AI/ML Engineer

AFTAB MALLICK

8100458986 | aftabmallick007@gmail.com
https://www.linkedin.com/in/aftab-mallick
https://github.com/Aftabmallick
Bengaluru, KA 560035

Skills

- Python (Pandas, NumPy, Matplotlib, Seaborn)
- SQL (Oracle SQL, MySQL, PostgreSQL)
- Machine Learning (scikit-learn, TensorFlow, PyTorch, Keras)
- Deep Learning (ANN, CNN, RNN, LSTM, GRU GAN)
- Computer Vision (OpenCV, YOLO)
- Cloud Platform (AWS, GCP)
- Natural Language Processing (Regex, Spacy, NLTK, Word Embedding, BERT, Word2vec)
- Machine Learning Lifecycle (MLflow, DVC, CI/CD)
- Backend (Flask, FastApi)
- Frontend (HTML, CSS, JavaScript, Streamlit)
- Version Control (Git & GitHub)
- Others (Langchain, LLM, GPT, GenAI, Pinecone)

Projects

KIDNEY DISEASE CLASSIFICATION WITH CICD ON AWS – Personal Project – **Project URL**   03 / 2024

- Utilized Kaggle's kidney image dataset to train a **VGG16 CNN model**, employing **OpenCV for image processing**
- Employed **MLflow** to track all ML experiments conducted during **hyperparameter tuning** and selected the best parameters
- Implemented **DVC** for creating a **machine learning pipeline**, streamlining data ingestion, preprocessing, model training
- Developed a **Flask** server for predictions and implemented **CI/CD** for continuous integration and deployment on **AWS EC2**.

RAG BASED QUESTION ANSWERING SYSTEM – Personal Project – **Project URL**   02 / 2024

- Created a **RAG chain** using **OpenAI GPT 3.5 turbo** model and **langchain** framework
- Converted PDF / Website data in text format, then utilized **OpenAI text embeddings** to convert the text into vectors
- Uploaded the vectors to a cloud database called **Pinecone**, enabling easy access from any location
- Retrieve answers for user questions using **cosine similarity**

CHATBOT FOR FOOD DELIVERY APPLICATION – Personal Project – **Project URL**   01 / 2024

- Leveraged Google's **Dialogflow** to integrate chat functionality, enabling seamless communication with users
- Implemented **custom food entities** to significantly boost chatbot accuracy
- Implemented a **FastAPI** backend to ensure swift response times and efficient data processing
- Connected **MySQL** database for retrieving food prices, orders, and status updates, enhancing system functionality

DATA SCIENCE JOB MARKET EDA – Personal Project – **Project URL**   01 / 2024

- Utilized **Python** to analyze 7000 data science job listings and gain insights on what it takes to land a job in analytics
- Implemented **Regex** techniques to comb through the job descriptions and identified the key requirements
- Aggregated and visualized the data by using **pandas, matplotlib** and **wordcloud** to compile a professional report

Work Experience

BUSINESS AND DATA ANALYST INTERN – Ybi Foundation – Virtual   06 / 2023 - 07 / 2023

- Engineered **Artificial Neural Network (ANN**) models achieving an **average accuracy of 90% in predicting** telecom customer churn, resulting in a significant reduction in customer attrition rate and substantial revenue preservation.
- Implemented **ANN** solutions for banking and telecom churn forecasting, outperforming traditional methods and facilitating timely customer retention actions.
- Analyzed financial news sentiment **using Random Forest** and **NLP** techniques, resulting in improved market trend predictions and actionable insights for investment decisions.

Education

BACHELOR OF TECHNOLOGY IN DATA SCIENCE – MCKV Institute of Engineering – Kolkata, West Bengal   2020 - 2024
Majors: Machine Learning, Deep Learning, Generative AI, Large Language Model, NLP, Data Analytics.