

Abusalem M

Backend Software Engineer · Technical Lead

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SUMMARY

Backend engineer with nearly four years at Twinleaves (Pallet). First engineering hire, now leading backend delivery for a 6-member team while still spending most of the week writing code. The work is mostly Java/Spring Boot on GCP: a multi-tenant catalog platform, tax and promotion engines, event-driven printing for stores, and shared libraries, spread across 30+ repositories. Comfortable taking a problem from design all the way to production and staying with it after release.

SKILLS

Languages	Java, SQL, JavaScript, TypeScript, Python
Backend	Spring Boot, Spring Security, REST APIs, microservices, JPA/Hibernate, Node.js
Data	PostgreSQL, MySQL, Elasticsearch, BigQuery, Redis
Cloud & Messaging	GCP (Cloud Run, Cloud Build, Pub/Sub, IAM, VPC), Firebase, Kafka, WebSockets, SSE, AWS
DevOps	Docker, Jenkins, GitHub Actions, Kubernetes, Git
Architecture	Multi-tenancy, RBAC, event-driven systems, system design, caching, observability

EXPERIENCE

Software Development Engineer 2

May 2024 - Present

Twinleaves (Pallet)

Bengaluru, India

- Lead backend work for a 6-member cross-functional team, 3 of them backend engineers: break requirements down into per-service tasks, review the code, unblock people when integrations get stuck, and handle releases across 11 repositories.
- Author the design specs and integration guides the team builds against, and personally own the riskier pieces: data models, API contracts, migrations, anything that touches production data.
- Designed the 5-level catalog hierarchy (Account, Brand, Head Office, Organization, Location) that replaced the old hard-coded inheritance with a real governance engine: per-level overrides, selective inheritance, most-specific-wins resolution.
- Engineered the product lifecycle around it. Products get created once and shared down, fork when a child edits them, and can be diffed against the parent, re-synced field by field, or un-forked. Child locations can hide inherited products without touching the parent record at all.
- Wrote the effective-catalog read path that collapses master and forked records into one result per product, using Elasticsearch collapse and sort precedence to pick the right version.
- Added approval workflows, account-global product ID sequencing, and the admin consoles used day to day for testing governance flows.
- Built the tax engine that prices every transaction: tax masters, slab management, and calculation APIs that resolve the right rate per line item at billing time, backed by 185 automated tests across India, Malaysia, UAE, and US tax categories.
- Oversee cart and billing for retail and restaurant flows, chasing down GST, selling-price, and coupon re-application bugs that were producing wrong final bills.
- Directed the team's work on the promotion engine covering 8 offer types: MRP offers, Buy-X-Get-Y, step and combo offers, flat-price offers, bundle discounts, and proportional allocation for loose items.
- Delivered the product, category, brand, recipe, and bundle APIs, plus bulk upload and backfill jobs that report partial successes instead of failing the whole batch.
- Developed product and catalog agents that turn messages, photos, and barcodes into structured product drafts, re-searching product images on the web first and falling back to the uploaded photo.
- Stabilized Server-Sent Events streaming: bounded executors, clean rejection at capacity, cancellation when clients disconnect, and cleanup of tool calls left dangling by interrupted sessions.
- Shipped the event-driven printing pipeline that connects printer agents, POS services, and the gateway over WebSockets: deferred prints, reprint tokens, startup recovery, sound alerts, job metrics.
- Extracted authorization into a shared Spring Boot starter (roles, plans, permissions, tenant and platform access) adopted by most platform services, which cut auth-related bugs roughly 40% and standardized request/response logging.
- Operate services on Cloud Run and Compute Engine; Jenkins and Cloud Build pipelines mean deployments now ship

about 30% faster. Performance work is mostly query and index tuning, Redis caching, and connection-pool adjustments wherever latency shows up.

- Resolve most production incidents: auth failures, calculation errors, Elasticsearch filter bugs, duplicate records, and one stubborn empty-PDF issue that turned out to be an entity-manager lifecycle problem.
- Implemented serviceability checks by pincode, region, radius, and store location, with instant and current-day delivery filters, shipping-charge rules, and free-delivery config that factors in logistics cost.
- Drove the revamp of serviceability, the system that decides whether a store can serve a customer's location at all: WhatsApp-based checks, faster radius queries, and the business-side configuration flows behind it.
- Expanded the cart into restaurant operations: quick-table and aggregated order views, table and order search, out-of-stock visibility, auto-accept and auto-bump, and Kitchen Display System / KOT flows with re-open, reprint, and OMS status sync.
- Rolled out the communications and marketing-audience APIs: segmentation, reporting integration, WebSocket support, and a multi-database setup.
- Introduced document sequence generation, notification workflows, audit filtering, and logo/template support for generated documents; also directed Slack alerts and the periodic sales-inventory reports.

Software Development Engineer 1

Twinleaves (Pallet)

Sep 2022 – May 2024

Bengaluru, India

- Created 6 of the company's core services during the early growth phase (Cart, Catalog, Serviceability, Logistics, Communications, Vendor Management) and contributed to 10+ more, all Java/Spring Boot with PostgreSQL and Elasticsearch.
- Reduced API response times by nearly 40% through endpoint profiling, Redis caching, query and index tuning, and pagination fixes in the slowest endpoints.
- Integrated WhatsApp Business, GS1 Datakart, Firebase, and Vertex AI, and built offline inventory sync for POS terminals in stores with patchy connectivity.
- Built the Vendor Management System integrations: vendor config and display data, logo uploads, Sandbox support, and its CI/CD; also handled inventory batches and positive-inventory fixes.
- Set up much of the early GCP infrastructure (VPC, Compute Engine, Cloud Run, IAM, load balancing), trimming about 15% off cloud costs.

PROJECTS

JobBeeper — Java/Python, PostgreSQL, Docker, Nginx, Telegram, Web Push, Email

jobbeeper.com

- Job-alert platform designed and operated solo. Polls LinkedIn, Naukri, Workday, Greenhouse, Lever, Ashby, and other career systems across 2,000+ tracked companies, matches postings against each user's preferences, and sends alerts over Telegram, browser push, and email.
- Self-hosted on an Oracle Cloud ARM VM: Docker Compose, PostgreSQL, Nginx with TLS, GitHub Actions for releases.
- Grew over time into a small product: user accounts, subscriptions and trials, referrals, community-submitted openings with moderation, and an admin panel for the schedulers.

EDUCATION

Certification in Java Backend Development

Masai School, Bengaluru

Dec 2021 – Aug 2022

Diploma in Computer Science

Bharati Vidyapeeth, Maharashtra

Aug 2018 – Oct 2021

ACHIEVEMENTS

- Employee of the Quarter at Twinleaves/Pallet (2025). First engineering hire; grew with the platform from writing the early services to leading the team that runs them.
- 700+ data structures and algorithms problems solved across platforms; regular LeetCode contest participant.