Karan Baid

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EDUCATION

VIT BHOPAL University   **Bhopal, MP**
B.Tech in Computer Science   October 2022 - Present

WORK EXPERIENCE

Netgraph Networking Pvt. Ltd., *Machine Learning Intern*   **Remote**
Duration: 8 weeks

- Built and deployed a personalized recommendation system for financial products using ML pipelines.
- Applied core machine learning concepts including data preprocessing, model training, and evaluation.
- Gained exposure to advanced AI/ML techniques and developed insights into fintech-specific use cases and data challenges.
- Collaborated with engineering team to align AI outputs with real-world fintech product structures.
- Gained hands-on experience in domain-driven ML solutioning, handling real user engagement data.

TECHNICAL PROFICIENCIES

Programming Languages:	Python,C++
Frameworks & APIs:	Flask, FastAPI , CrewAI , Langchain , Langgraph
MLOPS:	MLFlow, Docker , Airflow ,Dagshub , Grafana
Databases:	MySQL, PostgreSQL, Chroma , PineCone, FAISS
Development & Analytics Tools:	Git, Jupyter

PROJECTS

Cyber-Saarthi
GitHub Repository ↗

- **Developed a domain-specific chatbot** for cybersecurity education using LLaMA 2 via Ollama and LangChain.
- **Implemented prompt engineering**, conversation memory, and dynamic response generation for real-time queries.
- **Integrated a full-stack solution** using Flask + HTML/CSS frontend, simulating real-world chatbot use cases.
- **Gained experience in building LLM-based microservices**, local deployment, and frontend-backend integration.

    Tech Stack: Python, Flask, Lang Chain, Ollama (LLaMA 2), HTML/CSS

News Analysis Crew
GitHub Repository ↗

- **Engineered a multi-agent AI system** using the CrewAI framework to automate the critical analysis of online news articles, simulating a professional research workflow.
- **Developed a specialized "Web Content Extractor" agent** with a custom Python tool using BeautifulSoup to parse HTML and isolate core article text from web page clutter.
- **Designed a second "AI Critical Thinking Partner" agent** tasked with performing nuanced analysis, including identifying core claims, tone, potential biases, and generating verification questions.
- **Orchestrated the agent collaboration** in a sequential process where the extractor agent retrieves content and passes it to the analyst agent for in-depth reporting and final output generation.

    Tech Stack: Python, CrewAI, Pydantic, BeautifulSoup, YAML, LangChain

RAG Q&A chatbot
GitHub Repository ↗

- **Developed a conversational RAG application** using Streamlit and LangChain to enable users to chat with the content of uploaded PDF documents..
- **Engineered a history-aware conversational agent** to maintain context across multiple turns, allowing the system to understand and respond to follow-up questions accurately.
- **Implemented a user-friendly interface** with session management and secure API key handling, supporting multi-PDF uploads and persistent chat histories per session.

    Tech Stack: Python, Langchain, Huggingface, GroqAPI, ChromaDB, Streamlit

CERTIFICATIONS

Gen-AI Certification by IBM
Verification Link ↗

Python for Data Science and Machine Learning Bootcamp by Jose Portilla
Verification Link ↗

Complete Generative AI course with Langchain and Huggingface
Verification Link ↗