern	Tehran, Iran	Summer 2021
<ul style="list-style-type: none">Collaborated with development team to customize enterprise software solutions for 500+ clientsOptimized database queries and improved system performance through SQL optimization techniquesAdapted software features to meet specific client requirements and business needsParticipated in agile development processes and contributed to multiple feature releasesTechnologies: 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)