

VINAY KUMAR

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EDUCATION

Indian Institute of Information Technology, Tiruchirappalli (IIITT) — Tiruchirappalli, Tamil Nadu
B.Tech in Electronics and Communication Engineering — CGPA: 8.23 — Aug 2022 – May 2026

ACHIEVEMENTS

LeetCode: Rating 1805+ in contests, actively participating in problem-solving challenges

CodeChef: Rating 1602+ (3*), consistently ranked among top performers

Codeforces: Specialist 1405+ consistently ranked among top performers

Hackathon Finalist: Ranked Top 10 among 50+ teams at [Code Battle (IIIT TRICHY)] (2025).

EXPERIENCE

Full Stack Developer Intern – OneStop Pvt. Ltd

Jun 2025 – Aug 2025

- Worked on backend APIs and data handling for production features.
- Implemented secure authentication using JWT (JSON Web Tokens) and Role-Based Access Control (RBAC) to ensure data privacy for multi-user sessions.
- Improved application reliability through structured backend logic and validations.

PROJECTS

Secure Peer-to-Peer Digital Wallet | *Node.js, Express, MongoDB, ACID Transactions*

Live Github

- **Enforced Transaction Integrity :** Implemented Idempotency Keys to prevent double - spending anomalies during network failures, ensuring exactly - once execution for all financial operations.
- **Secured Fund Transfers :** Architected a Two-Phase Transfer System that validates recipient identity and server-side balances prior to execution, preventing logic errors and unauthorized overdrafts.
- **Optimized User Experience :** Engineered a Live Dashboard with efficient short-polling (3s interval) to instantly reflect balance updates, prioritizing data accuracy with minimal overhead.

Cloud Drive System | *Node.js, Express.js, MongoDB (GridFS), React.js, Streams API, JWT*

Github

- Designed a hierarchical file system using the Parent-Reference pattern in MongoDB, enabling efficient nested folder structures and O(n) directory traversal while maintaining database schema simplicity.
- Implemented a robust Data Lifecycle Manager featuring Soft Deletes and Trash Recovery, preventing accidental data loss by flagging records for archival rather than immediate permanent deletion.
- Implemented a real-time Storage Quota System using atomic counters to track user consumption and enforce strict tier-based limits.

Collaborative Real-Time Text Editor | *Node.js, Socket.IO, React.js, MongoDB, WebSockets*

Github

- Built a multi-user real-time editing platform supporting simultaneous document updates.
- Integrated Socket.IO to broadcast code changes to all connected clients in real-time with less than 100ms latency.
- Created a room-based architecture allowing users to create private coding sessions with unique room IDs.

TECHNICAL SKILLS

Languages : C++, Python, JavaScript, SQL, HTML/CSS

Frontend : React.js, Tailwind CSS, Chart.js

Backend : Node.js, Express.js, Socket.IO, REST APIs, JWT (JSON Web Tokens)

Databases : MongoDB, MySQL

Tools & Platforms: Git, GitHub, Postman, Render, Vercel.

Core Concepts: Data Structures & Algorithms, Object-Oriented Programming (OOPs), Operating Systems (OS), DBMS

ACTIVITIES

Member – Google Developer Student Club (GDSC), IIITT

- Organize hackathons and workshops mentored peers in DSA and web development.