ARYAN MISHRA

Kolkata, India| P: +91 7488022436| aryan456.rehla@gmail.com | Linkedin | Github | Portfolio

EDUCATION

TECHNO MAIN SALT LAKE kolkata, India
Bachelor of Technology August 2024 - 2028
Major in Computer Science
Cumulative GPA : 8.5/10

MY PROJECTS

WorkBench Studio | Next js, Typescript, SupabaseRealtime, Postgresql, React flow, Elkjs **(Github) (Live)**

- Built an AI-assisted system design workspace that converts **natural language requirements into structured architecture diagrams**, reducing manual design effort
- Architected a **dual-engine system (text + graph) with middleware synchronization**, ensuring consistency between document state and visual representation
- Implemented real-time collaborative editing using WebSockets with **optimistic updates and concurrency handling**, enabling smooth multi-user interaction
- Integrated **ELK.js** auto-layout engine to dynamically position architecture nodes, handling complex graph hierarchies without manual positioning

DCEP – Distributed Code Execution Platform | Node.js, Docker, Redis **(Github)**

- Built a distributed backend in Node.js to safely compile and run untrusted C++ code submissions in isolated environments.
- Integrated a Redis message queue to handle concurrent code executions asynchronously, preventing the main API from bottlenecking under heavy load.
- Sandboxed the execution environment using the Docker API, enforcing strict CPU, memory, and network limits to prevent server crashes and malicious attacks.
- Implemented timeout enforcement and process cleanup to handle infinite loops and hung submissions, ensuring system stability under adversarial inputs

Xdemy – Integrated Learning Management System | React, Tailwind Css, Supabase (Github) **(Live)**

- Built a full-stack LMS with Student/Teacher portal**s**, implementing role-based access control and a nested layout system to handle distinct user workflows
- Developed an integrated teacher dashboard with analytics and productivity tools (Kanban, scheduling) using React, Redux Toolkit, and Recharts
- Leveraged Supabase (PostgreSQL, Auth, Storage) for secure authentication (OAuth + email) and scalable backend services
- Built real-time notification system and progress tracking for students using Supabase subscriptions, enabling teachers to monitor course completion rates

TECHNICAL SKILLS

- **Languages and Frameworks:** JavaScript (ES6+), Python, TypeScript, C++, SQL, React.js, Next.js, Node.js, Express js
- **Developer Tools:** Git/GitHub, Postman, Docker, Supabase
- **Cloud and Databases:** MongoDB, PostgreSQL
- **Relevant Coursework**: Data Structures, Algorithms, DBMS, Operating Systems, Computer Networks, OOP
- **Core:** Data Structures & Algorithms (500+ problems solved on LeetCode, Rating: 1700+)

EXTRACURRICULAR AND HACKATHON

- 1 X hackathon winner and 5 X finalist
- Won 1st prize at problem solving competiton in college
- Member - Geekonix Tech Club, TMSL (2024 - 25)