

# 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

<b>Politecnico di Torino</b>	<i>Turin, Italy</i>	2023 -- Present
<ul style="list-style-type: none"><li><b>M.Sc. in Computer Engineering</b> – Artificial Intelligence &amp; Data Analytics Path</li><li><b>Relevant Coursework:</b> Machine Learning, Deep Learning, Data Mining, Computer Vision, Natural Language Processing</li><li><b>Focus Areas:</b> Advanced AI algorithms, statistical modeling, big data analytics, and intelligent systems design</li></ul>		
<b>Shariaty Technical and Vocational College</b>	<i>Tehran, Iran</i>	2020 -- 2022
<ul style="list-style-type: none"><li><b>Bachelor of Computer Technology Engineering - Software</b></li></ul>		
<b>Shariaty Technical and Vocational College</b>	<i>Tehran, Iran</i>	2018 -- 2020
<ul style="list-style-type: none"><li><b>Associate degree of Computer Software</b></li></ul>		

## Experience

<b>Freelance Web Developer</b>	<i>Remote</i>	2021 -- Present
<ul style="list-style-type: none"><li><b>Developed responsive web applications</b> using modern frontend and backend technologies</li><li><b>Built full-stack solutions</b> for various clients with focus on user experience and performance</li><li><b>Implemented database design</b> and API development for web applications</li><li><b>Collaborated with clients</b> to deliver custom web solutions meeting business requirements</li><li><b>Technologies:</b> HTML, CSS, JavaScript, React, Node.js, SQL, Git</li></ul>		
<b>Software Engineering Intern</b>	<i>Tehran, Iran</i>	Summer 2021
<ul style="list-style-type: none"><li><b>Collaborated</b> with development team to customize enterprise software solutions for 500+ clients</li><li><b>Optimized database queries</b> and improved system performance through SQL optimization techniques</li><li><b>Adapted software features</b> to meet specific client requirements and business needs</li><li><b>Participated in agile development</b> processes and contributed to multiple feature releases</li><li><b>Technologies:</b> SQL, Relational Databases, Java, Git</li></ul>		

## 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

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- **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

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- **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

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