

# SAURABH JAINWAL

Senior Backend Engineer | Full-Stack Developer

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## PROFESSIONAL SUMMARY

Senior Backend Engineer with over 4 years of experience architecting, building, and scaling enterprise-grade software. Single-handedly built and maintained the entire backend for a large-scale e-commerce platform that grew from 1,000 to 100,000 users. Experienced across the full software lifecycle, from backend infrastructure design to web and mobile application development. Proficient in building AI-powered systems including RAG pipelines, OCR processing with multi-LLM setups, and intelligent pricing tools. Proven track record across international environments spanning India, the UK, and the Middle East. Passionate about Japanese tech culture and actively learning Japanese.

## TECHNICAL SKILLS

<b>Languages:</b>	Java, TypeScript, JavaScript, Go, Python
<b>Backend:</b>	Node.js, GraphQL, Apollo Server, NestJS, Spring Boot, RESTful APIs, Microservices
<b>Frontend:</b>	React.js, Next.js, Expo, Electron.js, Tailwind CSS, HTML5, CSS3
<b>AI/ML:</b>	RAG Pipelines, OCR Processing, LLM Integration, GitHub Copilot, ChatGPT API
<b>Databases:</b>	PostgreSQL, MongoDB, Redis, MySQL, SQLite, Firebase, ClickHouse, Neo4j, DGraph, DynamoDB
<b>Cloud &amp; DevOps:</b>	AWS (EKS, Serverless, S3), GCP, Docker, Kubernetes, Helm, Terraform, Pulumi, Ansible, CI/CD
<b>Messaging:</b>	RabbitMQ, Apache Kafka, AWS SQS
<b>Monitoring:</b>	Grafana, Prometheus, Loki, New Relic

## PROFESSIONAL EXPERIENCE

### Senior Backend Engineer | Suplyd

Feb 2023 - Present | Cairo, Egypt (Remote/Hybrid)

- Single-handedly architected, designed, built, deployed, and maintained the entire backend for a large-scale e-commerce platform serving Egypt and Middle East markets, while also contributing to the web and mobile applications.
- Scaled the system from 1,000 users to 100,000 users over three years without requiring a major rewrite, demonstrating robust architecture decisions from day one.
- Implemented Apollo Router for federated GraphQL architecture, improving API response times by 40%.
- Designed and optimised PostgreSQL database schemas and queries, reducing query execution time by 35%.
- Built cloud-native applications on AWS using EKS, managing containerised applications with Kubernetes and Helm.
- Integrated RabbitMQ for asynchronous message processing, handling 5,000+ messages per minute.
- Built a RAG-based recommendation system that helps customers identify products suited to their needs, improving UX.
- Developed an OCR pipeline for customer KYC processing, handling printed and handwritten data through multiple validation stages, virus checks, and a multi-LLM setup that generates finalised reports.
- Designed and built an AI-powered competitor pricing system with a full dashboard, graphs, and management interface entirely in-house, directly contributing to increased traffic and sales.
- Built multiple internal developer tools: MongoDB schema-to-TypeScript class generator, ergonomic VS Code themes, and full ETL systems with a GUI built in Go.
- Established monitoring and alerting systems using Grafana, Prometheus, and New Relic for 99.9% uptime.
- Mentored junior developers on backend development best practices and code review processes.

*Technologies: AWS (EKS, S3, Serverless), Node.js, Apollo GraphQL, PostgreSQL, MongoDB, Go, Python, Next.js, Kubernetes, Helm, RabbitMQ, Redis, Grafana, Prometheus, New Relic*

### Backend Engineer | Raftlabs

Oct 2021 - Jan 2023 | India (Remote)

Joined as a Node.js intern and was offered a full-time Backend Engineer position. Key contributions included:

- Part of a core team building a desktop application that combined the functionality of Microsoft Teams, Slack, Google Calendar, and Google Meet into a single platform. Worked across both ends: backend using Hasura GraphQL Engine, NestJS, AWS EKS, and AWS Serverless, and frontend using Next.js and Electron.js.

- Served as team lead for a US healthcare project (Galen). Built a secure, HIPAA-compliant, SOC 2-approved system enabling remote appointments, scheduling, and audio/video calls with zero drop in quality. The application interfaced with specialised hardware allowing quarantined patients to live-stream vitals to their doctors remotely.
- Implemented site reliability engineering practices, achieving 99.8% system uptime.
- Automated deployment pipelines using CI/CD best practices, reducing deployment time by 60%.
- Optimised application performance through code profiling and database query optimisation.

*Technologies: Node.js, NestJS, Hasura GraphQL, PostgreSQL, MongoDB, Redis, Docker, AWS (EKS, Serverless), Next.js, Electron.js, Firebase, CI/CD*

## Node.js Developer Intern | Taxvisor

Apr 2021 - Sep 2021 | India

- Developed a cross-platform desktop finance management application using Electron.js.
- Built real-time data synchronisation between Firebase backend and React.js frontend.
- Implemented offline-first architecture with SQLite for local data storage.
- Created automated tax calculation algorithms, reducing manual processing time by 80%.

*Technologies: Node.js, Firebase, React.js, Electron.js, SQLite*

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## PROJECTS

### **mongo-auto-type-gen** (Node.js, Go)

A developer tool that introspects MongoDB collections and uses samples to auto-generate TypeScript types/interfaces/classes. Published on npm.

### **KastQL** (Go, SQLite, Redis, GraphQL, Next.js)

A full-fledged GraphQL engine with a developer-friendly setup and a CLI tool. In progress.

### **commit-better** (Node.js)

A CLI tool that generates descriptive and meaningful commit messages. Published on npm.

### **Sleepy Nights (VS Code Theme)** (JSON)

A VS Code theme designed for night coders with warm colours and low contrast for reduced eye strain. Published on the VS Code Marketplace.

### **Wave Runner** (C#, Unity Engine)

An Android/PC game about dodging obstacles and collecting points.

### **TGP** (Node.js)

A CLI tool that quickly scaffolds a TypeScript-based GraphQL server using Apollo and Prisma as ORM.

### **SJ-server-client** (Node.js)

A CLI tool to create a basic Express and React project template for beginners.

### **Issue Tracker** (Node.js, MongoDB, GraphQL)

A GraphQL-based issue tracking web application built with SSR React, GraphQL, and Express.

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## EDUCATION

**Bachelor of Computer Applications (BCA)** | IGNOU, New Delhi | 2017 - 2021 | Grade: A

**Diploma in Software Technology** | NSIC, New Delhi | 2018 - 2021 | Grade: A1

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## KEY ACHIEVEMENTS

- **Solo Architecture:** Single-handedly designed and built the complete backend for an e-commerce platform that scaled from 1,000 to 100,000 users over three years, remaining in production without a major rewrite.
- **AI Systems:** Built three distinct AI-powered systems in production: a RAG recommendation engine, an OCR/multi-LLM KYC pipeline, and a competitor pricing intelligence tool.
- **Performance:** Improved application response times by 40% through GraphQL federation and caching strategies.
- **Reliability:** Maintained 99.9% uptime for production systems serving 100,000+ users.
- **Cost Optimisation:** Reduced cloud infrastructure costs by 25% through efficient resource management.
- **Team Leadership:** Led the Galen healthcare project as team lead; mentored 3 junior developers, improving team productivity by 30%.
- **Healthcare Compliance:** Built a HIPAA-compliant, SOC 2-approved telemedicine system with real-time video, custom hardware integration, and zero-drop call quality.