Divya Musahib

[redacted] | [redacted] | [redacted] | github.com/divyamusahib
Codeforces Expert (1647) | CodeChef 4★ (1810) | LeetCode Knight (1880)

Summary

Final year **Data Science & AI student at IIT Guwahati** with strong foundations in **DSA, Core CS (OS, Networks, DBMS, OOPs)**, and hands-on experience building **full-stack AI systems, multi-agent workflows, and RAG pipelines** in Python on Linux. Comfortable across FastAPI, Docker, REST APIs, and active competitive programmer, DSA mentor, and hackathon winner.

Education

Indian Institute of Technology Guwahati *2023 – 2027*
B.Sc. (Hons.) in Data Science and Artificial Intelligence CPI: 8.18/10

Technical Skills

Languages & Tools: Python, C, C++, Java, JavaScript, SQL · FastAPI, React, Docker, Git/GitHub, JWT, SSE, Streamlit, Linux
CS Fundamentals: Data Structures & Algorithms, OS, Computer Networks, DBMS, OOPs, Complexity Analysis, System Design
AI/ML & DL/NLP: LangChain, LangGraph, RAG Pipelines, Gemini/LLM APIs, PyTorch, ML/DL/NLP, FAISS, Qdrant, Sentence-Transformers, Pandas, Scikit-learn

Projects

ShopMate — Full-Stack E-Commerce AI Concierge Live Demo | GitHub
Python · FastAPI · LangGraph · Gemini · FAISS · SQLite · React · Docker

- Built a **LangGraph supervisor-agent system** routing natural-language requests to specialized sub-agents (Catalog, Cart, Order, Deals, Support) for full conversational commerce.
- Implemented **FAISS semantic product search**, **JWT-secured REST APIs**, rate limiting, and a SQLite backend tracking products, orders, carts, sessions, and price history.
- Shipped a **React + Vite frontend** (Vercel) + **FastAPI backend** (Render) with long-term memory for user preferences and interaction history.

Charcha — AI Multi-Agent Debate & Reasoning Engine Live Demo | GitHub
Python · FastAPI · LangGraph · Qdrant · SSE · JavaScript · Docker

- Built a **LangGraph multi-agent system** with Advocate and Skeptic agents that generate, cross-examine, and synthesize evidence-backed arguments via Qdrant vector search.
- Designed a **3-round debate state machine** with a Judge node producing executive briefs with opportunities, risks, and confidence scores.
- Built a **FastAPI + SSE backend** for real-time AI output streaming; containerized and deployed on Render.

Graph-RAG Auditor — AI-Powered Codebase Auditor Live Demo | GitHub
Python · LangGraph · FAISS · NetworkX · Sentence Transformers · Streamlit

- Parsed codebases into **AST-level semantic chunks**, generated FAISS embeddings, and built a **NetworkX call-dependency graph** with graph-hop expansion for deep contextual retrieval.
- Designed a **LangGraph Map-Reduce pipeline** that parallelizes code evaluation and synthesizes severity-tagged audit reports; deployed on Hugging Face Spaces.

Experience

Physics Wallah — Problem Setting & DSA Mentor Intern
DSA & Algorithms | Problem Setting | Technical Mentorship

- Built a **500-problem DSA Master Sheet** (Arrays, Trees, Graphs, DP, Strings) adopted by **35,000+ students**; authored original problems with test cases, constraints, and editorials.
- Conducted live **DSA mentoring sessions**, debugging algorithmic solutions and guiding students on advanced problem-solving strategies.

Achievements & Leadership

- **Competitive Programming:** Codeforces Expert (max 1647), CodeChef 4★ (max 1810), LeetCode Knight (max 1880); solved **2000+ problems** across platforms.
- **ICPC 2025 Prelims:** National team rank **1041**; **IICPC 2025 Prelims:** Solo national rank **1195**.
- **Hackathon Winner (PWIOI):** Secured **1st place** with *Kisaan Mitra*, a GenAI-powered agricultural data platform.
- **Tech Club President:** Led technical initiatives and organized **3 intra-college coding contests** with **200+ participants**.
- **Yugaantar Fest:** Rank 4 in AlgoStrike Finals among 50 teams; **Retrack Competition:** 4th place among 40 teams.