

MUHAMMAD USMAN

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OBJECTIVE

Machine Learning Engineer with hands on experience in building, training and optimizing machine learning models using python, Scikit-learn, Tensorflow, and PyTorch. Skilled in data preprocessing, data transformation, feature engineering and developing RESTful APIs using FastAPI and Flask to ML solutions. Learning new technologies like RAG using LangGraph, AgenticAI, LLMs, NLP and experienced in cloud platforms AWS, Azure and solving real world problems using AI driven systems.

EXPERIENCE

Data Science Intern, ITSOLERA

Jul 2025 – Sep 2025

- Build and trained machine learning models for sentiment analysis and disease prediction using python and Scikit-learn.
- Applied deep learning and anomaly detection techniques for risk forecasting and geological event prediction.
- Performed data preprocessing and data transformation on large datasets to improve model performance.
- Developed RESTful APIs using FastAPI and Flask to serve trained ML models for prediction use.

Machine Learning Intern, ITSOLERA

Jul 2024 – Oct 2024

- Developed anomaly detection models for financial risk forecasting using supervised and unsupervised algorithms.
- Designed a mental health prediction system using keystroke dynamics and machine learning models.
- Automated data pipelines and models evaluation workflows using python.
- Built API based ML services using Django and Flask for integration with applications.

PROJECTS

Automated Grading and Learning Analytics Platform (Final Year Project)

- Designed and implemented a hybrid automated grading system using rule-based logic and data driven analysis to evaluate student performance, reducing manual grading effort and improving accuracy.
- Developed performance analytics to track student progress over time and generate actionable insights for collaborative learning environments.
- Applied data preprocessing, feature engineering, and machine learning techniques to support automated evaluation and long-term performance analysis.

Predicting Students Career Aspirations Using Machine Learning

- Built machine learning models on academic and personal datasets using feature engineering EDA.
- Optimized Random Forest Classifier achieving 80% prediction accuracy.
- Integrated a recommendation system for career guidance and deployed model using FastAPI API services.

TECHNICAL SKILLS

Programming Languages

- Python, Java, SQL, JavaScript, React, Node.js, Express

Techniques

- Deep Learning, Natural Language Processing (NLP), Agentic AI, RAG using LangGraph, LLMs, Fine Tuning, Computer Vision, Anomaly detection, Predictive Modeling, Data preprocessing, Feature Engineering, Exploratory Data Analysis (EDA)

Tools

- Pandas, Numpy, Matplotlib, Seaborn, Plotly, Scikit-learn, PyTorch, Tensorflow, Keras, XGBoost, OpenCV, Flask, Streamlit, Jupyter Notebook, Docker, AWS, ML Pipelines, Git/GitHub, PowerBI

Databases

- MySQL, PostgreSQL, NoSQL, MongoDB, SQLite

EDUCATION

Bachelor of Computer Science, University Of Sindh

Dec 2025

Major in Computer Science GPA: 2.95/4.0

Relevant Coursework: Artificial Intelligence, Machine Learning, Data Structure and Algorithms, Object Oriented Programming, Parallel and Distributed Computing, Web Engineering Technologies, Database Management Systems, Linear Algebra, Mobile Application Development, Probability and Statistics.