

Piyush Naula

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EDUCATION

Graphic Era Hill University

B.Tech in Computer Science and Engineering

Specialization in AI & ML CGPA: 8.30

Aug 2023 – May 2027

Bhimtal, Uttarakhand

PROJECTS

SnapClass — Python, Streamlit, dlib, Resemblyzer, Supabase, PostgreSQL

- Engineered a **face** and **voice** attendance system using **128-dim dlib** and **Resemblyzer** embeddings, matched via **Euclidean distance** against profiles in **Supabase PostgreSQL**.
- Designed a full-stack **Streamlit** app with **QR-based** join links and **bcrypt** teacher login. Added **multi-face** and **multi-segment voice** matching per session.
- Established a **human-in-the-loop** review step where teachers confirm AI-matched attendance before saving, giving **100%** final control.

TripMate AI — FastAPI, LangGraph, Groq, PostgreSQL, AviationStack, Tavily

- Developed a **4-agent** travel planning pipeline using **FastAPI** and **LangGraph** (Flight, Hotel, Itinerary, Final Response agents).
- Integrated **AviationStack** and **Tavily** with **Groq LLM** to build day-wise itineraries. Used **NLP-based location parsing** to add budget estimates.
- Implemented **PostgreSQL**-backed conversation memory using **thread IDs**, letting users resume trip planning across sessions.

ChurnGuard — Python, Scikit-learn, XGBoost, TensorFlow, SHAP, Streamlit

- Devised a **churn prediction** system on the **Telco dataset (7,043 customers)**. Compared **4 models** with **SMOTE** and **PR-curve** tuning, reaching **~84% ROC-AUC**.
- Introduced **SHAP** explainability for top churn drivers. Created a **Streamlit** app with **risk tiering** (High/Medium/Low).
- Created an **ROI simulation** module estimating revenue saved vs. campaign cost, projecting **~1,465% ROI** using **CLV** assumptions.

INTERNSHIP

Navodita Infotech

Data Science Intern

Mar 2026 – Apr 2026

Remote

- Built **MusicRecommender**, a **FastAPI + Streamlit** music discovery system on **62,317** Spotify tracks. Used **KNN** (cosine similarity, 8 audio features) and **KMeans** (30 clusters).
- Generated rule-based mood/activity engines plus trending, artist-similarity, and playlist-chain features, exposed via **10+ REST APIs**.

SKILLS

Languages

Python, SQL, C, JavaScript

ML & AI

Scikit-learn, XGBoost, TensorFlow, NLP, RAG, LangChain, LangGraph, Hugging Face, Transformers, Prompt Engineering, Computer Vision, Model Deployment

Data & Analysis

Pandas, NumPy, Matplotlib, SMOTE, SHAP, Feature Engineering, EDA, Statistical Modeling

Backend & APIs

FastAPI, REST APIs, Streamlit, SQLAlchemy

Databases

PostgreSQL, MySQL, MongoDB, ChromaDB, Redis

Cloud & DevOps

AWS, Docker, Git, CI/CD, Vercel, Render

Core CS

Data Structures & Algorithms, OOP, DBMS, CN, OS, System Design

ACHIEVEMENTS

- Selected among top teams at **Smart India Hackathon (SIH) 2025** — pioneered an AI voice assistant for specially-abled children using OpenAI API and agent-based LLM architecture.
- Spearheaded an ML prototype for space data analysis using Python and TensorFlow, presented at **NASA Space Apps Challenge 2025** — global hackathon with 57,000+ participants worldwide.
- Certified: Generative & Agentic AI (Udemy), IBM Data Science (Coursera), Deep Learning Masters & SQL Masters (Euron).