

Rakesh Bhagat

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EDUCATION

Guru Ghasidas Vishwavidyalaya (Central University)

Bachelor of Technology in Electronics and Communication Engineering | CGPA: 8.65/10.0

Bilaspur, Chhattisgarh

Nov 2022 – June 2026

PROFESSIONAL EXPERIENCE

Web Developer (Full Stack – Backend Focused)

December 2025 – Present

Crescentia One

Remote

- Resolved a production WhatsApp integration failure where every business-initiated send returned a **500 Internal Server Error**, tracing it to an approved template's dynamic URL button requiring a **button** component in the payload (which body-only variable counting silently missed), restoring automated messaging.
- Debugged a third-party call-log integration's intermittent **"fetch failed"** errors by surfacing the cause hidden on `err.cause` (an ENOTFOUND DNS failure from a non-resolving API host plus an obsolete payload shape), and removed dead lead-push code after auditing the client's plan entitlements.
- Diagnosed slow cross-page navigation in production by reading **Vercel↔Supabase region mismatch** from response headers (~250 ms round-trips per query), then cut perceived load time by adding App-Router streaming skeletons and replacing per-page `auth.getUser()` network calls with cookie-only session reads across 9 routes.
- Architected full-stack e-commerce backend with **Node.js / Express.js**, designing secure **RESTful APIs** for payment gateway integration and inventory management across 3 client platforms, reducing API response time by 30%.
- Migrated client infrastructure from WordPress to **Next.js + Express.js** backend, re-engineering the database layer and SSR pipeline, improving Core Web Vitals scores by 40%.

KEY PROJECTS

Chate CRM – Multi-Branch Lead Management & WhatsApp Automation | *Next.js, TypeScript, PostgreSQL (Supabase), RLS, Webhooks* | [Live](#)

- Built a unified lead-intake pipeline ingesting from **4 channels** (Meta Ads, Shopify, Walk-in QR, and inbound call-log webhooks) with HMAC signature verification, idempotency keys, and round-robin counselor assignment, funneling all sources through a single `createLead` service for consistent dedup and routing.
- Engineered a **config-driven pipeline-stage engine** (stages editable from Settings, no redeploy) plus CRM-authored per-stage WhatsApp templates that auto-send on stage entry via the Spur/Meta Business API, and an automated follow-up reminder system with an **exactly-once** notification guarantee using a conditional UPDATE guard.
- Implemented **role-based access control** with four org/branch-scoped roles enforced at the database layer through PostgreSQL Row-Level Security policies, and optimized page-load latency by adding App-Router streaming skeletons and eliminating redundant network auth validations.

SketchyDraw – Real-Time Collaborative Canvas | *Node.js, PostgreSQL, WebSockets, AWS EC2, NGINX* | [Live](#)

- Engineered scalable **Node.js** backend with **WebSocket-based** real-time synchronization enabling multi-user collaborative drawing with sub-100ms latency and state consistency across all connected clients.
- Designed normalized **PostgreSQL** schema with **Prisma ORM** for type-safe CRUD operations, supporting user authentication, session management, and persistent canvas data storage.
- Configured production deployment on **AWS EC2** with NGINX reverse proxy and SSL certificates, achieving 99.9% uptime with zero-downtime updates.

GGV Lost & Found System | *Node.js, PostgreSQL, Python, REST APIs, ML (TF-IDF)* | [Live](#)

- Architected university-scale backend platform serving 500+ students, managing 100+ records through complex relational queries and efficient PostgreSQL data modeling.
- Built 15+ RESTful API endpoints with optimized SQL queries and indexing strategies, reducing query execution time by 75% and improving system throughput.
- Developed **Python-based ML microservice** using TF-IDF and cosine similarity algorithms, automating 85% of item matches with 90%+ accuracy – demonstrating practical **AI/ML integration** in production.

TECHNICAL SKILLS

Languages: JavaScript (ES6+), TypeScript, Python, SQL, C/C++

Backend: Node.js, Express.js, RESTful APIs, WebSockets, Microservices, Webhooks (HMAC verification), FastAPI (familiar)

Frontend: React.js, Next.js (App Router, Server Actions), HTML5, CSS3, Tailwind CSS, Responsive Design

Databases: PostgreSQL, Supabase, MongoDB, MySQL, Prisma ORM, Row-Level Security (RLS), Query Optimization, Indexing

Cloud & DevOps: AWS (EC2, S3), Docker, NGINX, CI/CD Pipelines, Vercel, Git, GitHub

AI/ML: Gemini AI API (LLM integration), Python ML microservices (TF-IDF, Cosine Similarity), RAG concepts, vector-based search

CS Fundamentals: DBMS, Computer Networks, OS, System Design