

GNANESHWARAN K

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PROFESSIONAL SUMMARY

Final year B.Tech Computer Science Engineering student (Class of 2027, CGPA 8.91/10, zero backlogs) with a strong foundation in Data Structures and Algorithms, Object Oriented Design, Operating Systems, and Database Management Systems. Hands on experience developing RESTful APIs, designing normalized relational database schemas, and building concurrent, multi tiered applications with Java, Python, JavaScript, and SQL. Comfortable working through the software development life cycle end to end, from requirement analysis and design to implementation, testing, and deployment, using Git/GitHub and Agile/Scrum practices including sprint planning and code reviews. Familiar with AWS cloud computing fundamentals (EC2, S3, RDS). Seeking a Software Apprentice role to apply strong analytical thinking, ownership, and collaborative problem solving to real world applications.

TECHNICAL SKILLS

Programming Languages: Java, Python, JavaScript (ES6+), SQL

Databases: MySQL, PostgreSQL - relational schema design, normalization, foreign keys, indexing, query optimization

Cloud & DevOps Tools: AWS fundamentals (EC2, S3, RDS), Git/GitHub, Agile/Scrum, Postman

Backend & Distributed Systems: Node.js, Express.js, REST API design, JWT Authentication, RBAC, WebSockets, Concurrent/Multi Tiered System Design

Frontend: React.js, Next.js, HTML5, CSS3, Bootstrap 5, responsive/component driven UI

Computer Science Fundamentals: Data Structures & Algorithms, Object Oriented Design, Operating Systems, Complexity Analysis, DBMS

PROJECTS

Multi-Role Exam Registration Platform

[Live](#)

Next.js, Node.js, Express.js, MySQL, REST APIs, JWT

- Enabled simultaneous student and admin workflows on one platform by architecting a concurrent, multi tiered RESTful API system in Node.js/Express with object oriented design.
- Ensured data integrity and efficient query performance at scale by designing a normalized MySQL schema with foreign key constraints across users, exams, and registrations.
- Reduced unauthorized access risk across 12 endpoints by implementing JWT based RBAC with middleware authorization, validated in Postman for edge cases and race conditions.

CollabDoc - Real-Time Collaborative Text Editor

[Live](#)

React 19, Vite, Node.js, Express, WebSockets, Quill.js

- Replicated Google Docs style real time collaboration for multiple simultaneous users by building a custom Operational Transformation algorithm to resolve concurrent edit conflicts.
- Delivered low latency sync of cursors, presence, and document state by engineering a Node.js/Express WebSocket server for the editor's real time backend.
- Improved reliability and recoverability by implementing autosave and a 50 edit revision history system, deploying via Vercel (frontend) and Railway (backend).

EXPERIENCE

Web Development Member

Aug 2025 - Present

[TechVayuna](#)

- Shipped a production grade React.js website by building a component driven architecture and deploying it on Vercel.
- Improved release velocity and code quality by collaborating in a multi developer team through Agile practices: sprint planning, feature branching, and code reviews.
- Kept ambiguous, evolving requirements moving forward by communicating technical decisions clearly to non-technical stakeholders.

EDUCATION

SRM Institute of Science and Technology

2023 - 2027

B.Tech, Computer Science and Engineering

- CGPA: 8.91 / 10 | Zero active backlogs
- Relevant coursework: Data Structures & Algorithms, Object Oriented Programming, Operating Systems, Database Management Systems, Software Engineering, Machine Learning, NLP

CERTIFICATIONS

- NPTEL: Machine Learning, Natural Language Processing, Database Management Systems
- Frontend Development with React JS - Hejex Technology