

Mahdi AlKhalaf

Software Engineer

Business Automation · Full Stack Applications · AI Enablement · Platform Engineering

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PROFESSIONAL PROFILE

Hands-on software engineer with experience building business applications, automating operational workflows, and operating cloud platforms. Combines Kotlin/Java and React/TypeScript development with Kubernetes, GitOps, and production support. Delivered enterprise SAP application changes, implemented Zoho CRM with user training, and built reporting automation in logistics. Uses supervised AI coding agents to support implementation, testing, and documentation, with responsibility for architecture, review, and delivery.

TECHNICAL SKILLS

- **Application engineering:** Kotlin, Java, Quarkus, TypeScript, React, Next.js, SAPUI5, ABAP; full stack applications, system integration, SQL, MongoDB, PostgreSQL
- **Automation and AI:** Excel VBA, Bash, operational reporting, workflow automation; generative AI, RAG and agent frameworks including LangChain/LangGraph; supervised AI-assisted development
- **Platform and delivery:** Linux, Docker, Kubernetes, Argo CD, GitOps, OpenTofu/Terraform, Nomad, CI/CD, Git, Prometheus, Grafana; identity integration, monitoring, troubleshooting, technical documentation

PROFESSIONAL EXPERIENCE

Independent Digital Transformation Consultant and Founder

Super Context / Independent Practice · Saudi Arabia · May 2025-Present

- Translate business needs into application designs, scoped prototypes, implementation plans, and deployment and handover procedures across business systems, workflow automation, and web applications.
- Built and operate a reusable Kubernetes application platform using OpenTofu, Talos Linux, and Argo CD, separating business workloads from shared engineering and management services.
- Implemented a software delivery pipeline connecting Forgejo, Woodpecker CI, Harbor, and Argo CD, with image scanning, signed artifacts, staging verification, and controlled production promotion.
- Integrated identity, databases, messaging, storage, and observability services to support application deployment and operation; developed guarded node-maintenance and recovery procedures.
- Delivered a paid bilingual Next.js website through personal freelance practice, including Cloudflare Workers deployment, iterative updates, and transfer of source to a client-controlled repository.

Data Analyst with Digital Transformation and IT Responsibilities

Naizak · Saudi Arabia · 2024-2025

- Managed a Zoho CRM implementation and trained internal users, connecting business-process and data requirements with system configuration and adoption.
- Worked across reporting, business-system implementation, and stakeholder support; explored generative AI, retrieval, agents, and local/hosted language models for organizational workflows.

PROFESSIONAL EXPERIENCE CONTINUED

Business Technology Developer in Production Support

Esnad AlRiyad Co. · Riyadh Bank assignment · Riyadh · May 2023-May 2024

- Monitored business-critical banking systems and overnight processing, investigated failures, and responded to incidents and user issues to support service continuity.

DevOps Engineer and Full Stack Web Developer

Independent / Freelance · Saudi Arabia · September 2022-May 2023

- Designed and built a training-management platform over approximately eight months, covering application workflows, identity, data, infrastructure, and deployment.
- Implemented Kotlin/Quarkus backend and React/TypeScript frontend components using MongoDB, Ory Kratos, CockroachDB, and a self-managed Nomad environment.

SAP Application Developer

Wipro · Dhahran · September 2021-September 2022

- Built and customized enterprise SAP applications using SAPUI5 and ABAP, translating requirements into application changes within an enterprise delivery environment.

Import Tracing Agent and Screening Expert

DHL Express · Al Khobar · December 2017-September 2021

- Earned additional software-development and data-analysis responsibilities through self-initiated improvements to operational workflows.
- Automated recurring reporting and data extraction with Excel VBA and Kotlin, replacing manual steps in operational processes.
- Developed a Kotlin B2B/B2C shipment classifier and a key-account matching tool that handled spelling variation in shipment data.
- Built browser and system automation, status-update tools, an employee-email service, and a full stack prototype for employee discount requests.

Independent Android Developer and Volunteer Java Instructor

Independent · 2017

- Java, Kotlin, Android, Firebase, and community Java instruction.

Electrical Engineer in Quality Control

Kentz · 2015-2016

SELECTED PLATFORM ENGINEERING WORK

- Built separate production and staging application environments with isolated databases, identities, secrets, and deployment configuration; implemented health checks and controlled release procedures.
- Implemented observability using Prometheus, Grafana, Loki, and Tempo, alongside identity, source control, image-registry, and CI services.
- Developed workload-aware maintenance procedures for stateful services, using health gates, resumable checkpoints, and recovery checks to manage node replacement and service changes.

EDUCATION AND PROFESSIONAL DEVELOPMENT

- **B.S. Electrical Engineering** · King Fahd University of Petroleum and Minerals · 2015
- **Certified Kubernetes Application Developer (CKAD)** · Earned 2019
- **Udacity Nanodegrees** · Cloud DevOps Engineer; Full Stack Web Developer; Front End Web Developer

LANGUAGES

Arabic: Native · **English:** Professional working proficiency