Vivek Kumar

Backend Engineer

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Best Launchpad Award 2024-25 (Bytive) | **Led the team that delivered the Kisna Diamonds platform** to production

SUMMARY

Backend Engineer with 3.5+ years designing and owning **backend APIs** and **distributed, event-driven systems** in **Node.js/TypeScript and Go** on **AWS**, across PostgreSQL, MongoDB, MSSQL and Redis. Focused on **correctness where money moves** (pricing, gift cards, promotions, gold rates) with idempotency, reconciliation and audit trails. I own work end to end (design spec, benchmark, tests, production), review code and own team releases.

EXPERIENCE

Software Engineer Jul 2023 - Present

Bytive Technologies *Noida, India*

Multi-Brand Jewellery Commerce Platforms - Kisna Diamonds, Iraah, PC Jewellers, Carat24 | *Node.js, Go, MongoDB, Redis, AWS*

- **Led the Kisna Diamonds delivery team** to production: design specs, **pull-request reviews**, and UAT and production releases across admin, storefront and backend.
- **Cut API latency 40%** and eliminated dropped **ERP-to-e-commerce orders** (10K+ SKUs) by moving synchronous flows onto **event-driven microservices** (AWS SQS, Azure Service Bus) with **idempotent consumers, DLQs and replay**.
- Kept **money flows correct** across ERP, POS and web: reconciled ERP promotions into checkout discounts, fixed POS and omnichannel **gift-card validation**, and traced a **digital-gold redemption** weight mismatch to its source.
- Cut nightly **repricing of a 600K-variant catalogue from 2.6 hours to 33 minutes** (179x fewer queries, 99.5% cache hit rate; second 300K tenant 15-35 min) by profiling queries first and adding a two-tier **Redis** cache with batched writes.
- Reduced **production database load** by optimising the heaviest queries and adding a **Redis cart cache** invalidated on every cart change.
- Shipped **inventory import v2**: exact barcode/title matching, per-row validation, stock-move guards and **idempotent re-imports**, behind an **env flag** next to v1, with 46 unit tests.
- Synced customers, products and **gold rates** from **MongoDB into MSSQL** over SQS for Salesforce, and added a CMS **event beacon** (impressions, clicks, session id) to close the storefront-to-CRM loop.
- Took a **WhatsApp commerce assistant** live on a **Salesforce CRM** layer: cached OAuth2 token, audit log per call, each channel behind an env flag.
- Built **AI-powered hybrid search in Go** over **OpenSearch**: agentic LLM query understanding, text + image embeddings (**OpenAI/Gemini**), KNN + full-text ranking, and a query-analytics console that exposed zero-result searches.
- Diagnosed production data races with **zero downtime** (Winston, Loki, Grafana) and **cut deploy time 40%** by automating CloudFormation and CI/CD.

Sadashree - Multi-Vendor Marketplace | *React, Node.js, Cloudflare R2*

- Protected vendor-negotiated pricing with admin-gated **price locking**, and fixed extra-charge handling so **vendor order totals settled correctly**.
- Removed the app server from the upload path with presigned **direct browser-to-R2 uploads** behind one storage abstraction over S3, R2 and DigitalOcean Spaces.

PROJECTS

VTempo - Event-Driven Accountability SaaS *TypeScript, Express, PostgreSQL, Prisma, Docker*

- Built the **escalation engine** (delayed queue, worker, consumers that **claim an event before sending** so retries never double-notify) and a PostgreSQL/Prisma model for groups, invites and plan tiers where a downgrade archives instead of deleting. Design spec and TDD plan per phase.

qr-infra - Product Identity Resolution API *TypeScript, PostgreSQL, Drizzle, Redis, Next.js*

- **GS1 Digital Link** resolver (ports and adapters): invariants enforced under a **row lock**, auth, rate limiting and **idempotency** middleware; Redis read model kept correct by a **transactional outbox** swept by BullMQ, plus a **CI architecture checker**.

TECHNICAL SKILLS

- **Languages & Backend:** TypeScript, JavaScript, Go, Python, SQL | Node.js, Express, REST API design, gRPC, AWS Lambda
- **Distributed Systems:** Event-driven architecture, AWS SQS/SNS, Azure Service Bus, BullMQ, idempotency, DLQs & replay, transactional outbox
- **Data:** PostgreSQL, MySQL, MSSQL, MongoDB, Redis, OpenSearch, S3, Cloudflare R2
- **Engineering Practice:** Code review, TDD, design specs, profiling & benchmarking, CI/CD, Docker, CloudFormation, Grafana & Loki, feature flags
- **Also:** LLMs (OpenAI, Gemini), embeddings & vector search | React, Next.js, RTK Query, Tailwind CSS, MUI

EDUCATION

B.Tech, IT & Mathematical Innovations - Cluster Innovation Centre, University of Delhi | CGPA 8.981/10 2020 - 2024