Dawood Sarfraz

Machine Learning Engineer

+923061757838 dawoodsarfraz.cs@gmail.com Dawood Sarfraz DawoodSarfraz Lahore, Pakistan

Education

FAST National University of Computer and Emerging Sciences
Bachelor's in Computer Science *Sep 2020 - Sep 2024*

Skills

Languages: Python, C++, SQL
Tools: Git, Postman, Docker, Kubernetes, Jenkins, AWS
Libraries: FastAPI, Flask, Streamlit
ML Libraries & Frameworks: PyTorch, scikit-learn, TensorFlow, Keras, NumPy, Matplotlib, SciPy, Pandas, Seaborn, NLTK, spaCy, OpenCV, Yolo
GenAI Libraries & Frameworks: LangChain, Weaviate DB, RAG, Crew AI, Llama3, LlamaIndex

Experience

Deutics Global **Jan 2025 – Present**
Associate Machine Learning Engineer *On-site*

- I worked on live video streaming by converting RTSP streams to WebRTC and performed traffic analysis using computer vision techniques. This involved real-time video processing for efficient streaming and analytics.

FAST NUCES **Sep 2023 – Sep 2024**
Machine Learning Engineer (Research Intern) *On-site*

- Worked on a project focused on classifying skin cancer using CNN, ShuffleNet, and NasNet models, gaining experience in medical data processing and deep learning architectures.

Anonymous Tree **Jun 2023 – Aug 2023**
Machine Learning Engineer Intern *Remote*

- Developed a recommendation system using user data, item metadata, and techniques like content-based, collaborative filtering for personalized product suggestions.

Projects

Road Traffic Analysis Project Link

- Developed a real-time traffic analytics system using computer vision to track pedestrian crossings, direction, wait times, and duration, along with vehicle queues, bus wait times, vehicle counting, speed detection, and red light violations. Enables data-driven traffic optimization and safety enforcement.

Skin Cancer Classification using NasNet and ShuffleNet

- Developed deep learning models (Custom CNN, NasNet, ShuffleNet) for multi-class skin cancer classification using the HAM10000 dataset. Enhanced accuracy with batch normalization, dropout, and Adamax optimizer, achieving the highest accuracy with NasNet and improved efficiency with ShuffleNet.

LlamaAssist Project Link

- LLama Assist is an AI-powered application built with LLama 3.2 3B and LLama 3.2 Vision. It allows users to generate assignments with customizable output length and difficulty, save content into text files, and interact with images via AI-driven chat. Perfect for creating and managing assignments with ease and precision.

RoboText Classifier Project Link

- Built a text classification model using RoBERTa and NLTK. Enhanced performance with dynamic masking, sentence packing, byte-level BPE vocabulary, and larger batch sizes for efficient, accurate classification of diverse text.

Duplicate Questions Pair Project Link

- Built a model to identify and detect duplicate question pairs using Random Forest, XGBoost, and Decision Tree classifiers. Achieved 90% accuracy with XGBoost classifier.

Text Generation Project Link

- Processed a 500MB unlabeled dataset with almost 3000 unique words and 1000 sentences. Applied data preprocessing techniques and used LSTM with Adam optimizer, achieving 93% accuracy.