Sumukh Acharya

Computer Science Engineering Student

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EXPERIENCE

CODMAV(PES), Bangalore — *INTERN*

JUNE 2024 - AUGUST 2024

- 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% and a recall of 96.245%** for RFE-selected features.
- 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.

Personal Portfolio - My Personal Website

- Built a fully responsive personal website using **Next.js**, **React**, **TypeScript**, and **Tailwind CSS**.
- Showcases projects, skills, and achievements, with a **user-friendly UI.**
- Deployed via **Vercel**.

RideWave - RideWave Fare Forecasting

- 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

B-Tech in Computer Science Engineering (2022-2026)

PES University

PUC Class 12 (2020-2022)

BASE PU College (95%)

CBSE Class 10 (2009-2020)

Sri-Kumaran Children's Home (90%)

SKILLS

Languages: Python, C

Database: MySQL

Machine Learning and Big Data: Pandas, numpy, tensorflow, scikit-learn, Matplotlib, Seaborn, Pytorch, keras, Librosa, Hadoop, Kafka, Spark

OS: Windows, Ubuntu Linux

WebDev: HTML, CSS, JavaScript, NextJS, React

Version Control: Git, Github

Others: Blender, MSOffice, VSCode, Docker, Kubernetes

ACHIEVEMENTS

Learn Photorealism with Blender 4-week Course Certificate.

Placed Top-10 in Kaggle Data Analytics Hackathon.

Placed Top-10 in Kaggle Machine Learning Hackathon.

LANGUAGES

English, Konkani, Kannada, Hindi