Meghank Jubur

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Computer Science graduate with experience in data analysis, machine learning, software development, cloud-based solutions.

EDUCATION

Old Dominion University GPA: **3.76**/4 — Norfolk, VA
Master's in Computer Science — Expected December 2024

KL University — Guntur, India
Bachelor's in Electronics and Communication — May 2018 – May 2022

SKILLS

Languages: Python, JavaScript, SQL, C, R, HTML.
Frameworks & Libraries: Flask, TensorFlow, Keras, Scikit-learn, FastAPI, React, Node.js, Docker, Kubernetes.
Tools & Platforms: Git, AWS, Azure, PostgreSQL, MySQL, Jupyter Notebook, Power BI, SharePoint, MS Word, MS Excel, MS PowerPoint.
Data Analysis & Visualization: Pandas, NumPy, SciPy, NLTK, TF-IDF, PIL, OpenCV, Matplotlib.

EXPERIENCE

Graduate Research Assistant — Aug 2023 – May 2024
Virginia Modeling, Analysis, and Simulation Center. — Norfolk, VA

- Enhanced emotion recognition models using the **CASE dataset**, achieving a 15% accuracy boost in classifying emotions from physiological signals and predicting valence-arousal levels. Conducted statistical and exploratory data analysis, leveraging **Python, Pandas, NumPy, SciPy** in **Jupyter Notebook** with optimized feature engineering and preprocessing..
- Implemented full-stack AI-powered chatbot using **HTML**, JavaScript, Python, and **Flask**, seamlessly integrating front-end forms with back-end **Application Programming Interfaces(API)**, reducing response time by 30% and boosting user satisfaction by 25%.
- Developed an **NLP** sentiment analysis model on a Twitter dataset using Logistic Regression in Google Colab, with precise data pre-processing and vectorization via Scikit-learn, NLTK, and TF-IDF, enhancing classification accuracy by 20%.
- Proactively led weekly presentations at VMASC, enhancing the visibility and impact of research projects. Contributed to **Storymodelers Lab monthly conferences**, where I authored comprehensive reports and played a pivotal role in co-authoring a high-stakes research grant proposal on Autism.

Intern — May 2021 – December 2021
NPHSAT Pvt. Ltd. — Guntur, India

- Contributed to the successful design and deployment of **CubeSats**, reducing mission planning time by 20% through automation tools built in **MATLAB** and **LabVIEW**.
- Engineered high-efficiency antennas for small satellites, achieving a 10% improvement in signal strength and communication reliability.
- Streamlined satellite telemetry processes, enhancing data transmission rates by 15%.

PROJECTS

Image Classifier for Text Extraction from Hotel Menus

- Created a **OCR-free model** with **Donut** and **PyTorch** to extract data from hotel menus, achieving 89.6% accuracy and 88.6% F1 score by effectively handling data preprocessing and image manipulation with Python and **PIL**.

Multi-Model Approach for Real-Time Toxic Comment Classification

- Created and optimized real-time toxic comment classification models using SVM and LSTM with Python, achieving high accuracy and leveraging Scikit-learn, TF-IDF, and **TensorFlow** for efficient text preprocessing and feature extraction.

Physiological Data Streaming App

- Developed a real-time physiological data streaming app using Python, integrating Empatica E4 with **LabStreamingLayer** and **Streamlit** for live data visualization.

E-commerce Web Application

- Architected a scalable e-commerce web application using **React.js, Node.js** as part of a course project, successfully simulating the handling of a large number of users with consistent uptime.
- Integrated a payment gateway using **Stripe API**, improving transaction security and reducing simulated payment processing time by 40%.

Cloud-based Microservices Architecture

- Designed and implemented a cloud-native microservices architecture using **Docker, Kubernetes**, and **Azure DevOps** for a university project, reducing deployment time by 50% and demonstrating improved system scalability.
- Deployed containerized applications on **AWS** in a simulated environment, showing a potential 30% reduction in operational costs and a 25% improvement in system reliability.