Alan Shabrandi

Senior Golang Backend Engineer

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PROFESSIONAL SUMMARY

Senior Backend Engineer and **Go specialist** with **6+ years** of experience in **distributed systems**, scalable APIs, and **cloud-native architectures**. Strong foundation in full-stack development (React, Next.js) and **spatial databases**, with a track record of delivering reliable enterprise solutions for high-traffic platforms (**50k+ DAU**). Passionate about **Clean Architecture**, system observability, and incorporating **AI-powered capabilities** into robust backend environments.

TECHNICAL SKILLS

- Backend (Go, Microservices, Clean Architecture, DDD, CQRS)
- DevOps (Docker, CI/CD, RabbitMQ, Keycloak, Prometheus, Grafana)
- Databases (PostgreSQL, Redis)
- Frontend (TypeScript, React.js, Next.js, Redux)

WORK EXPERIENCE

Senior FullStack Engineer (Backend Focus) | **Enterprise Document Management Platform** Mar 2022 – Present

snapdrive.cloud

- Built the core backend in Go using **Clean Architecture** and **DDD**, scaling the platform to support **15+ distinct modules** and over **250k Monthly Active Users (MAU)**.
- Designed a **Modular Monolith** with an **event-driven** setup to handle high throughput, reliably processing **600k+ daily background jobs** via Asynq and Redis while keeping API **latency under 200ms**.
- Implemented critical security and governance features, including **RBAC, Active Directory integration**, and immutable versioning to meet strict enterprise compliance rules.
- Developed a **hybrid search engine** combining **PostgreSQL Full-Text Search and pgvector**, enabling semantic retrieval and AI-based summarization across an archive of **50M+ documents**.
- Set up automated **CI/CD pipelines using Docker**, custom linters, and GitLab CI/GitHub Actions, which reduced complex on-premise (air-gapped) deployments from 2 days to under 2 hours.
- Contributed to the frontend by building an offline-first **PWA using Next.js and TypeScript**, implementing robust conflict resolution for reliable document syncing in low-connectivity areas.

Backend Developer (Go) | **K. N. Toosi University of Technology** Sep 2020 – Feb 2022

K. N. Toosi

- Engineered scalable backend services in Go to process complex **geospatial datasets**, implementing high-performance **RESTful APIs** for spatial queries and **map-based features**.
- Optimized **PostGIS spatial data** models and query execution plans, improving geospatial data retrieval speeds and **spatial index** performance.
- Integrated **OpenStreetMap data** pipelines, building reliable backend modules to ingest, transform, and serve vector/spatial layers to client applications.
- Implemented core spatial processing algorithms, handling geometry operations, bounding box filters, and location-based services for complex spatial workflows.

Frontend Developer (ReactJS, NextJS) | **MCI (Hamrah Aval)** Aug 2018 – Mar 2020

MCI (Hamrah Aval)

- Engineered the frontend infrastructure for a high-concurrency video streaming platform, reliably delivering live and on-demand content to over **50k+ Daily Active Users (DAU)**.
- Optimized application performance by implementing advanced **code splitting** and **lazy loading** techniques, successfully reducing initial page load times by **45%**.
- Built core modules for a scalable Cloud Storage platform using a **modular feature-based architecture**, implementing complex flows such as Single Sign-On (SSO) and advanced file management capabilities.

SELECTED PROJECTS

Scribe — AI-Powered Git Commit Assistant

Go, TypeScript, Git Hooks, LLM APIs (OpenAI/Claude), VS Code API

GitHub VS Code Marketplace

- **Hybrid Workflow:** Architected a high-performance **Go CLI** featuring native **Git hook** support and a companion **VS Code Extension** for seamless source control integration.
- **Context & Ticket Awareness:** Automatically parses active **Git branch patterns** to dynamically extract and attach relevant issue/ticket IDs to generated commit messages.
- **Performance & Cost Optimization:** Implemented **SHA-256 caching** for identical staged diffs alongside **payload chunking** and summarization to minimize LLM token consumption and costs.

JanusGate - Cloud-Native API Gateway & Reverse Proxy

Go, Docker, Redis, Prometheus, OpenTelemetry, Jaeger, Grafana

GitHub

- Engineered a high-performance, stateless **API Gateway in Go** handling **15k+ QPS** with **sub-2ms latency**, utilizing **atomic.Pointer** for lock-free, **zero-downtime hot reloading**.
- Architected distributed **rate-limiting** using **Redis token-bucket** algorithms and implemented dynamic **load balancing** (**Round-Robin**, **Least Connections**) for optimized traffic distribution.
- Designed resilience patterns including **circuit breakers**, active/passive **health checks**, and **exponential-backoff retries** to isolate upstream microservice failures.
- Integrated end-to-end cloud-native observability by implementing **Prometheus** metrics scraping and **OpenTelemetry** (**OTLP/Jaeger**) distributed tracing.

EDUCATION

K. N. Toosi University of Technology

B.Sc. in GIS Engineering