Muskan Singhal

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Summary

AI Engineer and Full-Stack Developer with **3+ years of experience** integrating LLMs, vector databases, and cloud systems into real-world applications. Strong hands-on experience with LangChain, OpenAI APIs, and retrieval-augmented generation (RAG) pipelines. Experienced in building AI features that operate reliably at scale within full-stack systems across IoT and analytics domains.

Core Skills

- **AI/ML:** LLMs, LangChain, RAG, Fine-Tuning, Prompt Engineering, NLP, Vector Databases (MongoDB Atlas, FAISS)
- **Backend:** Python, FastAPI, Node.js, Go
- **Frontend:** ReactJS, Next.js, Material UI
- **Databases:** PostgreSQL, MongoDB, Redis, InfluxDB
- **DevOps/Cloud:** Docker, AWS, GCP, Grafana, Kibana, Prometheus
- **Tools:** Git, Serverless Framework, REST APIs, WebSockets

Experience

Tantiv4 Technologies   Jul 2022 – Present
Full Stack & AI Developer – Bangalore

- Designed and deployed a **natural-language log analysis system** using Fluent Bit, ElasticSearch, Kibana, and a Claude-based MCP layer, reducing debugging time by **40%**.
- Implemented and optimized a **fine-tuned RAG pipeline** for astrological question answering, using LangChain, OpenAI embeddings, and vector search to improve response relevance.
- Engineered **Python-based ML features** for IoT devices to classify machine power sources, achieving **95% accuracy** in production scenarios.
- Built and integrated **LLM-based workflows** using LibreChat and custom MCP servers, leveraging GCP infrastructure, MongoDB Atlas vector indexes, and Grafana for monitoring.
- **Owned end-to-end development** of a customer analytics platform using **ReactJS, Node.js, MongoDB, AWS Lambda**, enabling actionable insights for a financial services client.
- Developed major frontend and backend modules for an **Element Management System (EMS)**, used to manage and monitor large-scale UBR devices.
- Integrated **Google Maps JavaScript APIs** within the EMS to visualize device locations and real-time connectivity, and implemented a **threshold-based alarm system** using InfluxDB alerts and MongoDB change streams.
- Spearheaded frontend development for a **Cloud Network Management System (CNMS)** using ReactJS and Material UI. Designed and implemented a **reusable dynamic DataTable component** with customizable actions, now used across **50% of the application UI**, significantly reducing development time.
- Built and customized an end-to-end WordPress-based learning platform (theschoolofyou.in), integrating LMS functionality, Razorpay payments, and custom workflows tailored to business needs.

Newgen Software Technologies Ltd.   Jan 2022 – May 2022
Software Developer Trainee – Noida

- Trained in Java Swing, PostgreSQL, and proprietary enterprise tools.

Education

B.Tech in Information Technology – BIET Jhansi (2018–2022)   CGPA: 8.02

Certificates

- Infosys Certified Programmer
- Python – ICT Academy IIT Kanpur
- SQL Basics – HackerRank
- Tantiv4 Top Performing Employee (multiple quarters)