

Muhammad Siddiq

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Backend and GenAI developer with strong experience in Python and API-driven system design. Skilled in building reliable backend services, handling data flow, and integrating AI models into applications. Experienced with natural language processing, retrieval-based systems, and agent-style architectures. Focused on writing clean, maintainable code and turning AI capabilities into practical backend features.

Experience

Developers Hub | Internship | Remote

- During this six-week virtual internship at DevelopersHub, I gained practical experience in artificial intelligence and machine learning concepts.
- I worked with data preprocessing, model training, and evaluation, and developed a clear understanding of how ML models are applied to real problems. I also strengthened my Python skills and learned how to structure AI workflows from data to deployment.
- This experience improved my ability to translate theoretical ML concepts into working implementations.

Projects

AI Chatbot with RAG using LangGraph

- Built an intelligent conversational AI chatbot with LangGraph orchestration, FastAPI backend, and React frontend, featuring real-time streaming and multi-thread management.
- Implemented RAG capabilities using FAISS vector store for semantic PDF search with automatic document chunking and vectorization.
- Integrated multi-tool functionality (web search, weather, calculator, stock prices) with dynamic selection and SQLite-based conversation history for persistent, context-aware responses.

LMS Agentic

- Developed a full-stack Learning Management System with React-TypeScript frontend and Flask-SQLAlchemy backend, featuring role-based access control for admins, teachers, and students.
- Engineered an AI chatbot assistant using LangGraph and OPENAI API with role-specific tools and natural language interface for educational workflows.
- Implemented comprehensive CRUD operations with unified dashboard, persistent chat history, and state-based agent orchestration for personalized learning experiences.

YouTube RAG Chat - Chrome Extension

- Built a production-ready Chrome extension enabling intelligent conversations with YouTube videos through RAG pipeline and vector embeddings.
- Developed FastAPI backend with automated transcript extraction, FAISS vector store, and LLM integration for context-aware video content queries.
- Implemented auto-detection, semantic search, conversation persistence, and dark-themed UI to deliver instant insights without watching entire videos.

Skills

• Python • NLP(Natural Language processing) • ANN(Artificial Neural Network) • Numpy • Pandas • Matplotlib • Seaborn • LangChain • LangGraph • Lang Smith • FastAPI • Flask • MySql