

Bablu Kumar Singh

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PROFESSIONAL SUMMARY

Backend Engineer with **1.7+ years of experience** building scalable, high-performance SaaS platforms using Node.js, Express.js, PostgreSQL, MongoDB, MySQL, Redis, and RabbitMQ. Experienced in designing production-grade REST APIs, multi-tenant architectures, role-based access control (RBAC), payment gateway integrations, asynchronous messaging, and event-driven systems. Proficient in Docker, Linux, Nginx, AWS EC2, GitHub Actions, and CI/CD pipelines for reliable cloud deployments. Improved application response time by approximately 30% through database optimization, efficient backend architecture, and scalable API design. Currently expanding expertise in Generative AI, Agentic AI, OpenAI APIs, LangChain, and Retrieval-Augmented Generation (RAG) while building hands-on AI applications.

TECHNICAL SKILLS

- **Languages:** JavaScript (ES6+), TypeScript, SQL
- **Backend:** Node.js, Express.js, Strapi, REST APIs, API Versioning, Backend Architecture, System Design
- **Databases:** PostgreSQL, MongoDB, MySQL, Redis
- **Messaging & Architecture:** RabbitMQ, Multi-tenant Architecture, Event-driven Architecture, Asynchronous Processing, RBAC
- **Authentication & Security:** JWT, OAuth2, API Security, Webhooks
- **Cloud & DevOps:** AWS EC2, Docker, Linux, Nginx, GitHub Actions, CI/CD Pipelines, SSL, Reverse Proxy
- **Integrations:** Stripe, Google Analytics API, Google Search Console API
- **Database Optimization:** Data Modeling, Query Optimization, Indexing, Transactions, Aggregation Pipelines, Redis Caching
- **Currently Learning:** Generative AI, Agentic AI, OpenAI APIs, LangChain, Retrieval-Augmented Generation (RAG), Vector Databases, GraphQL

EXPERIENCE

- **X-Strategy Services LLP** Noida, India
Backend Engineer September 2024 – Present
 - **Backend Architecture:** Designed and maintained scalable backend services for multiple production SaaS applications, emphasizing modular architecture, performance optimization, and long-term maintainability.
 - **Multi-tenant SaaS Platform:** Architected and developed ROI Spectrum, a production-ready multi-tenant SEO SaaS platform featuring subscription management, service tracking, audit logs, role-based access control (RBAC), analytics dashboards, and team collaboration.
 - **REST API Development:** Designed and developed scalable REST APIs supporting authentication, request validation, API versioning, pagination, structured error handling, and business workflows across multiple production SaaS applications.
 - **Database Optimization:** Improved application performance by optimizing PostgreSQL and MongoDB queries using indexing, aggregation pipelines, schema optimization, and Redis caching, reducing average API response time by approximately 30%.
 - **Asynchronous Processing:** Implemented event-driven workflows and background task processing using RabbitMQ, improving application scalability, reliability, and asynchronous job execution.
 - **Authentication & Authorization:** Designed secure authentication systems using JWT and OAuth2 while implementing hierarchical Role-Based Access Control (RBAC) across administrators, managers, executives, and end users.
 - **Payment Gateway Integration:** Integrated Stripe payment workflows including recurring subscriptions, webhook processing, billing automation, payment synchronization, and subscription lifecycle management.
 - **Cloud Deployment & DevOps:** Containerized applications using Docker and deployed production workloads on AWS EC2 Linux servers. Configured Nginx reverse proxy, SSL certificates, GitHub Actions based CI/CD pipelines, environment management, and automated deployment workflows.

- **Third-Party Integrations:** Integrated Google Analytics API and Google Search Console API to provide automated SEO reporting, website performance insights, and customer analytics dashboards.
- **Collaboration:** Worked closely with frontend developers, QA engineers, designers, and stakeholders to deliver high-quality software through Agile development practices and code reviews.

PROJECTS

- **ROI Spectrum — Multi-tenant SEO SaaS Platform (roispectrum.com):** Designed and developed a production-ready multi-tenant SaaS platform enabling businesses to manage SEO services, subscription plans, analytics, and team collaboration. Implemented RBAC, subscription lifecycle management, audit logs, Google Analytics/Search Console integrations, scalable REST APIs, and automated payment workflows.
Tech: Node.js, Express.js, PostgreSQL, MongoDB, Redis, RabbitMQ, Docker, AWS EC2, Nginx, Stripe.
- **Forklift CRM — Enterprise Lead Management System:** Built a CRM platform supporting lead lifecycle management, workflow automation, role-based access control, reporting dashboards, audit logs, and operational workflows for enterprise sales teams.
Tech: Node.js, Express.js, MongoDB, Redis, RabbitMQ.
- **Generative AI Learning Projects:** Building hands-on AI applications using OpenAI APIs, LangChain, Agentic AI workflows, Retrieval-Augmented Generation (RAG), embeddings, and vector databases to understand modern AI application architecture and intelligent automation.
Tech: OpenAI API, LangChain, RAG, Vector Databases (Learning).

EDUCATION

- **Master of Computer Applications (MCA)** Patna, India
A.N. College, Patna CGPA: 8.3/10 — Rank #1 in Batch 2022 – 2024
- **Bachelor of Science (Mathematics)** Patna, India
S.G.D.M. College 2019 – 2022

PROFESSIONAL DEVELOPMENT

- Actively building hands-on applications using Generative AI, Agentic AI, OpenAI APIs, LangChain, Retrieval-Augmented Generation (RAG), vector databases, and modern AI application architectures.
- Developing a cross-platform mobile application using React Native and Expo, currently under Google Play Store review.