Khush Shah

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EXPERIENCE

Cisco | **Software Engineering Intern** **Mar. 2026 – Present**

Technologies: C, Linux, Embedded Systems, IOS-XR, CMocka, Valgrind

- Working with XR operating system and development of embedded software for Line Cards.
- Optimized memory management and resource allocation using **Valgrind**, maintaining system stability in memory-constrained embedded environments.
- Implemented robust unit testing suites using **CMocka** to validate hardware-software interfaces and prevent regressions in the core networking stack.

Futures First | **Software Engineering Intern** **Oct. 2025 – Jan. 2026**

Technologies: TypeScript, Next.js, MobX, Nx, Apache ECharts, MongoDB

- Contributed across **3** repositories, merging **20+** pull requests and delivering **10k+** lines of code across frontend and backend systems.
- Architected a derivatives dashboard using **Apache ECharts** and **MobX**, actively used by over **150+** traders.
- Designed scalable database schemas using **Mongoose** and built backend APIs in **Next.js** to persist trading strategies and analytical workflows.
- Introduced an **Nx** monorepo architecture, standardizing dependencies and enabling build caching across **15+** dashboards, significantly improving developer productivity.

CreditSea | **Software Engineering Intern** **Jul. 2025 – Sep. 2025**

Technologies: TypeScript, Next.js, Node.js, Express.js, MongoDB

- Optimized **MongoDB** queries using aggregation pipelines and bulk writes, and improved backend logic across **10+** cron services, reducing API response times by **60%**.
- Automated invoice generation APIs and wrote excel text extraction pipelines, eliminating manual workflows and saving **20+ hours per week** for the operations teams.
- Implemented end-to-end authentication and authorization module for the internal admin dashboard featuring 2FA and RBAC.

ACHIEVEMENTS

CODOLIO (CODING PROFILES)

- **ICPC Regionalist (2024)** at Amritapuri and Chennai Regionals, achieving the best-ever college rank of **48**.
- Secured Global Ranks **41, 47,** and **54** in CodeChef Starters contests among **25,000+** participants.
- **LeetCode: 2005 (Knight, Top 2%), CodeChef: 1982 (4-star), Codeforces: 1606 (Expert Badge, Top 0.5%).**
- Secured Global Ranks **2** and **3** in CodeStudio Weekly Contests 142 and 120 respectively.
- Solved **2000+** algorithmic problems across LeetCode, Codeforces, and GeeksforGeeks.
- Head of the Coding Wing at House of Geeks (IIIT Ranchi), conducting DSA and mentoring sessions, mentoring students for CP contests, and organizing **50+** post-contest analysis meets to drive peer learning.

TECHNICAL SKILLS

Programming Languages: C, C++, Java, JavaScript (ES6+), TypeScript, Go

Technologies: Node.js, Express.js, FastAPI, Next.js, React Native, Docker, Nginx

Databases & Caching: MongoDB, PostgreSQL, MySQL, Redis

Cloud & DevOps: AWS (S3, EC2, ECS, ECR, SES), GitHub Actions (CI/CD), Azure

Developer Tools: Cursor, Git, GitHub, Postman, Docker, Jupyter, Makefile

Coursework : DBMS, Operating Systems, OOP, Computer Networks, Software Engineering

PROJECTS

- **Claude Code Clone (Link)** — Built an AI-powered, context-aware CLI coding assistant using **Gemini** API, LangChain and LangGraph, enabling intelligent code understanding, generation, and multi-step task execution.
- Designed an agent-based workflow using **LangGraph** and **Model Context Protocol (MCP)** to integrate filesystem operations, GitHub access, and web search tools
- Implemented persistent conversation memory and state checkpointing using **PostgreSQL** and **Prisma**, enabling contextual continuity and debugging.

EDUCATION

Indian Institute of Information Technology (IIIT), Ranchi **Nov. 2022 – May 2026**

Bachelor of Technology (B.Tech) in Computer Science and Engineering (CSE)