

Ammar Hamdi Hammouch

DevOps Engineer

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PROFESSIONAL SUMMARY

Shipped event-driven serverless architecture on GCP and built async job infrastructure across several production systems. Waseel runs on Cloud Run, Cloud Functions, and Pub/Sub with a fully event-driven order lifecycle and per-shipment ordering keys. Set up CI/CD with Cypress gates that block merges on failing tests. Designed a two-worker-class execution model — light I/O workers and forked, isolated heavy workers — so a runaway job can't take down the rest of the pipeline.

EDUCATION

Bachelor in Computer Science, Jazan University
GPA: 4.86 / 5 — First Class Honours

2021 – 2025

PROFESSIONAL EXPERIENCE

Software Engineer, Entropy

09/2025 – Present

LLM evaluation platform benchmarking Arabic-language model performance.

- Built a microservices ingestion pipeline for LLM training datasets — upload verification, format validation (CSV, XML, JSON), metadata quality checks, and Label Studio annotation integration — deployed and orchestrated across BullMQ + Redis for async job processing and internal webhooks for service-to-service communication.
- Connected an internal RAG chatbot to Microsoft Teams and Slack via FastAPI, handling connection management, reconnection on drop, and query routing to an indexed internal knowledge base.
- Contributing to the deployment and infrastructure of the Arabic-language LLM benchmarking platform.

Integration Specialist, Thmanyah

01/2025 – 05/2025

Media and podcast company. Internal systems across HR, TA, and Marketing.

- Deployed an internal HR platform with BullMQ + Redis job infrastructure for async PDF generation via Puppeteer, managing queue throughput and failure recovery for payroll and evaluation report workloads.
- Designed a multi-source aggregation engine pulling from Tally, Google Forms, Airtable, and Excel into an internal CRM, cutting manual reporting turnaround by ~60%. The engine uses configurable flows similar to n8n with auto-distributed outputs.

React Native Developer, Motmaina Medical Center

04/2024 – 12/2024

Telehealth consulting platform for mental health.

- Built the React Native app end to end — state architecture managing health session state, patient–doctor handoffs, and booking flows across the full care cycle.
- Integrated AWS S3 and Lambda for secure media upload and processing: S3 pre-signed upload URLs, Lambda triggers for transcoding, and real-time status updates to the client.

Technology Integration Intern, Reachware

08/2023 – 04/2024

iPaaS platform serving SMB and enterprise clients across the Middle East.

- Worked on ZATCA e-Invoice Phase 2 (FATOORA) compliance integration: XML schema validation, cryptographic invoice signing, and real-time clearance against the ZATCA API.
- Built data integration pipelines between Snowflake and ServeMe for financial reporting and analytics.
- Contributed to Oracle NetSuite and Oracle Fusion ERP integration architecture, focused on finance module sync between the two systems.

Enterprise Application Developer, COMT

08/2022 – 08/2023

F&B technology.

- Set up CI/CD pipeline with Cypress end-to-end QA gates — failing tests block PR merges, enforcing quality at the integration boundary before any code reaches production.
- Architected a full POS platform from scratch, comparable to Foodics and Rewaa: inventory, product catalog, and categories built into a transaction cycle that runs from entry through order, payment, and receipt in under 30 seconds.
- Built offline-first architecture with real-time sync — the system stays operational through network interruptions and reconciles when the connection returns.

PROJECTS

Flow Studio 🧩, Isolated Worker-Class Architecture

Webhook-driven aggregation and document engine with a deliberate two-worker-class design. Light I/O workers (email delivery, CRM routing, webhook dispatch) run on a standard BullMQ queue with concurrency scaled to throughput. Heavy workers (React-PDF document generation) run on a separate forked queue with concurrency set to 1 — each PDF render gets its own process, so a runaway render that chews memory can't take down email delivery or webhook routing. The advance protocol is a Postgres 'FOR UPDATE' transaction every worker runs, which means there's no central orchestrator to be a single point of failure. Crash recovery is the normal code path: if a worker dies mid-step, the row stays locked and the next worker picks it up.

Mozn Platform 🧩, Multi-Service Infrastructure with Schema-Contract CI

End-to-end LLM-Ops data platform running across multiple services — Balsam (Airflow batch evaluation), Mizan (Kafka + Faust streaming), and Basira (dbt + DuckDB warehouse). Services are composed with Docker Compose for local development and testing. Kafka topics carry evaluation events between services, with schema contracts enforced in CI: a schema evolution that breaks a downstream consumer fails at the PR stage instead of silently corrupting leaderboards or dashboards. The CI pipeline validates contracts, runs dbt tests, and checks that Pydantic validation schemas match the current topic schemas before merge.

Moyassier *🔗 , Single-Binary In-Region Deployment*

Headless court-transcription bot built on Restate durable execution. Deployed as a single binary in-region under PDPL data residency requirements — no separate orchestrator service, no external scheduler, no cross-region state store. This was an explicit decision: Temporal would have required running the Temporal server, a database, and workers as separate services; Restate collapses orchestration, state, and execution into one process. For a system handling dozens of mostly-idle concurrent court sessions (each suspending between steps for minutes at a time), the single-binary footprint reduces operational surface area and keeps session data within the region boundary.

IterateForge *🔗 , Durable Workflow Engine*

Durable workflow engine in TypeScript that runs inside a Node process on Postgres with no external orchestrator. Journals every step result and suspension point so a workflow killed mid-execution resumes from its last completed step across crashes and redeploys. Memoized step primitives, durable sleeps, external signals, and flow versioning that catches replay-incompatible edits at registration.

SKILLS

Containerization and CI/CD

Docker, GitHub Actions and CI/CD, Cypress

Cloud — AWS

S3, Lambda

Infrastructure

Serverless architecture, event-driven systems, worker isolation, dead-letter topics

Databases

PostgreSQL, Firebase Realtime DB, Snowflake

Cloud — GCP

Cloud Run, Cloud Functions, Pub/Sub, Firebase

Queuing and Streaming

Redis, BullMQ, Kafka

Languages

TypeScript, Python, JavaScript, SQL

CERTIFICATIONS

OCI Certified Architect Associate — Issuer: Oracle | Date:
November 2025, **AWS Cloud Practitioner CLF-C02** — Issuer: AWS,
OCI Certified AI Foundations Associate — Issuer: Oracle | Date:
October 2025

LANGUAGES

Arabic — Native • **English** — Professional