Pouria Nazemi

Personal Data

Location:	Mashhad, Iran	Website:	
Email:	pourianazemi80@gmail.com	LinkedIn:	
Phone:	+989154833278	Github:	

Summary

Results-driven AI/ML engineer with strong hands-on experience in building production-ready machine learning systems across diverse domains, including network monitoring, medical signal processing, and document intelligence. With a passion for translating cutting-edge research into real-world solutions, and demonstrated success in delivering end-to-end AI solutions — from problem definition and data preparation to model deployment and performance optimization. Seeking to contribute to innovative, high-impact AI projects within research-driven or product-focused environments.

Technical Skills

Programming Languages: Python, Bash, Java, C

Core Machine Learning: Scikit-learn, Feature Engineering, Time-Series Forecasting, Signal Processing, Model Evaluation

Deep Learning Frameworks: TensorFlow, PyTorch, Keras, Transformers, Hugging Face

Natural Language Processing: LLMs, Prompt Engineering, Text Classification, RAG, NLTK, Hazm, LangChain

Computer Vision: CNNs, Image Classification, OCR, OpenCV

Data Analysis and Visualization: Pandas, NumPy, Matplotlib, Seaborn, Plotly, SciPy

MLOps and Deployment: Docker, Git, Flask, Linux, Prometheus, Grafana, OpenSearch, Elasticsearch, Kibana, FAISS, ChromaDB

Experience

Monitoring Solutions Developer, SRE (Full-Time) Jul 2023 – Present
Part Software Group *Mashhad, IR*

- Contributed to an intelligent NOC system leveraging LLMs to simulate engineer workflows, providing automated fix suggestions, incident detection, and historical analysis reports, enhancing operational efficiency.
- Mentored and instructed students for the Cangrow Data Science course, teaching machine learning fundamentals and guiding final student projects integrating classical ML and LLMs.
- Technical lead for anomaly detection team analyzing NetFlow data: designed and supervised implementation of scalable algorithms for identifying network anomalies.
- Developed and maintained monitoring infrastructure and automation tools to support system reliability and observability.

Data Scientist (Internship) Jun 2023 – Oct 2023
Neurosina Company *Mashhad, IR*

- Designed and implemented a real-time seizure detection pipeline using multimodal biosignals from wearable devices, improving detection accuracy while reducing false alarms.
- Applied neural networks and signal processing techniques on large-scale biosignal datasets.
- Engineered data transformation pipelines to address confounding factors from physical activity.

Data Scientist (Part-Time) Jun 2022 - Mar 2023
Pelekan Company *Mashhad, IR*

- Collaborated on a project to optimize warehouse operations for a book distribution company.
- Analyzed invoice data and performed feature engineering to prepare inputs for predictive modeling.
- Applied clustering, regression, and time-series forecasting to predict book sales and inform warehouse space utilization strategies.
- Designed an end-to-end pipeline to classify products and forecast sales based on book names.

Projects

Persian Document Classification
Under supervision of Dr. Pourreza — *OCR, NLP, LLMs, Transformers, Hugging Face*

- Developed a pipeline to classify images of documents based on text classification of OCR results
- Analyzed open-source OCR models and fine-tuning Bert model on Persian dataset
- Analyzed the impact of OCR errors on classification accuracy and developed preprocessing improvements
- Achieved accuracy of 97.8% on clean text and 80.3% on fully artificial defected text

Seizure Detection
Draft Article — *Signal Processing, Time-Series Analysis, Machine Learning, High-Volume Data*

- Developed an automatic epileptic seizure detection system using multimodal biosignals (3D accelerometry, blood volume pulse, electrodermal activity, and temperature) recorded from the Empatica E4 wearable device.
- Engineered statistical and time-series features from physiological signals and trained different classifiers using a leave-one-seizure-out approach.
- Achieved a final performance of 74% sensitivity and a False Alarm Rate (FAR) of 35.8 d^{-1} on a publicly available dataset from 6 patients
- This performance is comparable to previous methods and significantly outperforms a random classifier (50% sensitivity, 144 d^{-1} FAR).
- Implemented a pipeline covering data acquisition, exploratory analysis, heuristic seizure onset annotation, training data selection, feature extraction, and classifier training and testing.
- Designed and optimized a post-processing algorithm to refine classifier outputs, leveraging a moving window and thresholding for final seizure classification.

PDF Question-Answering System Using LLMs (RAG)
Repo — *RAG, LLMs, Prompt Engineering, Langchain, FAISS, Chromad*

- Developed a RAG system with Falcon-7B (self-hosted) for context-aware question answering.
- Implemented document ingestion from PDFs, text chunking, and embedding generation using SentenceTransformers with ChromaDB + FAISS backend.
- Integrated LangChain for end-to-end retrieval and QA chaining, enabling contextual answering over custom document sets.

Digit Classification
Repo — *CNN, Tensorflow, Pytorch, Implementing Loss Function, Data Generation*

- Built and benchmarked digit classifiers using CNNs, SVMs, and Random Forests, achieving high accuracy through custom loss functions and regularization.
- Performed feature engineering, hyperparameter tuning, and applied regularization and custom loss functions for model optimization.
- Tuned and optimized diverse model architectures to enhance digit classification performance.

Article Search Recommend System
Repo — *NLP, Information Retrieval, ELK*

- Built a Flask-based search and recommendation system for blockchain papers using Elasticsearch, TF-IDF, and cosine similarity.
- Integrated Kibana for real-time data visualization and interactive dashboards to support document exploration and insights.

More projects are available on my GitHub: github.com/pouria-nazemi

Education

Ferdowsi University — Mashhad, IR
B.S. in Computer Science with Specialization in Artificial Intelligence — *Sep 2020 – Aug 2025*

- GPA: 95% - Ranked 3rd
- TA of Linear Algebra, Fundamentals of AI for 2 years

Certifications and Awards

- **Neural Networks and Deep Learning** — Issuer: DeepLearning.AI (Certificate)
- **Network Training Course Based on CCNA** — Issuer: Part College (Certificate)
- **Datadays Anomaly Detection Challenge - Rank 10/80** — Conductor: Sharif University (Repo)