SYED SHAYAN ABBAS NAQVI

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Github | Linkedin | Portfolio

SUMMARY

Full-stack engineer specializing in geospatial systems — PostGIS, vector tile serving, and multi-format spatial pipelines — with production Angular/RxJS frontends, event-driven backends, and LLM/RAG integrations.

TECHNICAL SKILLS

Languages: TypeScript, Python, JavaScript
Frontend: React, Angular, Next.js, RxJS, Redux
Backend: NestJS, Node.js, Flask, REST APIs, MikroORM, Zod, Pandas, NumPy
Cloud & Infra: GCP (Cloud Run, Pub/Sub), AWS, Azure, Vercel, Docker, Terraform
Databases: PostgreSQL, PostGIS, MySQL, MongoDB, AlloyDB, BigQuery
Geospatial: MapBox, MVT tile serving, Turf.js, PostGIS, KML/GeoJSON/Shapefile, GDAL
AI/LLM: OpenAI API, Anthropic API, RAG Pipelines, MCP
CI/CD & Testing: GitHub Actions, Jenkins, Git, Cypress, Puppeteer, Jest

WORK EXPERIENCE

Conrad Labs (Product: Transect) | Austin, TX — Remote — Feb 2024 – Present

Software Engineer II — Jul 2026 – Present
Software Engineer I — Feb 2024 – Jul 2026

Stack: *Angular, NestJS, MikroORM, Zod, PostGIS, GCP, MapBox, Turf.js, RxJS, New Relic, Rollbar, Cypress, Puppeteer*

- Built an LLM-powered Due Diligence Reader for renewable-energy M&A — a RAG pipeline that auto-classifies permit types (WOTUS, SPCC, wetlands), flags regulatory issues, and returns schema-validated JSON summaries — compressing multi-day analyst reviews into minutes, and laying the AI foundation (reusable LLM SDK abstractions, prompt templates, MCP configs) the team now ships every AI feature on.
- Replaced a three-team manual handoff (Customer → CS → Data Team) with a self-serve custom layer upload system (KML, GeoJSON, Shapefile), cutting layer turnaround from 6 weeks to under 30 minutes.
- Shipped a Landowner Contact Info feature (BatchData API) that surfaces property-owner details in-platform, replacing manual searches through public records and county databases.
- Architected a churn-reduction Metrics Service: user events stream through Pub/Sub into BigQuery (provisioned via Terraform), with materialized views synced to HubSpot — giving customer success real-time engagement signals for proactive outreach.
- Cut infrastructure costs with an internal MVT tile server that serves geospatial layers directly to MapBox, eliminating redundant cloud processing.
- Extracted long-running Pub/Sub consumers from the main API into a standalone Cloud Run service, removing timeout constraints and isolating resource usage per service.
- Co-built Energy Pulse (Solar, Wind, Battery) and Data Center Pulse, which ingest news and social-media data per jurisdiction to surface community sentiment on custom MapBox layers.

InfoArc.ai | Dubai, UAE — Remote — Jan 2023 – Feb 2024

Full-Stack Engineer + Data Engineer

Stack: *Python (Flask), React, MySQL, Azure, GCP, Stripe*

- Sole engineer on InvX, a circular supply-chain platform — took it from MVP to production, building auth, listings, auctions, wishlist, cart, and Stripe payments with full webhook handling for the async payment lifecycle, and maintained staging and production environments end-to-end.
- Built GCP data pipelines for a retail client: automated ingestion on scheduled jobs and delivered executive reporting emails with actionable retail insights.

PERSONAL PROJECTS

Kilo | Free, Local-First Workout + Calorie Tracker (Android)

Stack: React Native (Expo), TypeScript, expo-router, SQLite — github.com/ShayanAbbas1/kilo

- Built and shipped a free, local-first Android fitness app that puts training, body weight, and calories on one timeline — offline-first with all data in on-device SQLite and JSON export/import.
- Implemented full workout logging — routines, rest timer, RPE, plate calculator, last-session ghost values — plus CSV history import from Strong and Hevy, on a ~870-exercise library seeded from a public-domain dataset.
- Built analytics rivaling paid apps: per-exercise progression (est. 1RM, top weight, volume), muscle-group tonnage with an anatomical body heatmap, a PR feed, and a combined body-weight/tonnage/calorie trendline.

RetroPlayer | Retro Spotify Client + Listening History Analyser

Stack: TypeScript, Next.js, React, Spotify Web Playback SDK + Web API, NextAuth —
https://github.com/ShayanAbbas1/retroplayer

- Built a Winamp-skinned Spotify client on the Web Playback SDK with OAuth via NextAuth — browse playlists, albums and songs, click-to-play with the remaining results queued behind it, like/unlike, and drag-to-playlist.
- Turned Spotify's full data export (zip) into the analytics the app itself doesn't offer — a listening heatmap and multi-year trend graphs — parsed entirely in-browser, so listening history never leaves the client.
- Recreated Win98 and Winamp 2.x chrome pixel-faithfully via a Tailwind design-token remap, with virtualized lists keeping large libraries and multi-year exports responsive.

Slate (WIP) | Performant MacOS DB Client Made in Rust

Stack: Rust, GPUI, Tree-sitter, Postgres

- Building an open-source database client in Rust + GPUI as a fast, lightweight alternative to Electron-based database clients. Currently supports PostgreSQL, with support for additional databases planned.
- Supports multiple simultaneous database connections, each mapped to its own workspace, with seamless switching between them.
- Uses Tree-sitter for SQL syntax highlighting and a high-performance grid renderer targeting 120 FPS for large result sets, while keeping a small memory footprint.

OPEN SOURCE CONTRIBUTIONS

Had PRs for bugs merged into the main Angular repository, contributed to Zed's Angular LSP, and created the coolnight theme extension for Zed's official extensions.

EDUCATION

BS Computer Science — FAST NU, Lahore 2018 – 2022