

Abusalem M

Backend Software Engineer

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SUMMARY

Backend Software Engineer with 4+ years of experience owning high-scale systems end to end, from architecture and infrastructure to production. Joined Twinleaves (Pallet) as the first engineering hire, independently built 6 core services, and now lead backend development across 11 microservices. Strong in Java, Spring Boot, PostgreSQL, Elasticsearch, GCP, AWS, distributed systems, and AI, with a focus on performance, reliability, and solving complex business problems.

SKILLS

Languages	Java, SQL, JavaScript, TypeScript, Python
Backend	Spring Boot, Spring Security, REST APIs, Microservices, JPA/Hibernate, Node.js
Data	PostgreSQL, PostGIS, MySQL, Elasticsearch, Redis, BigQuery
Cloud & Messaging	GCP (Cloud Run, Cloud Build, Pub/Sub, IAM, VPC), AWS, Firebase, WebSockets, SSE
DevOps	Docker, Kubernetes, Jenkins, GitHub Actions, Git
Architecture	Multi-tenancy, RBAC, Event-driven Systems, Caching, Observability

EXPERIENCE

Software Development Engineer 2

Twinleaves (Pallet)

May 2024 - Present

Bengaluru, India

Catalog, Tax & Content

- ▶ Engineered a high-throughput catalog search and hierarchy engine backed by PostgreSQL and Elasticsearch for 1M+ products, handling 45K+ queries/min with p99 search latency under 18ms.
- ▶ Built custom Elasticsearch query pipelines for multi-tenant product discovery, dynamic filtering, aggregations, and pricing, using cache-friendly filter execution and query optimization to sustain low-latency search at scale.
- ▶ Built a catalog sync engine that keeps product data the same across hundreds of stores, automatically pushes master changes, and still allows each store to keep its own pricing and inventory.
- ▶ Built a backend-driven app content system to manage pages, layouts, and campaigns, with scheduled festival and promotion updates without requiring new app releases.
- ▶ Built a configurable Tax Master that lets businesses manage tax types, jurisdiction hierarchies, rules, rates, formulas, slabs, effective dates, and exemptions without changing application code.
- ▶ Built a high-precision tax calculation engine processing 100K+ tax calculations/day with p99 latency under 20ms, using DAG-based dependency execution, location/date-aware rule selection, cascading taxes, and rounding reconciliation to keep complex invoice totals accurate.

Cart & Promotions

- ▶ Built a shared cart service used across 1000+ stores for POS, Restaurant, B2C, and B2B flows, handling pricing, promotions, GST calculation, and order finalization.
- ▶ Reduced add-to-cart latency from 2s to 112ms, including catalog and inventory lookups and offer evaluation, while supporting 5–10k+ queries/sec.
- ▶ Built the promotion engine in cart for Buy-X-Get-Y, step offers, combos, and category/brand rules, applying the best discount and recalculating prices on every cart change.

AI Agents

- ▶ Built an AI catalog agent to manage products, categories, brands, images, SEO, and other catalog data through chat with inline actions, reducing product onboarding time by 70-80% from minutes to seconds.
- ▶ Built an AI website builder agent for creating and refining website content, structure, visuals, and SEO through chat, reducing store setup time by 80-90% from hours to minutes.
- ▶ Built an AI knowledge base for Pallet that organizes documents, keeps information consistent, and improves AI retrieval accuracy while reducing duplicate content and processing cost.

Common Dependencies

- ▶ Built a shared Spring Boot platform library for multi-tenant authorization, RBAC, rate limiting, tenant validation, and request handling, removing duplicated security logic and enforcing consistent access control across microservices.
- ▶ Built a shared AI commons library that validates token quota, enforces tenant limits via annotations, tracks actual usage,

and publishes billing events asynchronously to Pub/Sub without adding request latency.

- ▶ Designed a lock-free JDBC connection pool using CAS and non-blocking queues, achieving sub-millisecond borrow latency and reducing AI token checks to 5-11ms under concurrent load.

Job Management & Cloud Printer Agent

- ▶ Built a centralized Job System used across 400+ stores to create, assign, track, and manage job status end to end, giving teams real-time visibility into pending, in-progress, completed, and failed work.
- ▶ Built a Cloud Printer Agent processing 50K–80K print jobs/day across 400+ stores, using WebSocket for real-time delivery, polling as fallback, and Pub/Sub + Kafka for reliable event processing.

Serviceability, Vendor & Communication

- ▶ Built a configurable serviceability service used across 1,000+ stores for instant, same-day, and slotted delivery, using PostGIS for location and radius checks with slot lookup and delivery-time calculation under 45ms.
- ▶ Built the Vendor service end to end, covering vendor onboarding, configuration, product mappings, external integrations, and inventory sync with validation and async processing.
- ▶ Built a multi-tenant Communication service for tenant-specific templates, messaging configurations, and channel settings across shared platform infrastructure.

Cloud & Infrastructure

- ▶ Managed GCP application infrastructure across 110+ Cloud Run services, 10+ Compute Engine instances, 10+ Cloud SQL instances, and 170+ Artifact Registry repositories.
- ▶ Managed deployment and messaging infrastructure with 140+ Cloud Build triggers, 70+ Pub/Sub topics, and 45+ subscriptions supporting microservice releases and event-driven communication.
- ▶ Managed production GCP networking end to end, including VPCs, subnets, firewall rules, Cloud NAT, routers, gateways, load balancers, DNS, and private service connectivity across microservices.

Technical Leadership

- ▶ Leading 3 backend engineers across 11 microservices, breaking product requirements into service-level tasks, assigning ownership, reviewing code, resolving cross-service dependencies, and coordinating releases.
- ▶ Led a 14-member backend, frontend, and QA team for Pallet Restaurant across RMS, POS, B2C, and B2B, driving feature delivery and integrations with Zomato, Swiggy, and other platforms.

Software Development Engineer 1

Sep 2022 – May 2024

Twinleaves (Pallet)

Bengaluru, India

- ▶ Built 6 core services during the company's early growth phase, including Cart, Catalog, Serviceability, Logistics, Communications, and Vendor Management, and contributed to 10+ other services across the platform.
- ▶ Integrated WhatsApp Business, GS1 Datakart, Firebase, and Vertex AI, and built offline POS inventory sync to keep store operations running during unstable or lost connectivity.
- ▶ Set up and managed the company's GCP infrastructure from the ground up, covering Cloud Run, Cloud SQL, VPC networking, subnets, firewalls, NAT, routers, load balancers, storage, Docker, and Cloud Build CI/CD.

PERSONAL PROJECT

JobBeeper Python, PostgreSQL, Redis, Docker, Nginx, Telegram, Web Push, Email

[Jobbeeper.com](https://jobbeeper.com)

- ▶ Built JobBeeper end to end, bringing jobs from 25+ hiring platforms into one place and sending personalized alerts through Telegram, email, web push, and Android.
- ▶ Built the job matching and alert system to filter jobs by user preferences, avoid duplicates, retry failed deliveries, and send new opportunities quickly and reliably.
- ▶ Set up and managed the production platform on Oracle Cloud with Docker, PostgreSQL, Nginx, CI/CD, and background workers, supporting 2K+ active users and millions of job-delivery records.

EDUCATION

Java Backend Development

Masai School, Bengaluru

Dec 2021 – Aug 2022

Diploma in Computer Science

Bharati Vidyapeeth, Maharashtra

Aug 2018 – Oct 2021

RECOGNITION

- ▶ Earned Employee of the Quarter every quarter since December 2022 and joined the company as its first engineering employee.
- ▶ Solved 700+ data structures and algorithms problems across LeetCode and other competitive coding platforms.