

Muhammad Rasal kv

MERN Full Stack Developer

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Profile Summary

Self-taught MERN stack developer with a strong foundation in JavaScript, TypeScript, and backend development. I enjoy building real-time, scalable web applications and have hands-on experience creating full-stack projects using React, Node.js, MongoDB, Redis, and Socket.IO. I am passionate about learning modern technologies, improving problem-solving skills, and building efficient systems that solve real-world problems.

Skills

- **Languages:** JavaScript, TypeScript, SQL
- **Frontend:** React, Redux, HTML, CSS, Tailwind, Bootstrap
- **Backend:** Node.js, Express.js, REST APIs, JWT Authentication
- **Databases:** MongoDB, PostgreSQL, Redis
- **Integrations & Real-Time:** WebSockets (Socket.IO), Stripe, Razorpay, OAuth, Firebase, Cloudinary, S3
- **Tools & DevOps:** Git, GitHub, AWS, Nginx, Postman, Railway, Render, Figma

Main Projects

NexaRide – Real-Time Taxi Booking App

A full-stack ride-hailing web application that connects riders and drivers through real-time location tracking, live communication, and secure wallet-based payments. The platform simulates real-world taxi service workflows including ride requests, driver matching, trip lifecycle management, and digital payment handling, delivering a scalable and production-like transportation solution.

- Developed a secure authentication and authorization system using JWT with role-based access for riders and drivers, ensuring protected API communication and session handling.
- Built a complete ride booking workflow, enabling riders to request trips with pickup and destination details while allowing nearby drivers to receive, accept, and manage ride requests in real time.
- Implemented live ride tracking and bidirectional communication between riders and drivers using Socket.IO WebSockets, providing instant status updates such as ride accepted, arrived, started, and completed.
- Utilized Redis for socket ID storage and caching, improving real-time event delivery performance and efficient connection management.
- Designed ride lifecycle management and cancellation handling, ensuring accurate state transitions from request to completion with proper validation and rollback logic.
- Integrated Geoapify APIs for geocoding, routing, and distance estimation, enabling location-based ride calculations and map-driven navigation features.
- Implemented a wallet system with secure Stripe payment integration, supporting balance top-ups, ride payments, and webhook-based transaction confirmation.
- Structured the backend using Node.js, Express, and TypeScript with modular layering, applying MVC and Repository Pattern principles for scalability and maintainability.
- **Tech Stack:** React, Redux, Node.js, Express.js, TypeScript, MongoDB, Redis, Socket.IO, Stripe, Geoapify
- **Architecture & Concepts:** REST APIs, JWT Authentication, WebSockets, Repository Pattern, Real-Time Systems

[Live](#) [Git - Frontend](#) [Git - Backend](#)

Coza Store — Full-Stack E-Commerce Web Application

A server-rendered fashion e-commerce platform that enables users to browse products, manage carts, and complete secure purchases through a structured backend and dynamic user interface. The system demonstrates real-world online store functionality including authentication, product management, order handling, and RESTful API design.

- Developed secure user authentication and session management, enabling protected access to user accounts and personalized shopping experiences.
- Built product listing, category filtering, and dynamic cart functionality, allowing users to browse items, add/remove products, and manage quantities seamlessly.
- Implemented secure checkout and payment processing using Razorpay with proper validation and transaction handling.
- Designed the backend using Node.js, Express.js, and MongoDB following an MVC-based structure for clear separation of concerns and maintainable code organization.
- Created RESTful APIs and server-side rendered views using EJS, delivering responsive pages and efficient data flow between client and server.
- **Tech Stack:** Node.js, Express.js, MongoDB, EJS
- **Concepts:** MVC Architecture, REST APIs, Authentication, Session Management, CRUD Operations

[GitHub](#)

Mini Projects

PDFSlice — PDF Processing Web Application

[Live](#) [GitHub](#)

- Developed a web-based tool to upload, split, and manage PDF files with secure file handling and efficient document processing using server-side logic and in-memory storage.
- **Tech Used:** TypeScript, Node.js, Redis, pdf-lib, Supabase storage

NexaRead — Online Learning Platform

[Live](#) [GitHub](#)

- Built a basic article-sharing application allowing users to create posts, like articles, manage profiles, and block users with secure authentication and CRUD-based content handling.
- **Tech Used:** React, Redux, Node.js, Express, MongoDB, TypeScript, Cloudinary

OLX Clone — Marketplace Web Application

- Developed an OLX-inspired marketplace using ReactJS, integrated with Firebase authentication for secure user experiences
- **Tech Used:** React, Node.js, Express, MongoDB, Firebase Storage

Netflix Clone — Streaming Interface (Frontend)

- Designed a Netflix-style movie browsing interface with dynamic content rendering, reusable components, and modern UI styling to replicate a streaming platform experience.
- **Tech Used:** React, Typescript, CSS, TMDB API

Education

MERN Full Stack Development

2024 - Present

Brototype

Higher Secondary (Computer Commerce)

2022 - 2023

GHSS Tirunagadi