SATYAM SINGH

ML & Generative AI Enthusiast | Chemical Engineering Undergraduate

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Github | LinkedIn | Portfolio

SUMMARY

Machine Learning and Generative AI enthusiast with a strong foundation in ML, Deep Learning, and system-level AI design. Experienced in building end-to-end ML and GenAI applications including recommender systems, computer vision projects, Retrieval-Augmented Generation (RAG) pipelines, and agentic AI systems using LangGraph. Focused on clean architecture, grounded AI behavior, and practical deployment. Seeking ML/AI internship opportunities.

TECHNICAL SKILLS

Machine Learning: Regression, Classification, Feature Engineering, Model Evaluation, Collaborative Filtering

Deep Learning: ANN, CNN, RNN, LSTM , Backpropagation, Transformers, Transfer Learning

Generative AI : Langchain, Retrieval-Augmented Generation (RAG), Prompt Engineering, Ollama, Gemini

Agentic AI: LangGraph, Agno, CrewAI, Multi-Agent Systems, MCP (Servers & Clients)

Computer Vision: OpenCV, Hand Tracking, Gesture Recognition, Object Detection (YOLO)

Tools & Libraries: Python, Numpy, Pandas, Sklearn , Tensorflow, SQL, Streamlit, FastAPI, Docker, GitHub

PROJECTS

- **End-to-End Agentic Chatbot | Python, LangGraph, LangChain, Ollama, SQLite** Demo
  - Built a production-style agentic chatbot with structured workflows, tool calling, and persistent memory
  - Used LangGraph for state management and orchestration with local LLM inference via Ollama
  - Implemented SQLite-based storage to enable conversation recovery across sessions
- **Chemical Engineering RAG System | LangChain, Ollama, Vector Database, SQLite** Demo
  - Developed a domain-specific RAG assistant to answer chemical engineering queries from academic PDFs
  - Enforced strict source-grounded responses to prevent hallucinations in technical explanations
  - Designed a safety-aware pipeline suitable for academic and engineering reference use
- **AI Story Generator (Multimodal GenAI) | Gemini, Streamlit, Python** Demo
  - Built an image-to-story generation system with mood control, narration, and PDF export
  - Applied multimodal reasoning to generate coherent long-form narratives from images
  - Deployed end-to-end as an interactive web application
- **Book Recommender System | Scikit-learn, Pandas, Streamlit** Demo
  - Implemented collaborative filtering using cosine similarity on user–item interaction data
  - Designed a personalized recommendation pipeline based on user preference similarity
  - Deployed as a live machine learning application

EDUCATION

B.Tech in Chemical Engineering | JADAVPUR UNIVERSITY

Expected Graduation: 2028

CERTIFICATIONS

Oracle Professional – Data Science | Oracle Professional – Generative AI | TRYST IIT Delhi – Machine Learning