

HASSAN RAZA

Senior Software Engineer | Backend & Distributed Systems

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Professional Summary

Software engineer with 8+ years building backend systems that move real-time data at scale — telemetry pipelines, event-driven services, and the data models and APIs on top of them. Led delivery of the module that onboarded **Saudi Aramco** at Tenderd (YC S18), rebuilt IoT telemetry ingestion on Kafka with **zero event loss**, and turned raw device data into operational metrics that didn't previously exist. Comfortable owning a module end-to-end and working directly with enterprise clients.

Core Technical Skills

Languages:	TypeScript, Node.js, Python, Go, SQL
Backend & APIs:	NestJS, Fastify, Express, REST, GraphQL, Microservices, Event-Driven Architecture
Data & Messaging:	PostgreSQL, MongoDB, Redis, Kafka (CDC pipelines, offset & poison-message handling), RabbitMQ, Elasticsearch
Real-Time & IoT:	MQTT, IoT telemetry ingestion, device-data modeling, real-time alerting (WhatsApp/email)
Cloud & Infra:	AWS, GCP, Docker, Kubernetes, CI/CD
Frontend:	React, Next.js, Redux, TypeScript
Delivery:	Enterprise client delivery, sprint planning & estimation, mentoring, QA coordination

Work Experience

Software Engineer Apr 2024 - Present

Tenderd (YC S18) — fleet-management platform, Dubai, UAE

- Led end-to-end delivery of the Booking module — built from scratch (data model, backend, UI) and shipped in under two months with a 7-engineer team — to onboard **Saudi Aramco**, who manage ~200 pieces of equipment through it.
- Rebuilt telemetry ingestion from a third-party device server (~200+ devices, per-minute pings): migrated the CDC → Kafka pipeline to a new schema with **zero event loss**, and fixed pre-existing Kafka reliability bugs including uncommitted offsets and poison-message handling that stalled consumers.
- Built operator and shift-based timesheets from scratch, deriving operator productivity and utilization from device-to-equipment attachment and raw pings — metrics the business did not previously have. Added engine-on-hours detection (distinguishing engine-on from ignition-on) for more accurate utilization.
- Rebuilt the Safety module (v2): redesigned violation categorization and built the APIs and dashboards; added real-time WhatsApp and email alerting to notify operators the moment a violation occurs.
- Cut a core reporting query from **60s+ to 2-3s**; moved editable, frontend-exposed reports into the backend to close security vulnerabilities. Currently driving migration toward a domain-driven architecture on PostgreSQL.

Tech Stack: TypeScript, Node.js, Python, Kafka, MongoDB, PostgreSQL, Redis, AWS, MQTT, NestJS, React

Software Development Lead (Contract) Oct 2023 - Mar 2024

Clozer — influencer & music-distribution platform, Remote

- Sole backend engineer on a 3-person team — owned all backend architecture in Go (Gin) and drove features end-to-end from design to delivery; mentored a junior developer and directed frontend (React/TypeScript).
- Built a service resolving artists' tracks across Spotify, Apple Music, Deezer, and SoundCloud, reconciling inconsistent metadata across platforms into a single view.
- Built release scheduling/automation, instrumented ~150 custom analytics events, revamped the auth flow (10+ critical bugs resolved), and maintained APIs supporting **50k+ daily requests**.

Tech Stack: Go, Gin, GCP, Firebase, MongoDB, Next.js, React, Docker

Independent Software Consultant (Contract) Apr 2022 - Sep 2023

Clients: Corel Corporation, Cofeapp (UAE), Zippia (US) & others, Remote

- Corel Corporation — worked on Corel Vector: built invoice PDF generation (groundwork for a subscription feature), improved existing features, and resolved 15+ bugs with testing.
- Led full product infrastructure — mobile, web, admin, backend, and CRM integrations — for the Send-me-a-Pro project; delivered contract backend/full-stack work for Cofeapp (UAE) and a US recruiting platform.

Tech Stack: TypeScript, Go, Python, FastAPI, MongoDB, PostgreSQL, React, Next.js

Senior Software Engineer Dec 2020 - Mar 2022

Bykea — transportation, logistics & payments (5M+ users), Karachi, Pakistan

- Migrated internal services from RabbitMQ to Kafka for event sourcing, cutting operational data loss to near zero.

- Built a trip-state event-logging service (Fastify + PostgreSQL) used downstream for fraud detection and analysis; audited Redis usage and cut cache load by nearly **50%**.
- Built an internal CSR support system full-stack (React, Node/Fastify, MongoDB/PostgreSQL/Redis); ran sprints with a **95% on-time delivery rate** and mentored engineers.

Tech Stack: TypeScript, Node.js, Fastify, NestJS, MongoDB, PostgreSQL, Redis, RabbitMQ, Kafka, AWS

Earlier Engineering Roles

2018 - 2020

Expando · Loops Digital · Panacloud — Karachi, Pakistan

- **Expando** (Backend Developer, Jun 2019 - Sep 2020) — built the backend for a ride-sharing app (Node, MongoDB, SSE) and a MERN classroom product with WebRTC; wrote an AWS Lambda to start/stop EC2 on call events to cut cost.
- **Loops Digital** (Software Engineer, Sep - Dec 2020) — built a web annotator tool (Vue + Node); hands-on with NestJS and React Native.
- **Panacloud** (Full Stack Developer, Jan 2018 - Feb 2019) — built web applications; early work with React and NestJS.

Selected Case Studies

- **Delivering an Equipment-Booking Module to Onboard Saudi Aramco** — problem, constraints, architecture, and trade-offs: hassanrazanini.com/work
- **Migrating IoT Telemetry Ingestion with Zero Event Loss** — CDC → Kafka schema cutover on a live pipeline: hassanrazanini.com/work

Education & Community

BS Computer Science

2017 - 2020

University of Karachi, Pakistan

Degree attestation available on request.

Volunteer instructor, Saylani Mass IT Training — taught JavaScript and React to 50+ students.

Key Achievements

- **Enterprise delivery under hard deadlines** — onboarded Saudi Aramco onto a YC startup's platform: a module built from scratch and shipped in under two months with a 7-engineer team.
- **Reliability across two Kafka migrations** — zero event loss on a live CDC → Kafka schema cutover (Tenderd); near-zero operational data loss after moving event sourcing from RabbitMQ to Kafka at 5M+ user scale (Bykea).
- **Performance & delivery discipline** — 60s+ → 2-3s core reporting query, ~50% Redis cache-load reduction, 95% on-time delivery across 10+ sprints, and mentoring at two companies.