

Osama *Hassanein*

SENIOR SOFTWARE ENGINEER · TECH LEAD

PROFILE

ROLE Senior SWE & Tech Lead

FOCUS ERP · AI · Integrations

YEARS 3+ in production

STACK .NET · Python · Next.js

AUTH End-to-end ownership

STACK

Languages & Runtime

C#, Python, TypeScript, JavaScript, SQL, HTML/CSS

Frameworks

.NET 6/8, ASP.NET Core, Entity Framework, Dapper, ADO.NET, Next.js, React, Tailwind

Architecture

Domain-Driven Design, Microservices, Event-Driven (Kafka, RabbitMQ), REST, Layered, Clean Architecture

Data

SQL Server, PostgreSQL, MongoDB, Redis

AI / LLM

OpenAI · Claude · GPT integration, RAG, OCR pipelines, schema-aware NL→SQL agents, Veo 3, Nano Banana

DevOps & Cloud

Docker, Kubernetes, Nginx, IIS, GitHub Actions, AWS, GCP, Vercel, Linux (Ubuntu) provisioning, SSL/Certbot

Testing & Tools

xUnit, NUnit · Git, Postman, Jira, Cursor, Claude Code

LANGUAGES

English FLUENT

Arabic NATIVE

SUMMARY

Senior software engineer with 3+ years shipping mission-critical systems *end-to-end* — from architecture and database design through backend, frontend, and deployment. Currently delivering multi-system work at ESAP across ERP, AI (LLM, OCR, predictive), and government integrations. Comfortable owning a project alone or leading distributed teams. Known for taking ambiguous requirements through to production on tight timelines.

EXPERIENCE

Senior Backend Engineer & Tech Lead @ ESAP

05/2024 – PRESENT RIYADH, KSA HYBRID

- Carry broad scope across the multi-tenant ERP — Finance, HR, Procurement, Inventory and Project breakdown — taking new requirements from spec → DB design → API → UI → deploy.
- **AI Knowledge Base agent.** Tech-led an LLM agent that answers from the database directly (no API layer). Authored 200K+ characters of schema documentation and routing rules across 200+ tables and 3,500+ columns.
- **AI ExpenseFlow OCR.** Tech-led an invoice-photo → structured-fields pipeline (number, date, VAT, items, seller tax info) that drafts expenses for one-click review.
- **AI Predictive operations system (current).** Leading work to detect and prevent operational issues before they occur, using historical signals.
- **Foodics + Cafe Inventory integration.** Architected real-time stock deduction tying foodics POS orders to a recipe-graph that flattens nested sub-recipes to raw materials. Owned partial-shipment purchase-proof handling, expiry alerts, and the deduction/return flow. Shipped solo in ~4 weeks.
- **Multifilter system.** Designed a column-aware filter engine combining EF Core with parameterized raw SQL — dependent multi-select, range filters, and branded Excel export with computed totals. Replaced bespoke report screens across the platform.
- **Muqem (Saudi government) integration.** Stood up a KSA-resident server (Ubuntu / Nginx / .NET / SSL) and built the Iqama, exit-visa and dependent-visa flows; later migrated to Windows for team parity.
- **Cafe AI rebuild.** Led the Python rewrite of the Cafe stack and managed the dev team during the transition.
- **Marketing campaign.** On-camera lead in the company's hybrid live-action + Veo 3 / Nano Banana AI marketing video for esap.ai. Owned the rescue of the company's Wix site (Arabic localization, missing pages) after an external contract fell short.
- Cross-timezone leadership of a distributed dev team, then transitioned to onsite Riyadh team.

EDUCATION

Beni-Suef University

2018 – 2022

B.Sc. Information Technology

Route Academy

DIPLOMA · 290 HOURS

Backend Development (150h) · Software Engineering (140h)

YAT Education

DIPLOMA · 148 HOURS

Full-Stack Development (120h) · Soft Skills (28h)

WHAT I'M KNOWN FOR

End-to-end ownership. Spec → DB → API → UI → deploy.

Untangling ambiguity. Confused requirements turn into shipped systems.

AI from the inside. I've built, led, and starred in AI products.

Cross-stack reach. Backend-heavy, but I ship the front end and the infra too.

Tight-deadline delivery. 3-day modules and 4-week complex builds.

EXPERIENCE (CONT.)

Backend Engineer @ Empowering Energy

06/2023 – 05/2024 RYADH, KSA HYBRID

- **REFACTOR** Modernized a .NET Framework MVC legacy ERP to .NET 6 — refactored APIs across the system, cutting response times ~60% and improving auth/security posture ~30–40%. Delivered in ~6 weeks.
- **Tasks & Coins module.** Assignment, deadlines, ratings, coin → cash conversion. Shipped on a 3-day deadline.
- **Supplier Portal.** Architected and led: bidirectional supplier/client flow, quotation bidding, vendor ranking by price, order history and quality, categorized notifications, integrated with the existing PO/payment system.
- **HR modules** built under Saudi labor law — leave types, document control with expiry alerts, end-of-service settlement (loans, deductions, custody, overtime, vacations).
- **Quotations / E-Invoicing / Project Breakdown.** Full client lifecycle — quote → PO → labor & materials → daily expense (ZATCA-compliant) → e-invoice with VAT offset.

.NET Intern @ Route Academy

12/2022 – 06/2023 CAIRO, EGYPT REMOTE

- Six-month intensive — shipped two capstone projects: an admin dashboard (RBAC, user/department management, MVC) and a clothing/footwear e-commerce API with payment-gateway integration. Top scores across both.

FEATURED PROJECTS

Knowledge Base AI

Schema-aware natural-language → SQL agent over a 200+ table production database.

ExpenseFlow OCR

Invoice photo → structured fields → reviewable expense draft.

Foodics + Cafe Inventory

Recipe-graph flattening with real-time POS-driven deduction.

Multifilter Engine

Column-aware EF + raw-SQL filter with branded Excel export.

Muqem Integration

KSA-resident infrastructure + Iqama / visa workflows.

Tasks & Coins

Gamified work-and-earn module shipped on a 3-day deadline.