Sumukh Acharya

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Skills

- **Languages:** Python, C, Java
- **Databases:** SQL
- **Machine Learning and Big Data:** pandas, numpy, tensorflow, scikit-learn, Matplotlib, Seaborn, Pytorch, keras, Librosa, Hadoop, Kafka, Spark
- **OS:** Windows, Linux
- **Web Dev:** HTML, CSS, JavaScript, NextJS, React
- **Version Control:** Git, Github
- **Others:** Blender, MSOffice, VSCode, Docker, Kubernetes

Experience

Intern, CODMAV – Bengaluru, KA June 2024 – August 2024

- **Tools Used:** Machine Learning, Data Analysis, Data Visualization
- Preprocessed datasets and applied feature selection techniques (**PCA, BSO, RFE, SelectKBest**) to optimize model performance.
- Trained **XGBoost, SVM, CatBoost, and KNN** models using **5-fold** cross-validation , achieving an accuracy of **98.746**.
- Designed an **Ensemble** Model integrating XGBoost, SVM, CatBoost, and KNN, boosting predictive performance for early lung cancer detection.
- Published a research paper titled "**Predictive Analytics for Early Lung Cancer Risk Using Machine Learning**" at the 2025 **IEEE** InC4 Conference (March 2025) .

Projects

DOFS – Distributed File Orchestration and Synchronization for Linux

- Developed a **multi-client file transfer** system using a client-server model in Python.
- Implemented secure directory **isolation** , **error handling**, and **real-time synchronization**, ensuring data integrity

Sports Rental – Sports Equipment Rental Management System

- Designed a web-based rental system allowing university students to **browse** and **rent** equipment , while **admins** track inventory in real-time , allowing **role-based access**.
- Implemented full **CRUD** functionality using **MySQL** , enhancing operational efficiency.

RideWave – RideWave Fare Forecasting System

- 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**
- Evaluated performance using **SMAPE** (Symmetric Mean Absolute Percentage Error).

Education

PES University 2022-2026

- B-Tech in Computer Science and Engineering