

Badal Chauhan

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Summary

AI and GenAI Engineer with 1 year 4 months of hands-on experience building LLM-powered applications, RAG-based systems, and AI agents. Experienced in integrating OpenAI, Gemini, Anthropic, and Hugging Face models using LangChain and FastAPI. Strong background in fine-tuning LLMs using LoRA and QLoRA, vector similarity search with PostgreSQL pgvector, and deploying scalable AI systems using Docker and CI/CD pipelines.

Skills

Languages: Python, C

AI & GenAI Concepts: LLMs, RAG, Prompt Engineering, Fine-Tuning (LoRA/QLoRA), AI Agents, Vector Embeddings, Similarity Search

Frameworks: Django, Django REST Framework (DRF), FastAPI, LangChain

Models & APIs: OpenAI (GPT), Gemini, Anthropic (Claude), Hugging Face, Mistral

Databases: PostgreSQL, MongoDB, MySQL

ML Libraries & Tools: PyTorch, TensorFlow, NumPy, Pandas, Faiss, pgvector

DevOps & Cloud: Docker, GitHub Actions (CI/CD), AWS, GCP

Web Technologies: HTML, CSS, JavaScript, Tailwind CSS

Work Experience

Python and AI Developer — BOL7 Technologies, Noida *July 2024 – October 2025*

- Built RAGMentor, a production-grade Retrieval-Augmented Generation system using LLMs and vector databases.
- Developed Gemini- and GPT-powered WhatsApp chat and voice bots with persistent conversational memory.
- Implemented real-time AI voice interactions using WebRTC and WebSockets.
- Designed web and PDF data extraction pipelines using Scrapy and pdfplumber, exposing structured data via Django APIs.
- Improved retrieval accuracy using LangChain, Hugging Face, Faiss, and pgvector, and deployed services using Docker with CI/CD.

Projects

LLM-Based Chat Support Bot (WhatsApp)

- Built an AI-powered WhatsApp chatbot supporting text and voice queries using LLM APIs.
- Integrated RAG pipelines for context-aware and accurate responses.

Disease Prediction LLM (Fine-Tuning)

- Fine-tuned the TinyLlama 1.1B model using LoRA on a medical symptoms dataset.
- Implemented preprocessing, training, evaluation, and confusion matrix analysis.

SHL Assessment Recommendation Engine

- Developed an AI system to recommend SHL assessments using ML-based similarity scoring.
- Built using FastAPI, PostgreSQL, SQLAlchemy, and deployed with public REST APIs.

AI Travel Agent (LangChain)

- Built a LangChain-based multi-tool AI travel agent for automated trip planning.
- Integrated tools for flights, hotels, weather, budget calculation, and email notifications.

Education

Bachelor of Computer Applications (BCA)

Chaudhary Charan Singh University, Meerut