

Karan Singh Sodhi – Software Engineer

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Summary

Entry-level Software Engineer with hands-on experience building **full-stack and real-time web applications** using MERN and Next.js. Strong foundation in **data structures, RESTful API design, object-oriented programming, and backend performance optimization**. Experienced with **AWS, Docker**, and real-time systems using Socket.IO through internships and production-grade projects. Comfortable working in agile environments, debugging complex issues, and delivering reliable software.

Experience

Web Developer Intern, V'NSPIRE – Agra, India

- Shipped a **production-ready MERN application** with authentication, posting, and feed workflows, handling **50+ user-generated posts**.
- Delivered **real-time messaging** using Socket.IO, supporting **10+ concurrent users** with low-latency updates.
- Modeled and optimized **MongoDB collections** for users, posts, and messages, scaling to **1,000+ records** without performance degradation.
- Designed and exposed **10+ REST APIs** in Node.js and Express with clear contracts, validation, and error handling.
- Secured backend services using **JWT-based auth** and role checks, preventing unauthorized access to protected endpoints.
- Improved UI responsiveness and data flow through efficient client-side state management and render optimization.
- Worked closely with designers and peers in short iteration cycles, resolving bugs and shipping features on schedule.

Software Engineer Intern, NITI – Agra, India

- Implemented a robust **JWT authentication system** supporting secure, scalable user access patterns.
- Improved component performance by **43%** through state management and algorithmic optimization.
- Reduced frontend latency by **32%** via workflow restructuring and minimizing network overhead.
- Implemented unit and integration tests ensuring API reliability and regression prevention.
- Delivered features predictably through sprint-based execution and coordination with infrastructure teams.

Projects

Discord Clone

Socket.IO, LiveKit, Next.js 15, Docker

[Live](#) / [Code](#)

- Built a **real-time messaging and voice/video system** supporting concurrent, low-latency collaboration.
- Designed relational schemas with indexing and soft-delete for integrity and efficient querying.
- Containerized and deployed services with monitoring and error tracking to ensure reliability.

AI PPT Generator

Zustand, Clerk, OpenAI API

[Code](#)

- Built an automated slide-generation system improving content throughput by **7x**.
- Increased output consistency by **40%** through structured JSON templates and deterministic rendering.
- Added a template marketplace enabling custom content creation and user-driven workflows.

Education

Dr. A.P.J. Abdul Kalam Technical University

Bachelor of Technology in Computer Science and Engineering

Skills

Languages: C, C++, Java, Python, JavaScript, TypeScript

Frontend: React.js, Next.js, HTML, CSS

Backend: Node.js, Express.js, REST APIs, Asynchronous Processing, Authentication

Databases: PostgreSQL, MongoDB, Indexing, Query Optimization

Cloud & DevOps: AWS (EC2, S3, Lambda, DynamoDB), Docker, CI/CD, Linux, Nginx, Monitoring

Tools: Git, GitHub, Debugging, Problem Solving

CS Fundamentals: OOP, Data Structures, Algorithms, Operating Systems, Concurrency

Certifications

- **Full Stack Web Development (MERN)** — Sheriyans Coding School
- **JavaScript (ES6+) & Data Structures** — Coursera
- **AWS Cloud Practitioner & Fundamentals** — freeCodeCamp