SUMUKH ACHARYA

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EDUCATION

B.Tech in Computer Science and Engineering, PES University   Expected Graduation: **May 2026**

Specialization: MIDS (Machine Intelligence and Data Science)

EXPERIENCE

AI Intern   September 2025 - Present
Tvam Technologies Pvt. Ltd.

- Implemented parameter-efficient fine-tuning on a **Gemma-3 270M** model, using **LoRA** to specialize its architecture for **agentic tool-calling** workflows.
- Actively contributing to the design and scalability planning for a full-stack AI project while mastering the company's core technology stack.

Teaching Assistant (Python & Databases)   August 2025 - Present
PES University

- Mentored 150+ undergraduate students in Python and Databases, while also assisting faculty with grading, course material preparation, and lab sessions.

Data Science Intern   June 2024 - August 2024
CODMAV (Centre of Data Modelling, Analytics and Visualization)   [(GitHub Link)](#)

- Led the development of a **lung cancer risk prediction system** using advanced feature selection (PCA, BSO, RFE, SelectKBest) and machine learning models (XGBoost, CatBoost, SVM, KNN), achieving **98.75% accuracy** and **96.25% recall**; co-authored on a research paper **accepted for publication on IEEE Xplore**.

PROJECTS

Distributed File Orchestration and Synchronization | Python, Sockets, Threading   [(GitHub Link)](#)

- Engineered a secure, **multi-client file server** with user authentication, enabling upload, download, preview, deletion, and listing of user-specific files; with **concurrent handling** for multiple client requests.

Grid Pulse | Python, Apache Kafka, Streamlit   [(GitHub Link)](#)

- Engineered a **real-time**, event-driven data pipeline using Apache Kafka within a decoupled microservice architecture to process both historical batch data and live event streams.
- Developed a **full-stack simulation** with a live, interactive Streamlit dashboard that consumes from a Kafka topic to visualize **real-time driver stock fluctuations**.

Senior Vision AI | Python, Flask, JavaScript, Gemini API   [(Live Demo)](#) [(GitHub Link)](#)

- Architected a **full-stack AI solution** to assist the elderly and visually impaired by scanning product labels, generating simplified summaries, and vocalizing the results.
- Integrated text-to-speech API providing **real-time vocalization** of AI-generated insights, delivering a fully accessible experience on a resilient stack **deployed to Render and Vercel**.

SKILLS

Languages:	Python, C, Java
Data Science:	PyTorch, TensorFlow, Scikit-learn, Pandas, NumPy
Frameworks and Tools:	MySQL, Kafka, Spark, Git, Docker, Kubernetes, FastAPI

ACHIEVEMENTS

- IBM Data Science Professional Course by Coursera [(Certificate Link)](#)
- Secured 7th place out of 364 teams in Kaggle Data Analytics Hackathon-1 [(Competition Link)](#)