

JAY AGGARWAL

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Full-stack developer and Computer Science student specializing in scalable web apps and cloud-native solutions (MERN, Kafka, GCP)

Education

The LNM Institute of Information Technology

Bachelor of Technology in Computer Science and Engineering

Aug 2022 – Apr 2026

Jaipur, India

Professional Experience

Full Stack Developer (Freelance)

Apr 2025 – June 2025

TRISX Technology

Remote

- Engineered a scalable exam portal for 1,000+ concurrent users with real-time dashboards, optimizing 25+ RESTful APIs (Node.js/Express, MongoDB) to improve query response times by 40% and boost operational efficiency by 30%.
- Secured the platform with JWT authentication and Role-Based Access Control (RBAC), reducing security vulnerabilities by 25% while enabling smooth multi-role access management.

Projects

KVP Library Management System

Jan 2024 – Apr 2024

React.js, Node.js, Express.js, MongoDB, NodeMailer, Design Patterns

- Developed a full-stack Library Management System with dedicated Admin, Student, and Faculty panels for role-based access.
- Implemented the **Abstract Factory** pattern for dynamic role creation (Admin, Student, Faculty) and the **Observer** pattern for automated email notifications (account setup, password generation, due date reminders) using NodeMailer.
- Integrated MongoDB for cataloging, borrowing, and returning books, with real-time updates across user panels.
- Deployed on Vercel: kvp-library-management-system.vercel.app

Kayak Travel Reservation System

Team Size: 2 | May 2025 – Aug 2025

React.js, Node.js, Kafka, Redis, MySQL, MongoDB, GCP, AWS

- Architected a high-availability (99% uptime) travel platform; cut search latency by 30% using Redis caching and a Kafka-based event-driven architecture.
- Authored 15+ reusable React components with TailwindCSS, accelerating frontend development speed by 20%.
- Integrated payment gateways, email notifications, and user dashboards for a seamless booking and management experience.

Leadership and Activities

Technical Lead

Sep 2024 – Feb 2025

E-Summit, LNMIIT

Jaipur, India

- Led a 10-member team to build and deploy summit platform (E-Summit '25 Website), automating processes for 1,000+ attendees, reducing errors by 15%; mentored 5+ junior developers in full-stack practices.

Skills

Languages: JavaScript, TypeScript, C++, Java, SQL

Frontend: React.js, HTML5, CSS3, TailwindCSS, Bootstrap, Material UI

Backend: Node.js, Express.js, RESTful APIs, MongoDB, MySQL, Redis, Kafka, Jest, Socket.io

Tools & DevOps: Docker, Git, CI/CD, Jira, Firebase, Google Cloud Platform (GCP), WebRTC