

UMAR FAROOQ

Machine Learning & Python Developer

umarfarooq69jbfas@gmail.com | +92 329 5855639 | Rawalpindi, Pakistan

LinkedIn: linkedin.com/in/umar-farooq-388b7a336 | GitHub: github.com/umarjutt33

PROFESSIONAL SUMMARY

AI undergraduate with hands-on experience building and deploying end-to-end ML systems, including fraud detection, federated learning, computer vision, and conversational AI. Proficient in Python and FastAPI, with a track record of taking projects from model work through to deployable web applications. Seeking AI/ML internship opportunities.

EDUCATION

Bachelor of Science in Artificial Intelligence

NUTECH (National University of Technology), Pakistan | 2024 – Present

Relevant Coursework: Machine Learning, Natural Language Processing, Data Structures and Algorithms, Database Systems, Python Programming, Linear Algebra, Probability and Statistics

TECHNICAL SKILLS

Programming Languages: Python, SQL

Machine Learning: Supervised Learning, Unsupervised Learning, LightGBM, Model Evaluation, Feature Engineering, Scikit-learn

AI/ML Applications: Federated Learning, Computer Vision (MediaPipe), LSTM/Transformer Models, Sentiment Analysis, NLP

Backend & Full-Stack: FastAPI, Streamlit, React, TypeScript, Node.js, SQLite, MySQL

Development Tools: Git, GitHub, Jupyter Notebook, VS Code, Google Colab

PROJECTS

SafeSwipe — Credit Card Fraud Detection

- Trained a LightGBM classifier on a dataset of ~285,000 credit card transactions to flag fraudulent activity, handling the strong class imbalance typical of fraud data.
- Built a FastAPI backend to serve the trained model as a prediction API for real-time inference.
- Built a Streamlit dashboard on top of the API so transactions could be scored and reviewed interactively without touching code.

Technologies: Python, LightGBM, FastAPI, Streamlit, Pandas, Scikit-learn

PakFedHealth — Federated Learning Healthcare Platform

- Built a federated learning system that trains disease-prediction models across multiple simulated hospital nodes in Pakistan without centralizing patient data, addressing privacy constraints in healthcare data sharing.
- Migrated the project from its original Replit environment into a clean, standalone two-workspace (server/client) project so it could run locally instead of depending on a hosted environment.
- Resolved a series of Windows-specific environment and dependency issues to get the full stack running reliably outside of Replit.

Technologies: Node.js, Federated Learning, JavaScript/TypeScript

AI Doctor Chatbot

- Engineered an intelligent medical assistance chatbot using NLP to interpret patient queries and provide preliminary medical guidance, with text preprocessing, tokenization, and intent classification for symptom recognition.
- Designed a conversation flow architecture supporting contextual understanding and coherent multi-turn dialogue management.
- Integrated machine learning models for continuous improvement of response accuracy based on user interactions, with testing to validate medical information accuracy.

Technologies: Python, NLTK, Natural Language Processing, Machine Learning, Scikit-learn

Machine Learning Predictive Analytics Project

- Developed predictive models using supervised learning algorithms including Linear Regression, Decision Trees, and Random Forests.
- Performed exploratory data analysis and feature engineering to identify key patterns, then applied cross-validation and hyperparameter tuning to optimize accuracy and prevent overfitting.
- Visualized data distributions and model results using Matplotlib and Seaborn, achieving measurable accuracy improvements through iterative refinement.

Technologies: Python, Scikit-learn, Pandas, NumPy, Matplotlib, Jupyter Notebook

CERTIFICATIONS AND LEARNING

- Completed online courses in Machine Learning Fundamentals and Python for Data Science
- Active participant in AI/ML coding challenges and hackathons

ADDITIONAL INFORMATION

Languages: English (Fluent), Urdu (Native)

Interests: Deep Learning, Computer Vision, Reinforcement Learning, AI Ethics, Open Source Contribution

Availability: Immediately available for AI/ML internships