

Mayukh Jain

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SUMMARY

Aspiring Data Scientist and ML Engineer with a strong foundation in predictive modeling, Computer Vision, and Generative AI. Proven track record of deploying scalable applications using Docker and other deployment tools. Skilled in Python, Scikit-learn, TensorFlow, and AWS cloud services. Completed projects in Agriculture fullstack application, flood prediction, fraud detection, and stock price forecasting with a focus on deploying scalable, data-driven applications.

TECHNICAL SKILLS

Programming Languages & Databases: Python, C++, SQL, Java, JavaScript, Vector Databases (FAISS/ChromaDB)

AI/ML & GenAI: LangChain, RAG (Retrieval Augmented Generation), TensorFlow, PyTorch, Scikit-learn, DeepSeek API (LLMs), OpenCV, Pytesseract (OCR), Hugging Face Transformers, Cosine Similarity

Frameworks: yTorch, FastAPI, Flask, Streamlit, React

Libraries & Tools: Pandas, NumPy, Matplotlib, Seaborn, Git, MySQL, Jupyter Notebook, REST APIs

Cloud & MLOps: AWS (EC2, S3, Lambda, IAM), Docker, Hugging Face Spaces, Vercel, Azure, Render, Qdrant, Supabase

PROJECTS

Academia.AI | [Link](#) | [Code](#)

Jan 2026

Intelligent Research & Learning Assistant *Fast API, Supabase (PostgreSQL + pgvector), RAG, Google Embeddings, Edge TTS*

- Engineered a RAG-based study platform utilizing Google Gemini 1.5 and pgvector to enable context-aware Q&A across uploaded research papers with sub-second retrieval latency.
- Developed multi-modal generative features, including "CourseGenie" (an adaptive curriculum generator with interactive quizzes) and "Podcast Studio" (transforming topics into engaging 2-person audio dialogues).
- Architected a decoupled full-stack system using FastAPI and React, featuring real-time audio visualization, secure session-based history management, and split-screen document previewing for enhanced productivity.

Cine Ai | [Link](#) | [Code](#)

Nov 2025 – Dec 2025

AI-Powered Movie Recommendation Full Stack System *React, FastAPI, RAG, Qdrant, Sentence Transformers, TMDB API*

- Built a Semantic Search Engine using Python and Qdrant to index and query 10,000 movie vector embeddings, enabling natural language discovery beyond simple keywords.
- Integrated Retrieval-Augmented Generation (RAG) by connecting Google Gemini with the vector database to generate context-aware, AI-driven movie explanations for users.
- Deployed a Full-Stack Microservices Architecture with React (Vite) on Vercel and FastAPI on Hugging Face (using Docker), ensuring scalable, real-time performance across devices.

Leaf Compass | [Link](#) | [Code](#)

July 2025 – Dec 2025

Full-Stack AgriAI App(Computer Vision & NLP) *React, Python, FastAPI, TensorFlow (CNNs), Scikit-learn, GenAI (LLMs)*

- Built a Full-Stack Agri-Tech Platform using React and FastAPI, integrating CNNs and Regression models for disease diagnosis, crop recommendation, fertilizer recommendation and yield prediction with ~90% accuracy.
- Engineered a context-aware AI chatbot using the DeepSeek-V3.2 API, reducing user query resolution time by providing instant, interactive agricultural advice.
- Deployed a containerized backend on Hugging Face Spaces (Docker) with a Vercel frontend, ensuring high availability and scalable performance.

NYAYA.AI | [Link](#) | [Code](#)

Dec 2025

Legal Intelligence Platform

FastAPI, RAG, Llama 3, Pinecone, Docker, Vercel

- Developed a full-stack legal AI companion using Retrieval-Augmented Generation (RAG) to interpret the Bhartiya Nyaya Sanhita (BNS) with 98% accuracy.
- Architected a vector search pipeline using Pinecone and HuggingFace embeddings to query 15k + precedents in sub-second time.
- Integrated Llama 3.3 (via Groq) to build an AI Verdict Predictor and Automated Document Drafter for affidavits and agreements.

EXPERIENCE

Technical Team Member

VIT University, Bhopal, India

TechnoMech Club

Oct 2024 – Present

- Spearheaded technical operations for coding contests and technical workshops, managing participation for 100+ students.
- Co-developed and maintained the club's official website, improving load times and mobile responsiveness.

EDUCATION

VIT Bhopal University | CGPA : 8.34

Bhopal, India

B.Tech. in Computer Science, Cloud Computing and Automation

Aug 2023 – Present

CERTIFICATIONS

AWS Cloud Practitioner Essentials

Smartbridge Certified Machine Learning in collaboration with Google

Applied Machine Learning in Python from University of Michigan

Microsoft Certified: Azure Data Fundamentals

IBM Cloud Computing Fundamentals

IBM Information Technology Fundamentals