

ARITRA KUMAR

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🌐 LinkedIn 🐙 GitHub 🌐 Portfolio ⚡ LeetCode ⚡ GeeksforGeeks ⚡ CodeForces

EDUCATION

Bachelor of Engg. in Information Technology - Jadavpur University, Kolkata

📅 Aug 2021 - June 2025

- **CGPA: 8.6/10**
- **Coursework:** Operating System (**OS**), Database Management Systems (**DBMS**), Object Oriented Programming (**OOP**), Data Structures and Algorithms (**DSA**), Computer Networks (**CN**).

TECHNICAL SKILLS

- **Programming Languages:** C, C++, Java, JavaScript, SQL.
- **Frontend Technologies:** HTML, CSS, Bootstrap, Tailwind CSS, Vanilla JS, React.js, Redux-Toolkit.
- **Backend Technologies:** Node.js, Express.js, REST API, JWT, Socket.io, Mongoose ODM.
- **Databases & Caching:** MongoDB, MySQL, Oracle DB, Redis.
- **Version Control & Collaboration:** Git & GitHub.
- **Dev Tools:** Postman, Docker, Kubernetes.
- **Cloud Platforms & Deployment:** Vercel, Render, Netlify, Heroku.

PROJECTS

DriveShare - A Google Drive Utility | **React.js, React-OAuth, Node.js, Express.js, MongoDB**

Live 🔄

- Implemented secure authentication using Google OAuth 2.0 with react-oauth to enhance account safety and convenience.
- Designed a system for Google Drive upload targets with folder IDs mapped to UUIDs in shared links for abstraction.
- Enabled anonymous file uploads via shared links using multer for backend handling and Google Drive APIs.
- Integrated controls for granting and revoking permissions on anonymous upload targets to manage access settings.

Blogger - A Blogging Platform | **React.js, Redux-Toolkit, Node.js, Express.js, MongoDB**

Live 🔄

- Developed robust JWT-based authentication to secure user data, ensure session integrity, and prevent unauthorized access.
- Designed content creation, posting, and searching in MongoDB using the KMP algorithm for string matching.
- Built user profiles showcasing content posting history and enabling social interactions such as follow and unfollow features.
- Delivered personalized feeds and recent activity of followed users via MongoDB aggregation pipelines.

CodeSync - A Realtime Collaborative Code Editor | **React.js, Node.js, Express.js, Socket.io**

Live 🔄

- Built a real-time collaborative coding platform using Socket.io and CodeMirror with support for multiple languages and themes.
- Enabled dynamic room creation with unique IDs via UUID and efficient management with Socket.io-adapter.
- Added user lists and typing indicators using debounce techniques to enhance collaboration.
- Synchronized edits in real-time using Socket.io with notifications via React Hot Toast for seamless teamwork.

PRACTICE PROJECTS

InShare - A File Sharing Platform | **HTML, Tailwind CSS, Vanilla JS, Node.js, Express.js, MongoDB**

Live 🔄

- Built a remote file-sharing platform using Multer for file handling, Cloudinary for cloud storage, and MongoDB.
- Implemented unique download links using UUID and dynamic download pages rendered with EJS for seamless file access.
- Added email notifications using Nodemailer and Mailgun SMTP to enhance communication with recipients.
- Automated 24-hour link expiration using Render's Cron Job scheduler for secure and efficient storage management.

ChitChat - A Simple Group Chat Room | **HTML, CSS, Vanilla JS, Node.js, Express.js, Socket.io**

Live 🔄

- Built a group chat app supporting create, join, leave, and real-time user activity notifications in a single room.
- Used Socket.io for tracking real-time activity, debounce for optimized typing indicators, and Socket.io-adapter for live members.
- Designed a responsive UI with HTML, CSS, JavaScript, and containerized the app using Docker for streamlined deployment.