Rohan Sinha

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Technical Skills

Languages	Python, SQL, C++, JavaScript
AI/ML	Scikit-Learn, XGBoost, PyTorch, Deep Learning, NLP
Generative AI	LLMs, Transformers, Hugging Face, Prompt Engineering, Fine-Tuning
RAG & Agents	RAG, LangChain, LangGraph, AI Agents, Tool Calling, Embeddings
Databases	PostgreSQL, MongoDB, Vector Databases
MLOps & Cloud	FastAPI, Docker, MLflow, GCP, CI/CD, Git, GitHub

Experience

Quality Analyst — Human Archive (YC S26) *Jul 2026 – Present*

- Perform high-quality video annotation and QA for large-scale AI datasets, ensuring accurate object tracking, action labeling, and metadata consistency for computer vision model training.
- Validate annotated datasets against quality guidelines, resolve labeling inconsistencies, and collaborate with cross-functional teams to improve annotation workflows and data quality.

AI/ML Intern — TechSaksham (Microsoft SAP CSR Initiative) *2024*

- Engineered end-to-end ML workflows covering data preprocessing, feature engineering, model training, and evaluation using Python, Pandas, NumPy, and Scikit-Learn.
- Built and validated predictive classification models using feature engineering, model evaluation, and performance analysis.

Projects

Enterprise Knowledge Intelligence Platform – Multi-Modal RAG System GitHub

Python · FastAPI · LlamaIndex · ChromaDB · BM25 · RAG · GPT-4o · RAGAs · Streamlit

- Built a **multimodal RAG pipeline** for PDF text, tables, and images using semantic chunking and GPT-4o Vision for context-aware retrieval and grounded responses.
- Implemented **hybrid search** using BM25 and vector retrieval with Reciprocal Rank Fusion (RRF), HyDE query expansion, and cross-encoder reranking.
- Developed FastAPI streaming APIs and evaluated retrieval using **RAGAs** metrics including faithfulness, answer relevancy, context precision, and context recall.

ResearchOS – Autonomous Research and Analysis Agent GitHub

Python · LangGraph · LLMs · RAG · Web Search · Tool Calling · Data Analysis

- Developed a **multi-agent AI research system** using LangGraph with planning, research, data analysis, competitor analysis, critique, and fact-checking agents.
- Implemented tool calling for **web search, document retrieval, database queries, data analysis, and chart generation** to automate research workflows.
- Added **fact-checking, citation validation, and critic loops** to improve factual accuracy and reduce unsupported LLM-generated claims.

Legalish – AI-Powered Legal Assistance Platform GitHub

Python · LLMs · RAG · LangChain · Vector Database · React · FastAPI · PostgreSQL

- Designed an AI-powered legal assistance platform to simplify legal research, document analysis, and access to legal information through an intelligent conversational interface.
- Architected an LLM-based workflow leveraging **Retrieval-Augmented Generation (RAG)** to retrieve relevant legal context and generate context-aware responses.
- Developed a scalable full-stack architecture integrating frontend interfaces, backend APIs, and AI services to support document-centric legal workflows.

Education

Bachelor of Technology in Computer Science Engineering *2022 – 2026*

Rungta College of Engineering and Technology CGPA: **7.6 / 10**

Certifications

Certificates

- **Generative AI Essentials: Using LLMs to Work with Data** – IBM.
- **Complete Data Science, Machine Learning & Deep Learning, NLP Bootcamp** – Krish Naik.
- **Data Science Bootcamp – From Analyzing Data to Creating ML Models** – GeeksforGeeks.