

Riya Gupta

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Professional Summary

Final-year Computer Science student and Full Stack Developer specializing in the MERN stack and Next.js. Passionate about system performance, database optimization, and open-source contribution. Experienced in architecting real-time applications using Redis and deploying scalable CI/CD pipelines.

Education

Vellore Institute of Technology

Bachelor of Technology in Computer Science

2022 – 2026

Open Source Experience

Winter of Code Social – Core Maintainer

Remote

- Lead Maintainer for [RoomMate](#), responsible for code quality assurance and merging Pull Requests from contributors.
- Architected the project's **Testing Infrastructure** by implementing automated test suites (Jest), which reduced regression bugs and standardized the contribution workflow.
- Refactored legacy React components to use modern hooks and Context API, improving application performance and maintainability.

Technical Skills

- **Languages:** JavaScript (ES6+), TypeScript, C++, Java, SQL
- **Frontend:** React.js, Next.js, Redux Toolkit, Tailwind CSS, HTML5/CSS3
- **Backend:** Node.js, Express.js, PostgreSQL, MongoDB, Redis, WebSockets (Socket.io)
- **DevOps & Tools:** Docker, AWS (EC2/S3), GitHub Actions (CI/CD), Git, Postman, Jest

Projects

KeyNotes

Next.js, PostgreSQL, Drizzle ORM, Redis

- Engineered a collaborative journaling platform with **Real-time Synchronization** using **Redis Pub/Sub** and implemented **Optimistic UI** patterns for zero-latency user interaction.
- Built a robust **CI/CD pipeline** using GitHub Actions to automate type-checking (TypeScript) and linting before deployment, ensuring production stability.
- Secured private workspaces using **Row Level Security (RLS)** principles and rigorous middleware validation to isolate user data.

Sonore – Music Streaming

React.js, Node.js, MongoDB, OAuth2

- Architected a scalable backend utilizing **MongoDB Aggregation Pipelines** (\$lookup, \$group) to handle complex playlist data generation efficiently.
- Implemented secure authentication using **OAuth2** and **JWT (Access + Refresh Token Rotation)** to prevent XSS and session hijacking attacks.
- Optimized media delivery by integrating **Cloudinary** for adaptive bitrate streaming, significantly reducing database load by offloading binary assets.

Property Registry Management System

MERN Stack, RBAC

- Developed a **Role-Based Access Control (RBAC)** system to manage granular permissions for Admins, Buyers, and Sellers.
- Optimized query performance by implementing **Compound Indexing** on frequently searched fields, reducing API response time by 40%.
- Integrated **Zod** for strict runtime schema validation to ensure data integrity across all REST API endpoints.

Achievements

- **LeetCode:** Solved 500+ Data Structures Algorithms problems; Global Rank: 1,410 (Top 50%).
- **Hackathons:** Selected for Google's Girls Hackathon (2024), Smart India Hackathon, and ZS Campus Beats.