ADITYA SHUKLA

Software Engineer · Systems Design & Backend

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EDUCATION

Vivekananda Global University, Jaipur, India Jun 2023 – Present

Bachelor of Technology in Computer Science and Engineering — GPA: 9.0/10

Relevant Coursework: Operating Systems, DBMS, OOP, Computer Networks, Data Structures & Algorithms

EXPERIENCE

MuTerra Labs Jun 2025 – Aug 2025

Software Development Intern · Backend

- Engineered core business logic from tokenomics requirements, enabling the platform to process transactions for **5,000+ daily active users**.
- Integrated third-party SDKs across 3+ Hive dApps (Muterra, Radiffect, Mole Miner) on a biweekly sprint cycle.
- Optimized PostgreSQL queries for complex tokenomics data, improving transaction-processing efficiency at scale.

PROJECTS

Deber — Distributed Search Engine (Go) — github.com/vastavikadi/deber

Go · Goroutines · PostgreSQL · Qdrant · Docker · REST API

- Built a concurrent web crawler in Go with a configurable **goroutine worker pool (up to 10 workers)**, per-domain token-bucket rate limiting (2 req/s), depth-bounded traversal (≤5 levels, up to 1,000 pages), and graceful shutdown via OS-signal handling and `context.WithCancel` propagation.
- Engineered a two-pass **hybrid retrieval pipeline** pairing a PostgreSQL TF-IDF inverted index with semantic vector search over HuggingFace embeddings in Qdrant, merged by a weighted ranker and served via a paginated REST API.
- Designed a **9-package modular architecture** (crawler, nlp, index, embeddings, ranking, api, scheduler, storage, config) with env-driven config, a cron 24h re-crawl scheduler, and `/health + /stats` endpoints for observability; Docker-deployable.

Tama — AI Companion App, Backend Architecture — usetama.me

Supabase Edge Functions · PostgreSQL · TypeScript · OpenRouter · RevenueCat · OneSignal

- Own the end-to-end backend for a cross-platform AI companion app (RevenueCat Shipaton 2026): a **13-table PostgreSQL schema** with row-level security and migration-safe, additive-first conventions (UUID keys, JSONB metadata).
- Built **6 serverless Supabase Edge Functions** (chat-turn, daily-summarize, extract-facts, generate-checkin, notify-special-person, crisis-check) handling server-side prompt assembly and LLM calls, keeping API keys off the client.
- Enforced privacy & safety at the architecture level: consent-gated notifications with no silent code path, an independent crisis-detection layer, full data deletion, and a signature-verified RevenueCat webhook.

InsightFlow — Full-Stack Analytics Platform — github.com/vastavikadi/insight-flow

Next.js 14 · TypeScript · Node.js/Express · MongoDB · Jest · CI/CD (Vercel)

- Architected a scalable Node.js/Express analytics backend on MongoDB delivering heatmaps, funnels, session-replay journeys, and page-view insights, with robust validation and rate limiting.
- Made SPA tracking reliable by intercepting History API navigation and persisting event queues, eliminating client-side data loss during crashes and reloads.
- Shipped a Next.js 14 dashboard (KPI monitoring, conversion funnels, CSV export) covered by Jest/Supertest integration tests.

BeatBrawls — Music TCG — beatbrawls.com

Next.js · Node.js · REST APIs · AWS EC2

- Co-founded and shipped a music trading-card game to **4,000+ players across 15+ countries** (200+ daily active users).
- Backed backend services on AWS EC2; architected three game modes, a deck builder, leaderboards, and multi-wallet support.

TECHNICAL SKILLS

Languages: Go, Python, JavaScript, TypeScript, C++, Java, SQL

Backend & APIs: Node.js, Express, FastAPI, GoFiber, REST, GraphQL, Microservices, Serverless (Supabase Edge Functions)

Databases: PostgreSQL, MongoDB, Redis, Qdrant

Systems & Design: Concurrency, Distributed Systems, System Design, Rate Limiting, Caching, Row-Level Security

DevOps / CI-CD: Docker, Kubernetes, GitHub Actions, AWS EC2, Vercel, Firebase, GCP

Frontend & Tools: React, Next.js, Tailwind CSS, Git, GitHub, Postman

ACHIEVEMENTS

IIT Delhi Tryst Hackathon — 1st Place Mar 2025

Built BeatBrawls (Next.js, Express, Web Sockets) with a team — 1st place in a 36-hour hackathon.

Hack Web3Conf (Global) — Top 100 Finalist Dec 2024

Reached the global Top 100 among thousands of competing teams.

Code Hive SinuSoid Hackathon, NIIT University — Top 5 Nov 2024

Architected LifeVault, a decentralized IPFS storage platform with cryptographically-verified metadata and AES hybrid encryption.