

Johnvessly Alti

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PROFESSIONAL SUMMARY

I am a Software Engineer focused on building scalable backend systems and distributed architectures. I specialize in designing high-performance APIs, asynchronous processing systems, and hybrid SQL/NoSQL data models using Node.js, NestJS, PostgreSQL, MongoDB, and Redis. My work emphasizes system reliability, performance optimization, and building production-grade infrastructure that scales predictably under real-world workloads.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript (ES6+), SQL

Backend: Node.js, NestJS, REST API Design, JWT, OAuth 2.0

Datastores: PostgreSQL, MongoDB, Redis

Systems: Event-Driven Architecture, Async Processing (BullMQ), Caching, Rate Limiting, Node.js Clustering

Infrastructure: Docker, Linux, Prisma ORM, Git/GitHub Actions, k6

OPEN SOURCE CONTRIBUTIONS

ServerCN (Backend Framework) | *TypeScript, PostgreSQL, Drizzle ORM* Merged PR

- Engineered and merged a hybrid authentication blueprint integrating PostgreSQL and Drizzle ORM, delivering a plug-and-play module for the open-source framework.
- Architected reusable scaffold templates supporting both MVC and feature-based project structures, enforcing strict type safety across authentication payloads.
- Resolved core routing bugs and validated end-to-end scaffold generation, ensuring deterministic behavior and production-ready reliability for developers.

KEY PROJECTS

DevNest – Scalable Social Platform Backend | *NestJS, Node.js, PostgreSQL, Redis, TypeScript* GitHub

- Architected a scalable monolithic backend leveraging a hybrid database strategy (PostgreSQL, MongoDB) via Prisma, establishing PostgreSQL as the structured single source of truth.
- Engineered a hardened authentication system integrating Google OAuth 2.0 and JWTs with UUID-tracked refresh token rotation, active session limits, cascade revocation, and SHA-256 IP hashing.
- Scaled backend throughput to reliably support 5,000+ concurrent user loads by offloading CPU-intensive bcrypt operations to `piscina` worker thread pools and implementing Node.js clustering.
- Designed a dynamic pull-based SQL feed architecture aggregating social graph posts on demand, eliminating data duplication and synchronization overhead from push-based models.
- Deployed Redis-backed BullMQ background workers for scalable asynchronous job execution and distributed rate limiting, effectively isolating heavy workloads from user-facing request flows.
- Authored deterministic Jest E2E test suites validating core REST APIs, security invariants, and multi-threaded worker stability, integrated into seamless CI/CD pipelines using GitHub Actions.

SubTrackr – Subscription Management SaaS | *OAuth, Multi-tenancy, Backend Systems* Live App

- Developed a multi-tenant backend infrastructure enforcing strict tenant-aware data isolation and predictable CRUD semantics across segregated environments.
- Implemented OAuth-based authentication workflows with hardened session handling, strict security boundaries, and defense-in-depth access controls.
- Engineered application logic emphasizing data correctness, concurrency safety, and deterministic system behavior under shared infrastructure.

EDUCATION

Aditya Degree College
B.Sc. in Computer Science

Vizianagaram, India
2021 – 2024