

Vishal Jadeja

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PROFESSIONAL EXPERIENCE

Full Stack Developer

Aug 2024 – Present

Glitchover (Diasimos Private Limited) | B2C Gaming Platform

Onsite, Ahmedabad

- Architected a distributed, event-driven tournament system serving **1,500+ concurrent users** — designed for fault-tolerance and horizontal scalability; eliminated polling bottlenecks by migrating to WebSocket-based architecture, cutting API load by **60%** and achieving **sub-200ms** latency at peak traffic.
- Resolved critical race conditions in payment confirmation workflows by applying atomic transactions and idempotent webhook handling — solved a concurrency problem spanning 3 distributed payment providers (Razorpay, Stripe, Cashfree), ensuring **zero financial inconsistencies** under high-volume load.
- Reduced MongoDB query latency by **45%** for high-frequency leaderboard reads through schema redesign, compound indexing, and aggregation pipeline optimization — applied complexity analysis to identify and eliminate $O(n)$ bottlenecks under tournament load spikes.
- Designed and deployed **2 independent microservices** (payment gateway, Discord bot) using object-oriented Factory Pattern — decoupled provider logic enabling integration of new systems with **zero refactoring** and 60% reduction in future integration effort.
- Engineered RBAC-based authorization layer using JWT across **4 dashboards**; implemented rate-limiting, input sanitization, and CSRF protection — designed to handle abuse at scale without degrading system performance.
- Introduced Redis-based caching layer for high-read endpoints, reducing database load during peak traffic and improving **p99 response times**; built CI/CD pipelines cutting deployment time by **70%** and Jest test suites reducing production regressions — all delivered within Agile sprint cycles.

PROJECTS

Mintmark – Personal Branding & Knowledge Platform

Next.js, TypeScript, PostgreSQL, pgvector, Trigger.dev, Upstash Redis, OAuth 2.0

- Architected a multi-tenant distributed system designed for **100k users from day one** — connection pooling via pgBouncer, query partitioning on high-volume tables (`activity_log`, `generated_content`) by `created_at` month, and user_id-scoped RLS enforced at both application and database layer.
- Designed a fault-tolerant async job architecture using Trigger.dev — all AI generation, publish, and email jobs are queued with **retry logic (3 attempts)**, ensuring no API route blocks on external calls; system degrades gracefully under provider outages.
- Built a unified AI adapter layer supporting 4 providers (Anthropic, OpenAI, Gemini, Groq) with parallel execution via Promise.all and streaming — abstracted provider-specific logic behind a single interface using OOP adapter pattern; zero consumer-side changes required to switch providers.
- Implemented a vector search pipeline using **pgvector** for semantic note retrieval — embedding jobs run asynchronously at low priority; all vector queries scoped strictly to the requesting user's embeddings to prevent cross-tenant data leakage.

TECHNICAL SKILLS

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

CS Fundamentals: Data Structures & Algorithms, Object-Oriented Design, Complexity Analysis, Distributed Systems

Backend: Node.js, Express.js, REST APIs, WebSockets, NextAuth.js, JWT, OAuth 2.0 (PKCE)

AI/ML: LLM API integration (Anthropic, OpenAI, Gemini, Groq), pgvector, RAG pipelines, BYOK architecture

Databases: PostgreSQL (indexing, partitioning, pgBouncer), MongoDB (aggregation, optimization), MySQL, Supabase

Infrastructure: Redis (caching, rate limiting), Trigger.dev (distributed job queues), Docker, Vercel, GitHub Actions, CI/CD

Practices: Microservices, Event-Driven Architecture, Fault-Tolerant System Design, RBAC, Multi-tenant SaaS

Testing: Jest (Unit, Integration), API Testing

EDUCATION

L. J. Institute of Engineering and Technology

Bachelor of Engineering in Computer Science and Engineering | CGPA: 8.48/10.0

Ahmedabad, India

Nov 2021 – July 2025