

AAWEZ KHAN

Senior Backend Engineer — Real-Time Voice AI, Telephony & Payments Infrastructure

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SUMMARY

Seven years building backend systems where latency is the product. Most recently at Ezra Technologies (US) I owned a real-time voice-ordering stack that sustained **200+ concurrent live media sessions under 1.2s end-to-end** across a five-hop SIP → STT → LLM → POS → payment path, and replaced a managed telephony vendor with a self-hosted Kamailio + FreeSWITCH stack that cut platform cost **43% (\$5–6K/month)**. Led 8 engineers across three production platforms. **1st Runner-Up, All India — LeetCode September Challenge 2021.**

SKILLS

Languages	TypeScript, JavaScript (Node.js), Python
Real-Time	SIP, Kamailio, FreeSWITCH, WebRTC, SIP.js, RTP, Telnyx, Vonage; streaming STT + LLM pipelines (Vapi)
Backend	Express, REST, GraphQL (Apollo Federation), microservices, event-driven, multi-tenancy, system design
Frontend	Angular, React, TypeScript; WebRTC / SIP.js browser clients
Data	MySQL, PostgreSQL, MongoDB, Redis, Elasticsearch, RabbitMQ, BigQuery
Infra	AWS (ECS, ECR, EC2, S3, ELB), GCP, Terraform, Docker, GitHub Actions, ELK, DR & failover design
Payments/POS	Worldpay, Aurus, Stripe, Razorpay; Toast, HungerRush, direct-brand POS
Leadership	Led a team of 8; architecture review, sprint planning, mentoring, incident response

EXPERIENCE

Technical Lead · Ezra Technologies (USA) · Remote

May 2023 – Aug 2026

AI voice-ordering, contact center and POS product across 500+ restaurant locations — Papa John's, Toast, HungerRush.

- **Real-time voice pipeline:** architected and owned a five-hop SIP → STT → LLM → POS → payment path sustaining **200+ concurrent live media sessions at <1.2s end-to-end** (~5,000 calls/day). Migrated the underlying stack twice — Vonage → Vapi → Telnyx.
- **Replaced a managed telephony vendor with self-hosted infrastructure:** proposed and delivered Kamailio (SIP routing) + FreeSWITCH (media) + SIP.js (browser agents) in place of Telnyx call-control and WebRTC — **43% platform cost reduction, \$5–6K/month** — while adding agent queueing, call recording and AI-to-human handoff. Kept IVR and live-agent legs on raw SIP so LLM billing applies only to AI minutes.
- **Multi-tenant POS + payments layer:** built a client-agnostic adapter over Toast, HungerRush and direct-brand POS with Worldpay and Aurus payments, processing **10,000+ orders/day (\$1M+/month GMV)**. Moved per-client behaviour into configuration, cutting merchant onboarding from 3 weeks to 5 days.
- **Cross-cloud disaster recovery:** replaced a hand-run pilot-light runbook and its always-on standby database/cache pair with a Terraform cold-start model covering **8 services in both directions** (5 AWS→GCP, 3 GCP→AWS). Standing cost is one continuously-refreshed DB dump instead of an idle warm replica; declaring a disaster is a single command. Replication authenticates over Workload Identity Federation with no key file on the host — trust scoped to a single instance, not a role shared by three unrelated machines.
- **Sized the standby from real telemetry** rather than copied limits: profiled 24h CPU/memory peaks and caught the largest AI workload at 2GB against ~10.2GB real usage — it would have OOM-looped on first failover.
- **Leadership:** led 8 engineers across backend, integrations and QA — architecture review, sprint planning, and production incident response for the voice and ordering stack.

Senior Software Developer · Unico Connect · Mumbai

May 2022 – May 2023

- Owned backend architecture across 5 enterprise products (healthcare, fintech, retail) serving tens of thousands of users, including AWS CI/CD.
- Consolidated 5+ microservices behind an Apollo GraphQL federated gateway with DataLoader batching — one endpoint for every frontend team, removing N+1 REST fan-out.
- Ran a team of 6: onboarded and mentored fresher hires, owned sprint delivery, gathered requirements directly with clients.

Backend Engineer · Synergerp (PTY) Ltd · Remote, South Africa

Sep 2020 – May 2022

- Built event-driven ERP microservices (RabbitMQ, Redis, MongoDB) with B2B integrations reused across 5+ Sage products (Sage 300, X3, Intacct).
- Proposed, designed and shipped a multi-tenant customer portal — invoice access and online payment via Stripe — that grew to **~1M end-user accounts** across Sage clients.

Software Engineer · Umrage Pvt Ltd · Mumbai

Oct 2019 – Sep 2020

- Built a travel product from zero — Node.js + Angular, MongoDB/Redis, Docker on AWS, Razorpay payments. Led 4 engineers through design and launch.

WRITING — SYSTEM DESIGN

aawezkhan.com/blog — bidirectional cross-cloud DR and keyless federated auth; multi-tenant contact-center design (Kamailio, FreeSWITCH, WebRTC); provider-agnostic voice AI ordering pipelines.

EDUCATION & HONORS

B.E. Computer Engineering · Chhatrapati Shivaji Maharaj Institute of Technology, Panvel

2022

LeetCode September Challenge 2021 — 1st Runner-Up, All India · 30-day DS & algorithms challenge; top 2 nationally.

2021