

Mohammad Shahnawaz

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Summary

Backend-focused developer with AI specialization, experienced in building async FastAPI services, PostgreSQL schemas, and REST APIs. Applied these in real-world GenAI projects including an agentic appointment system and a document retrieval pipeline. Seeking junior backend or AI engineering roles.

Skills

Languages: Python (primary), Javascript, SQL

AI/ML & GenAI: LangChain, LangGraph, MCP, LLMs, RAG

Web & APIs: FastAPI, REST APIs, Flask, Pydantic,

Developer Tools: Git, Docker, Google Colab, Jupyter Notebook

Specializations: AI Pipelines, GenAI Applications, RAG Chatbots

Experience

Open Source Contributor | MetaBrainz Foundation (ListenBrainz) Feb 2025 – May 2025

- Implemented persistent volume storage via **LocalStorage** across the React codebase, enabling user preference retention across sessions for **1M+** active users on the platform.
- Contributed **4+** pull requests reviewed and merged by core maintainers, gaining production-level experience with a large-scale codebase.

Software Developer (Contract) | Raza Studioz Dec 2025 – Feb 2026

- Built a full-stack web app with React, serverless REST API, and Supabase (PostgreSQL) serving 100+ active users.
- Engineered email dispatch system using Resend for real-time admin notifications with sub-2s delivery latency.

Projects

MedAI | FastAPI, Langchain, MCP, PostgreSQL [\[GitHub\]](#)

- Architected an agentic chatbot using **LangGraph** by implementing **Model Context Protocol (MCP)**, with **8+ dynamically invoked tools** for real-time data retrieval.
- Developed scalable **PostgreSQL schemas** via **SQLAlchemy**, ensuring strict data integrity and low-latency access for complex, multi-turn AI agent queries.
- Engineered a FastAPI backend, utilizing asynchronous programming to automate workflows, reducing manual booking time by 60%.

SmartLearn | FastAPI, Chroma DB, Google Gemini, Docker, Hugging Face [\[GitHub\]](#)

- Created document retrieval pipeline using Gemini **embeddings** and **ChromaDB**, enhancing document-query matching accuracy by **80%**.
- Built and deployed a Dockerized FastAPI backend on HF Spaces, serving agent requests with sub-500ms latency.

Irrigo Smart Irrigation System | Flask, Python, Javascript [\[GitHub\]](#)

- Designed **full-stack** IoT web application using **Flask** to serve as a centralized dashboard for real-time irrigation monitoring and motor control.
- Built **RESTful APIs** to facilitate **bi-directional** communication between the **Flask server** and ESP8266, reducing water wastage by **80%**.

Education

Guru Ghasidas Vishwavidyalaya – *Bachelors in Technology in ECE* 8.10 CGPA, May 2026

Certifications and Achievements

- Ranked in the **top 1% among 33,131** students in the IoT certification course by **IIT Kharagpur (NPTEL)**. [\[Certificate\]](#)
- CS50's AI with Python — Harvard/edX, 2024. [\[Certificate\]](#)
- CS50x's Introduction to Computer Science— Harvard/edX, 2023. – [\[Certificate\]](#)