Sumukh Acharya

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Skills

- **Languages:** Python, C
- **Machine Learning and Deep Learning:** pandas, numpy, tensorflow, scikit-learn, Matplotlib, Seaborn, Pytorch, keras, Librosa, Statsmodels, Joblib, ML Models(XGBoost, SVM, CatBoost, KNN), Nueral Networks(DNN, LSTM, Siamese Networks, Autoencoders)
- **Databases and Big Data:** MySQL, Hadoop, Kafka, Spark
- **OS:** Windows, Linux
- **Web Dev:** HTML, CSS, JavaScript, Node JS, React, TypeScript
- **Version Control:** Git, Github
- **Others:** Blender, MSOffice, VSCode, Docker, Kubernetes, Vercel

Experience

Intern, **CODMAV** – Bengaluru, Karnataka | **GitHub Link** June 2024 – July 2024

- **Tools Used:** pandas, numpy, scikit-learn, Matplotlib, seaborn, XGBoost, CatBoost
- Preprocessed datasets and applied Feature Selection techniques(**PCA, BSO, RFE, SelectKBest**); trained **XGBoost, SVM, CatBoost, and KNN** models using **5-fold cross-validation**.
- Designed an **Ensemble Model** for early lung cancer detection achieving **98.746%** Accuracy and **96.245%** Recall; published research paper at **2025 IEEE InC4 Conference**.

Projects

DFOS – Distributed File Orchestration and Synchronization **GitHub Link**

- **Tools Used:** socket, TCP Protocol, ThreadPoolExecutor, Multi-threading, Client-Server Architecture
- Engineered a scalable distributed file orchestration system using Python socket programming and multi-threading, supporting concurrent client sessions with secure authentication, real-time performance monitoring, and fault-tolerant data transfer protocols.

Sports Rental – Sports Equipment Rental Management System **GitHub Link**

- **Tools Used:** MySQL, CRUD operations, streamlit, pandas
- Designed a web-based rental system allowing university students to browse and rent sports equipment, while admins track inventory in real-time, allowing role-based access.

Fare-Forecasting-in-Quahog-City **GitHub Link**

- **Tools Used:** numpy, pandas, seaborn, matplotlib, scikit-learn, statsmodel
- Developed fare prediction models for bikes, autos, and cars using SARIMAX, XGBoost, and VAR, optimizing RideWave's dynamic pricing strategy; Conducted time-series analysis, feature engineering, and ensemble modeling, improving fare prediction accuracy by 9.47%.

Education

PES University 2022-2026

- B-Tech in Computer Science and Engineering

BASE PU College 2020-2022

- Class 11-12 (12th - 95%)

Sri Kumaran Children's Home 2009-2020

- Class 1-10 (10th - 90%)