

Prafull Prince

Full Stack Developer | MERN Stack | Real-Time Systems

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SUMMARY

Full Stack Developer experienced in building and deploying production applications using Next.js, Node.js, Express, MongoDB, Redis, and WebSocket. Strong focus on real-time systems, REST API design, authentication, database architecture, and cloud deployment. Built scalable chat infrastructure using Redis Pub/Sub and Redis Queues, and deployed multi-process backend systems on AWS EC2 with Nginx, HTTPS, and PM2.

EDUCATION

VIT, Vellore Institute of Technology, Bhopal

B.Tech – Computer Science Engineering; CGPA: 8

Bhopal, Madhya Pradesh

2023 – 2027

TECHNICAL SKILLS

Languages: JavaScript (ES6+), TypeScript, C++, HTML5, CSS3

Frontend: React.js, Next.js, Redux Toolkit, Tailwind CSS, Framer Motion

Backend: Node.js, Express.js, REST APIs, WebSocket (ws), Socket.IO

Authentication & Security: JWT, OAuth 2.0, bcrypt, Role-Based Access Control

Databases: MongoDB Atlas, Mongoose, MySQL, Redis

Cloud & DevOps: AWS EC2, AWS ElastiCache, Vercel, Render, Cloudinary, Nginx, PM2, Docker, GitHub Actions

Payments & APIs: Razorpay, Postman, REST API Design

Concepts: WebSockets, Redis Pub/Sub, Redis Queues, WebRTC, OOP, DSA, MVC, CI/CD

PROJECTS

Connect – Scalable Real-Time Chat GitHub Live

2026

- *Next.js, Node.js, Express, MongoDB, Redis, Redis Pub/Sub, Redis Queues, WebSocket (ws), JWT, AWS EC2, Nginx, PM2*
- Engineered a real-time chat platform using WebSocket with JWT authentication, persistent messaging, chat history, and connection management.
- Implemented Redis Pub/Sub to broadcast messages across multiple WebSocket server instances, enabling horizontal scaling while maintaining real-time communication.
- Integrated Redis Queues for asynchronous message processing and MongoDB for persistent chat and message storage.
- Deployed multiple backend processes on AWS EC2 behind Nginx with HTTPS and PM2, using domain-based routing for production services.

StudyForge – EdTech Platform GitHub Live

2024

- *Next.js, Node.js, Express, MongoDB, Redis, JWT, Cloudinary, Razorpay, AWS EC2, Nginx, PM2*
- Engineered a full-stack EdTech platform supporting student and instructor workflows, course management, enrollment, protected content, and REST APIs.
- Designed MongoDB data models and REST APIs for users, courses, sections, lectures, and enrollments with JWT authentication and role-based authorization.
- Integrated Cloudinary for course media management and Razorpay for payment processing, with Redis-backed services for improved application performance.
- Deployed the backend on AWS EC2 behind Nginx with HTTPS and PM2 for production process management.

RentaBuddy – Rental Companionship Platform GitHub Client GitHub Server Live

2025

- *Next.js, Node.js, Express, MongoDB, Redis, JWT, WebSocket, Cloudinary, AWS*
- Built a full-stack marketplace connecting users with buddies through authentication, profile discovery, booking workflows, and real-time communication.
- Developed REST APIs with JWT-based authentication and role-based authorization for profiles, buddy listings, search, filtering, and booking management.
- Implemented real-time communication using WebSocket and Redis-backed services, with Cloudinary integration for profile and media management.

HIGHLIGHTS

- Built and deployed multiple full-stack applications independently, covering real-time communication, payments, authentication, cloud storage, and production deployment.
- Designed a horizontally scalable WebSocket architecture using Redis Pub/Sub and Redis Queues for communication and asynchronous processing across multiple backend instances.
- Hands-on experience deploying Node.js applications on AWS EC2 with Nginx reverse proxy, HTTPS/SSL, PM2, domain-based routing, and Redis/ElastiCache integration.
- Strong focus on backend engineering, real-time systems, REST API architecture, authentication, database design, and production deployment.