

# Raju Kumar Mandal

Backend-Focused Full Stack Engineer

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[GitHub](#) — [LinkedIn](#) — [Portfolio](#)

## Professional Summary

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Backend-focused Full Stack Engineer with experience developing scalable Java-based and MERN stack applications. Skilled in designing RESTful APIs, implementing real-time features using WebSocket-based streaming, and optimizing database-driven backend systems. Hands-on experience with backend performance optimization, clean architecture principles, and delivering production-ready features in Agile development environments.

## Technical Skills

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**Programming Languages:** JavaScript, Java, SQL

**Frontend Technologies:** React.js, HTML5, CSS3, Tailwind CSS

**Backend Technologies:** Node.js, Express.js, Spring Boot

**Databases:** MongoDB, MySQL

**APIs & Communication:** REST APIs, WebSocket

**Tools & Platforms:** Git, Postman, JWT, Cloudinary

**Testing & CI/CD:** Jest (unit testing), GitHub Actions

**Core Concepts:** Backend Architecture, API Engineering, System Design, Microservices Fundamentals, Performance Optimization

**Containerization & DevOps:** Docker, CI/CD pipelines

## Professional Experience

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### Backend Developer (Part-Time / Internship)

Oct 2023 – Apr 2024

*Parabit Private Limited, Bhopal*

- Engineered Java-based backend modules for a Blood Bank Management System managing 10,000+ records, improving data accuracy by 30%.
- Optimized MySQL queries and relational schemas, reducing average query execution time by 35%.
- Implemented REST APIs for real-time inventory synchronization across 12+ centers.
- Automated donor onboarding, blood expiry tracking, and reporting workflows using backend services, reducing manual effort by 40%.
- Resolved high-priority backend issues, decreasing system downtime by 40%.
- Delivered backend features over a 5-sprint Agile development cycle, improving release reliability and delivery speed.

## Projects

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### Zerodha Clone – Real-Time Trading Platform

- Architected a full-stack trading platform with WebSocket-based streaming for real-time market data.
- Developed RESTful APIs for order placement, portfolio management, and transaction history simulation.
- Implemented JWT-based authentication and authorization for 1,000+ simulated users.
- Improved API response latency by 28% through backend optimization and database indexing.

*Tech Stack: React.js, Node.js, Express.js, MongoDB, WebSocket*

#### **Foodie App – Online Food Ordering System**

- Developed a MERN stack food ordering application with secure authentication and order management.
- Implemented cart, checkout, and order tracking APIs processing 500+ orders per day.
- Improved API response consistency by optimizing backend request handling.

*Tech Stack: MongoDB, Express.js, React.js, Node.js*

#### **StayEase – Airbnb-Style Booking Platform**

- Built a property booking platform with real-time availability and secure reservations.
- Integrated Cloudinary for optimized media storage and faster content delivery.

*Tech Stack: MERN Stack, Cloudinary*

### **Education**

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#### **Bachelor of Technology (B.Tech) – Computer Science**

2023 – 2027

IES College of Technology, Bhopal

CGPA: 7.5

### **Achievements**

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- 4-Star HackerRank rating in Data Structures and Algorithms, demonstrating strong problem-solving ability