

Ayush Raj

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TECHNICAL SKILLS

Languages: JavaScript (ES6+), TypeScript, C++, SQL, HTML5, CSS3

Backend Engineering: Node.js, Express.js, WebSockets (Socket.io), REST APIs, Microservices, Kafka

Frontend Development: React.js, Next.js, Tailwind CSS, Material UI

Databases & Infrastructure: PostgreSQL, MongoDB, Redis, Docker, Git/GitHub, Linux, Postman, Prisma ORM

Core CS Concepts: Data Structures & Algorithms, Distributed Systems, System Design, OOP, DBMS

TECHNICAL PROJECTS

Microservices-Based Job Portal | [Source Code](#) | *Next.js, Node.js, Kafka, PostgreSQL, TypeScript*

- Architected and implemented a distributed job portal using Node.js microservices with Apache Kafka for event-driven communication, enabling asynchronous recruiter–candidate workflows and decoupled service scaling.
- Engineered secure authentication & authorization flows (JWT, Forgot/Reset Password, multi-role access) across services, ensuring stateless, horizontally scalable backend infrastructure.
- Designed PostgreSQL schemas and optimized relational queries for job listings, applications, and recruiter dashboards, reducing average API response time by ~35%.
- Integrated AI-powered Resume Analyzer and Career Guide modules via service abstraction, enabling scalable feature extension without cross-service coupling.
- Collaborated on service contracts, event schemas, and API versioning to ensure reliability and maintainability across independently deployable services.

AegisID – Centralized Auth Service | [Source Code](#) | *Node.js, Redis, Docker*

Jan 2025

- Developed a secure **OAuth2/OpenID Connect-compliant** authentication server, utilizing **RS256** asymmetric signing for tamper-proof token generation.
- Slashing database read load by **40%** by implementing a high-speed **Redis caching layer** for session validation and blacklist management.
- Hardened security posture by implementing **Refresh Token Rotation** and PKCE flows, effectively mitigating XSS, CSRF, and replay attacks.
- Containerized the application using **Docker**, ensuring consistent deployment environments and reducing "works on my machine" integration issues by 100%.

Collaborative Real-Time Whiteboard (Work in Progress) | [Source Code](#) | *React, WebSocket* Aug 2024 – Present

- Developing a low-latency collaborative drawing tool aiming to support concurrent users via optimized **WebSocket** event broadcasting.
- Implementing conflict-resolution logic to handle simultaneous drawing events and ensure consistent state across clients.
- Integrating strict **TypeScript** typing to ensure codebase scalability and minimize runtime errors during the active development phase.
- Currently prototyping session history features (Undo/Redo) to optimize browser memory usage.

EDUCATION

Jaypee Institute of Information Technology (JIIT 128)

Noida, UP

Bachelor of Technology in Computer Science and Engineering

Sep. 2022 – May 2026

Relevant Coursework: Operating Systems, Database Management Systems, Algorithm Design, Computer Networks

ACHIEVEMENTS & CERTIFICATIONS

Global Coding Rank: Solved **400+** algorithmic problems on LeetCode.

Academic Excellence: Secured **95th percentile** in JEE Mains (National Engineering Entrance Exam) among 1M+ candidates.