

ANJALI

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ABOUT ME

Final-year B.E. Artificial Intelligence & Machine Learning student building production-grade AI systems from data ingestion to deployment. Currently developing a Dockerized Text-to-SQL conversational analytics platform in an industry internship and contributing to an ISRO-sponsored edge AI air quality forecasting project integrating LSTM and physics-informed models. Experienced in RAG and Text-to-SQL pipelines, real-time ML inference, FastAPI, React, Docker, SQL, Redis, and MLOps workflows. Passionate about transforming cutting-edge AI research into scalable, reliable, and production-ready applications.

SKILLS

Languages: Python, SQL, Java

AI / ML & GenAI: LLM Applications, RAG, Text-to-SQL Systems, NLP, Prompt Engineering, Anomaly Detection, Feature Engineering

Frameworks & Libraries: FastAPI, React, Streamlit, Scikit-learn, TensorFlow, XGBoost

Databases & Vector Stores: PostgreSQL, SQLite, FAISS

MLOps & Infrastructure: Docker, Airflow, MLflow, Redis, Feast

Tools: Git, GitHub, VS Code

Soft Skills: Analytical & Critical Thinking, Research & Documentation, Teamwork, Leadership

WORK EXPERIENCE

The Entrepreneurship Network | AI Intern *July 2026 – Present | Remote*

Python, FastAPI, React, PostgreSQL, Docker, Ollama

- Selected for a 3-month contract to independently architect and ship 6 production-grade AI systems (GenAI, forecasting, applied ML).
- Developed a Dockerized Conversational Analytics (Text-to-SQL) engine using Ollama to translate natural language into validated SQL with interactive visual results.
- Architected a full-stack React and FastAPI app with 10 REST API endpoints and a pluggable abstraction for unified PostgreSQL and SQLite integration.
- Built a dynamic schema-discovery system for runtime introspection, instantly converting CSV/XLSX file uploads into queryable in-memory SQL tables via Pandas.
- Designed a hybrid classifier seamlessly routing user questions to Text-to-SQL generation, vector-based document search, or dual-execution workflows.
- Engineered a single-container deployment supporting 7 distinct data formats (PDF, DOCX, CSV, etc.) with in-memory caching for sub-second query retrieval.

PROJECT EXPERIENCE

AI-Powered Air Quality Monitoring System (ISRO Project) *Nov 2025 – Present*

- Contributing as a System Engineer and Data Analyst Intern on a team-based edge-computing air quality monitoring system developed for the Indian Space Research Organisation (ISRO).
- Developing a hybrid LSTM pipeline using physics-validated outputs for real-time AQI forecasting and compliance monitoring.
- Supporting PINN to Chemical Transport Model (CTM) migration via operator splitting to enhance atmospheric simulation accuracy.
- Integrating ESP32-S3 edge devices via I2C/UART bridges for reliable, non-blocking sensor data ingestion.

PaperPilot AI: Local RAG Chatbot & Research Assistant *2026*

- Built a 100% local, zero-cost AI research assistant using FastAPI, React, and Hugging Face models.
- Engineered a RAG chatbot via FAISS and all-MiniLM-L6-v2 embeddings, achieving <1s query retrieval on dense PDFs.
- Developed a multi-stage NLP pipeline using BART to extract methodologies, summarize gaps, and compute 3 distinct readability metrics.
- Designed a custom vector-storage comparison engine enabling simultaneous semantic analysis of up to 5 research papers.

Argus: Real-Time Fraud Detection MLOps System *2026*

- Built an anomaly detection system to identify suspicious financial transactions and fraud patterns.
- Developed an XGBoost classifier, engineering 46 transactional and behavioral features managed via Feast.
- Achieved <100 ms inference latency by integrating a Redis-backed FastAPI feature serving layer.
- Automated model retraining and experiment tracking with Airflow and MLflow to address concept drift.

CERTIFICATIONS

- Introduction to Agent Skills — Anthropic
- Computer Graphics — NPTEL
- GenAI Powered Data Analytics Job Simulation — TATA iQ, Forage

EDUCATION

Cambridge Institute of Technology *2023 – Present*

Bachelor of Engineering (Artificial Intelligence & Machine Learning) — CGPA: 8.00