

Ganesh Kumar Mangla

Associate AI Engineer | Full Stack AI Developer

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Professional Summary

AI Engineer and Full Stack Developer with hands-on experience building agentic AI systems, RAG pipelines, and MCP-based integrations alongside production-grade web applications in Python, React, and Next.js. Experienced across the full lifecycle: designing multi-agent LLM workflows, building scalable REST APIs and real-time backends, and shipping responsive frontends.

Technical Skills

AI/GenAI Engineering: LangChain, LangGraph, CrewAI, RAG Pipelines, Agentic AI, MCP Development, Vector Databases (ChromaDB, Azure AI Search), Amazon Bedrock, Azure OpenAI, OpenAI APIs, Gemini, Groq, Ollama

Languages & Frameworks: Python, JavaScript, React.js, Next.js, Node.js, Express.js

Backend & APIs: FastAPI, Express.js, WebSockets, Strapi, ERPNext/Frappe

Databases & Cloud: PostgreSQL, MongoDB, MySQL, Supabase, AWS, Azure, Docker

Tools & Practices: Git, CI/CD (GitHub Actions), Postman, Redux, Tailwind CSS, SEO

Work Experience

Associate AI Engineer | Programming.com

Aug 2025 – Present

- Engineered an agentic AI workflow with LangChain that analyzes BRDs and codebases to auto generate functional, unit, and penetration test cases, cutting manual test-case authoring time by an estimated 70%.
- Architected and built an MCP-based AI chatbot providing governed read access to multiple datasets, with interactive data visualization and real-time conversational response streaming on the frontend.

Full Stack Developer | LetsAI Solutions Pvt. Ltd.

Jan 2025 – Jul 2025

- Built an interactive AI-powered 3D chatbot using Next.js, Three.js, Blender, and Mixamo, integrating vector search to drive context-aware character responses.
- Developed a fashion-tech platform converting 2D images into 3D models and a community discussion forum.
- Built an AI-enabled EB1A visa portal with a dynamic petition editor and a secure role-based access control (RBAC) system.

Software Developer Intern | Torit Innovations Pvt. Ltd.

Aug 2024 - Dec 2024

- Integrated Stripe payment gateway with webhook handling for real-time event processing, and built AI-powered research workflows using Tavily for automated data retrieval.
- Developed a Frappe/ERPNext and Next.js integration, building custom DocTypes, scripts, and REST APIs to bridge ERP data with a modern frontend.
- Managed full server infrastructure on DigitalOcean including CI/CD pipelines via GitHub Actions, Nginx reverse proxy configuration, SSL setup, and zero-downtime deployments.

Technical Projects

Lobo – Enterprise Data Agent | LangChain, MCP, RAG, Vector Embeddings, Epicor

- Built a RAG-based retrieval and embedding pipeline to connect and query Walworth for contextual search.
- Unified Epicor AP/AR data retrieval into a single LangChain-orchestrated agent via MCP, enabling cross-system querying through one conversational interface.

Kris – Ecommerce Support Chatbot | LangChain, LangGraph, RAG, Amazon Bedrock, FastAPI, Guardrails

- Developed a multi-agent AI workflow with LangGraph using an orchestrator-worker architecture.
- Implemented a hybrid-search RAG pipeline with Amazon Bedrock for contextual, LLM-based response generation.
- Built backend APIs with FastAPI and WebSockets to support real-time, multi-user data processing with Guardrails for safe AI output.

3D Talking Avatar | Agentic AI, Next.js, React Three Fiber, Rhubarb Lip Sync, ElevenLabs

- Built a real-time 3D talking avatar with accurate lip-sync animation using Rhubarb Lip Sync and FFmpeg, rendered with React Three Fiber and Drei.
- Integrated ElevenLabs for voice synthesis and implemented vector search for fast, accurate response retrieval.

Education

B.Tech in Computer Engineering

J.C. Bose University of Science and Technology, YMCA, Faridabad

2021–2025

CGPA: 8.98/10

Class XII (CBSE)

Lions Public School

2021

96.6%

Class X (CBSE)

Ryan International School

2019

95.8%