Ketan Goyal

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Education

Chitkara University — Punjab, India
*B.E. Computer Science – **CGPA: 9.8 / 10*** — *Aug. 2024 – May 2028*

Kendriya Vidyalaya — India
*Class XII (PCM): **94.4%** | Class X: **96%*** — *Graduated 2024*

Experience

Web Team Member — 2024 – Present
Open Source Chandigarh — *Chandigarh, India*

- Engineered and maintained the official **Open Source Chandigarh** community website using **Next.js** and **TypeScript**, improving page load performance by **40%** through code-splitting and asset optimization.
- Spearheaded technical operations across **3+ hackathons and community workshops**, coordinating **200+ participants** and ensuring zero-downtime event infrastructure via cloud-hosted services.

Projects

HackHeaven | *Next.js, Docker, AWS ECS, AWS ECR, Redis, Socket.io, Node.js*

- Architected a **real-time collaborative coding platform** supporting **multi-user simultaneous editing** and live coding contests, reducing collaboration latency by **60%** via **WebSocket** event-driven architecture with **Socket.io**.
- Containerized isolated code-execution sandboxes using **Docker** and deployed to **AWS ECS** with images managed via **Amazon ECR**, achieving **99.9% uptime** and horizontal scalability across **5+ concurrent execution environments**.

DevPulse | *React.js, Spring Boot, PostgreSQL, JWT, REST APIs, MVC Architecture*

- Built a **full-stack developer analytics dashboard** with **React.js** frontend and **Spring Boot** backend, delivering real-time system health metrics with **sub-200ms** query response times via **PostgreSQL** query optimization and indexing.
- Designed scheduled **Spring Boot** monitoring services with interactive data visualizations, improving incident detection speed by **35%** through proactive alerting on anomalous application health patterns.

DeployForge | *Docker, AWS EC2, Nginx, GitHub Actions, Node.js, React.js, CI/CD*

- Developed a **self-hosted full-stack deployment platform** on **AWS EC2** with **Docker** containerization and **Nginx** reverse proxy, automating build-to-production pipelines for **10+ applications** and cutting manual deployment effort by **70%**.
- Engineered **CI/CD pipelines** using **GitHub Actions** with zero-downtime rolling deployments and custom domain routing, reducing average release cycle time from **2 hours to under 10 minutes**.

Achievements & Certifications

Solved **800+ Data Structures & Algorithms** problems across **LeetCode**, **Codeforces**, and **GeeksforGeeks**, demonstrating mastery in dynamic programming, graph theory, and system design.

Contributed **multiple accepted & merged pull requests** to open-source repositories via **Hacktoberfest** and **Winter of Code**, improving codebases used by **1,000+** developers globally.

Completed **J.P. Morgan Software Engineering Virtual Experience Program** (Spring Boot), delivering production-grade REST API solutions assessed against industry standards.

Technical Skills

Languages: Java, C++, JavaScript, TypeScript, SQL
Frontend: React.js, Next.js, React Native, Tailwind CSS, HTML, CSS
Backend: Node.js, Express.js, Spring Boot, REST APIs, MVC Architecture
Databases: MongoDB, PostgreSQL, Database Design, Query Optimization
Authentication & Security: JWT, OAuth 2.0, NextAuth.js, Clerk, RBAC, Session Management
Real-Time Systems: WebSockets, Socket.io, WebRTC, Event-Driven Architecture
DevOps & Tools: Git, GitHub, Docker, AWS EC2, AWS ECS, AWS ECR, Nginx, GitHub Actions, Postman, Bash
Core CS: Data Structures & Algorithms, Operating Systems, DBMS, Computer Networks, OOP, System Design