SAMMER HUSSAIN

AI/ML Engineer | Python Developer

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SUMMARY

I am a recent IT graduate with a strong foundation in Python and Artificial Intelligence. I am passionate about building innovative, data-driven solutions that address real world challenges. Skilled in Flask and Node js for backend development, I have experience in designing, training, and deploying intelligent applications using modern AI/ML frameworks. I am proficient in multiple programming languages and tools, with a proven ability to transform complex data into actionable insights and deliver scalable, production-ready solutions.

EXPERIENCE

AI Engineer Intern

CoreTech Innovations

08/2025 - 09/2025 Remote

- Engineered machine learning models (sentiment analysis, student marks predictor) using Python, Scikit-learn, and TensorFlow.
- Architected and implemented a smart service platform to enhance internal workflows and productivity.
- Executed data preprocessing, feature engineering, and model evaluation to ensure high accuracy.
- Partnered with cross-functional teams in an Agile environment to ensure timely project delivery.
- Optimized, validated, and deployed models with production-ready techniques.
- Delivered data-driven insights and project outcomes to stakeholders, influencing business decisions.

EDUCATION

B.Sc. in Information Technology

Quaid-e-Awam University of Engineering, Science & Technology

12/2021 - 08/2025 Nawabshah, Pakistan

SKILLS

Python **JavaScript** **HTML/CSS** **SQL** **Flask** **Node JS** **Streamlit** **React JS** **TensorFlow** **Keras** **Scikit-learn**

NLTK **Pandas** **OpenCV** **MySQL** **SQLite** **MongoDB** **PostgreSQL** **VS Code** **Anaconda** **Jupyter Notebook**

Git **GitHub**

PROJECTS

FredCoach - AI Coaching Platform

10/2025 - 11/2025

Full-Stack AI Coaching SaaS Platform

- A full-stack, subscription-based SaaS platform delivering 24/7 AI-powered mental coaching via an intelligent chatbot.
- Engineered the backend with Node.js, Express, and MongoDB; built a responsive React frontend with Tailwind CSS.
- Integrated Stripe for secure payment processing and subscription management, including webhook handling for real-time status updates.
- Implemented a custom Retrieval-Augmented Generation (RAG) system with OpenAI's GPT-4o to provide context-aware coaching.
- Developed a comprehensive admin panel for system customization, user management, and dynamic branding control.
- Deployed with a scalable microservices architecture (Backend on Railway, Frontend on Vercel) ensuring high availability and performance.

AI-Powered Plagiarism Detection System

02/2025 - 06/2025

Final year project focused on plagiarism detection.

- Developed a modular application to detect semantic and lexical plagiarism.
- The system was built using Flask and React, incorporating TF-IDF, cosine similarity, and RoBERTa for sentence-level semantic analysis.
- Enabled document uploads, AI-generated text detection, and detailed PDF reporting.
- Optimized NLP preprocessing pipelines (tokenization, lemmatization, stop-word removal) to enhance accuracy and reduce analysis noise.

Live Object Detection with YOLOv8

08/2024 - 09/2024

Project focused on live object detection.

- Implemented a real-time object detection system using webcam feed with live predictions and bounding boxes.
- Crafted with Flask, OpenCV, and YOLOv8, integrating multi-class detection and confidence scoring.
- Optimized model performance for low-latency, real-time inference.
- Designed a web-based interface for seamless live monitoring and testing.

CERTIFICATIONS

Google Prompting Essentials

Introduction to Generative AI (Google)

Google AI Essentials