

Swarup Das

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Education

Jalpaiguri Government Engineering College
Bachelor of Technology in Computer Science & Engineering

Nov 2022 – July 2026
CGPA: 7.7/10

Experience

Backend Developer Intern – Graphura India Private Limited  Jan 2026 – Apr 2026

- Built **15+ RESTful backend APIs** using **Node.js**, **Express.js**, and **MongoDB**, supporting **JWT-based authentication** and **role-based access control** for intern portal applications.
- Designed and optimized **10+ MongoDB schemas** with **Mongoose validations and indexing**, improving query performance and data consistency across multiple modules.
- Collaborated with **3–5 frontend developers** through **GitHub workflows**, defining API contracts, resolving integration issues, participating in code reviews, and delivering **production-ready features** across multiple modules.

Projects

JOB TRACKER  | Node.js, TypeScript, Express.js, MongoDB, Redis, LangChain, Docker

- Built a **REST API** with **15+ endpoints** to help job seekers track applications; integrated **LangChain** and **Groq LLM** to automate job description summarization, resume-to-job fit scoring, scam detection, interview question generation, and outreach drafting, reducing manual research time by **~70%**.
- Designed a **multi-stage AI pipeline** using prompt templates, output parsers, and sequential **LangChain runnables** to process resumes and job descriptions extracted from **PDF/DOCX uploads** via `pdf-parse` and `mammoth`, returning structured **JSON insights** with **<3s end-to-end latency**.
- Engineered **Redis caching** for job listings, statistics, and AI responses, achieving **~80% faster data retrieval** and cutting redundant **LLM API calls** by **~60%**; enforced per-user **rate limiting** via Redis-backed middleware, validated all incoming requests using **express-validator**, automated **7-day follow-up reminders** using Nodemailer and node-cron, and containerized the full stack with **Docker Compose** for one-command deployment.

STUDYBUDDY  | React.js, Node.js, Express.js, MongoDB, Socket.IO, Yjs, Redux, JWT

- Built a full-stack **real-time collaboration platform** combining a shared document editor and team chat in a unified workspace, enabling multiple users to edit and communicate simultaneously with **sub-second synchronization**.
- Developed a collaborative text editor using **Tiptap**, **Yjs CRDT**, and **y-websocket**, synchronized across concurrent users via **Socket.IO**; implemented channel-based and 1-to-1 live chat with **typing indicators** and online presence tracking, while maintaining consistent document state during concurrent edits.
- Implemented **JWT authentication** and role-based access control for channel management (CRUD), integrated **Cloudinary** for avatar uploads, and deployed the **React frontend on Vercel** and **Node.js/Express backend on Render** using separate CI/CD pipelines for a fully cloud-hosted deployment.

INTERVO  | Next.js, TypeScript, Vapi AI, Groq LLM, Firebase, Zod, Tailwind CSS

- Built a voice-first **AI mock interview platform** that helps candidates practice **technical and behavioral interviews** through real-time voice conversations with role-specific, dynamically generated questions.
- Integrated **Vapi AI** for real-time voice interaction and **Groq LLM** for low-latency question generation and structured interview evaluation, enabling instant, conversational feedback after each session.
- Built with **Next.js (App Router, SSR)** for faster page loads and improved SEO over a traditional CSR setup, used **Zod** for end-to-end schema validation across forms and API routes, and stored user and interview data in **Firebase Firestore**.

Skills

Languages: C++, JavaScript, TypeScript, SQL

Frontend: React.js, Next.js, Redux Toolkit, Tailwind CSS

Backend: Node.js, Express.js, REST APIs, MongoDB, Mongoose, Redis, JWT Auth, Socket.IO

DevOps & Tools: Docker, Git, GitHub Actions, Postman, Firebase, Vercel, Render

AI & Core CS: LangChain, Groq LLM, Vapi AI, Data Structures & Algorithms, OOP, DBMS, OS, Computer Networks

Achievements

- Competitive Programming:** LeetCode rating **1700+** (top 12%, **450+ problems solved**); **2-Star Coder** on CodeChef.
- Academic:** Secured **AIR 1905** in **WBJEE 2021** (top 1.3%) out of 100,000+ candidates; cleared the **TCS NQT** and secured **All India Rank 2511** in **NCAT 2026** (Naukri Campus Aptitude Test).
- Research Internship:** Completed a research internship in **Quantum Computing** at **ISI Kolkata** (Summer 2023), studying quantum algorithms, quantum teleportation, and computational models under faculty guidance.