

KRITARTH SRIVASTAVA

Kolkata, West Bengal

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EDUCATION

MAKAUT, West Bengal

B.Tech in Computer Science Engineering – CGPA: 8.09

Aug 2023 – Jun 2027

Kolkata, India

PROJECTS

Legal Chatbot Assistant

Flask, LangChain, HuggingFace, FAISS, HTML, CSS, JavaScript

- Developed an end-to-end **AI-powered legal assistant chatbot** using **LangChain RAG** pipeline with preloaded legal documents (PDFs).
- Used **PyPDFDirectoryLoader** and **RecursiveCharacterTextSplitter** to parse and chunk court case documents.
- Integrated **HuggingFace sentence embeddings** with **FAISS vector store** to enable semantic document retrieval.
- Built backend API using **Flask**, served responses using **Groq's LLM (gemma2-9b-it)** for accurate legal Q&A.
- Designed responsive frontend with **HTML, CSS, JavaScript** to allow users to ask domain-specific legal questions.
- Handled metadata and ensured only relevant **page content** is used during LLM interaction.
- Deployed as a functional POC to demonstrate retrieval-augmented legal automation capabilities.

AI Resume Screening App

LangChain, Flask, NLP, HTML

- Developed a resume screening application using **LangChain** to process and analyze resumes with **LLM-driven reasoning**.
- Applied **NLP techniques** to extract key sections like skills, education, and experience from uploaded resume files.
- Created a backend using **Flask** to handle resume parsing, job description input, and response generation.
- Designed a simple yet effective **HTML-based interface** for users to upload resumes and view structured feedback.
- Enabled contextual matching between resumes and job descriptions to assist recruiters in shortlisting candidates efficiently.

AI Chatbot Interface with Gradio + Local LLM Backend

Python, Gradio, REST API, JSON

- Developed a lightweight **AI chatbot interface** integrating with **CodeGuru**, a local LLM backend using **Gradio** and **REST API**.
- Implemented **prompt history tracking** to maintain **contextual conversation flow**.
- Used **HTTP POST** with **JSON payloads** for efficient backend communication.
- Ensured compatibility with multiple local models through modular configuration design.
- Built fallback mechanisms for API failure handling and logging for debugging.

Multi-Tool AI Chatbot with RAG and Search Capabilities

LangChain, Streamlit

- Built an interactive chatbot integrating **DuckDuckGo, Wikipedia, Arxiv, and PDF Q&A tools** via **LangChain agents**.
- Implemented **RAG with FAISS and Ollama** for real-time document query resolution.
- Integrated **Groq AI's Llama3-8b-8192** model with **zero-shot agent routing**.
- Optimized search latency and agent decision-making using structured prompts.
- Enabled seamless user interaction with UI elements and visualized tool routing logic.

TECHNICAL SKILLS

Languages: Python, C++, C, Markdown

Technologies/Frameworks: Machine Learning, Natural language Processing(NLP), LangChain, LangGraph, Panda, Numpy, Streamlit, HTML, CSS, Flask

Developer Tools: VS Code, GitHub, Jupyter Notebook

Concepts: Object-Oriented Programming, Data Structures & Algorithms, Generative AI