AHMED MOHAMMED JALAL RAMADAN

Lead Software Engineer · Technical Lead

8+ Years of Software & Technology Experience · **Open to full-time opportunities**

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PROFESSIONAL SUMMARY

Currently leading the architecture and full-stack engineering (Next.js) of MEIA Global Platform, a multi-tenant B2B platform for pharmacy organizations, for a Sweden-based organization. My strongest work is where the business rules are hard — permissions, approvals, time-bounded responsibilities, stateful workflows — and I build those as code rather than convention: authority computed from assignments, boundaries enforced by automated checks, operations that can be retried and recovered. Machine learning is a supporting strength.

CORE SKILLS

Architecture & Design: layered architecture · multi-tenant design · domain modelling · system decomposition
Full-Stack & Web: Next.js · operational web platforms · responsive multilingual UX (English, Swedish, Arabic RTL)
Mobile & Desktop: Flutter · Dart · C# · WinForms · .NET Framework
Data & Databases: SQL Server · database design · reporting and analytics · data collection · dataset engineering
Applied AI / ML: Python · TF-IDF · XGBoost · LSTM · MediaPipe · computer vision · reproducible evaluation
Secure & Reliable: access control · input validation · HTTPS · SQL injection / XSS mitigation · retry-safe operations
Technical Leadership: technical direction · architecture decisions · implementation review · developer collaboration
IT & Networking: firewalls · VLAN segmentation · VPN · Wireshark · Nmap · end-user systems support

PROFESSIONAL EXPERIENCE

Lead Software Engineer · Technical Lead — 2026 – Present

Sweden-based organization · Remote · Digital Systems Modernization · MEIA Global Platform

- Own the platform's architecture and its Next.js implementation, from the domain model through the data layer to the interface.
- Model tenant isolation across customer organizations, pharmacies and people, with authority derived from active, time-bounded assignments and scoped responsibilities — never from a job title.
- Engineer Team Leader → Manager approvals (a pending request grants nothing), assignment revocation with preserved history, and readiness computed on every read against 14 requirements, each gap linked to its fix.
- Implement subscriptions, capacity limits and module entitlements as explicit business rules, with a responsive, bilingual EN/SV interface.
- Own technical decisions for reliability and extensibility: layered architecture guarded by automated boundary checks, retry-safe and transactional operations, concurrency handling and recovery paths.

Product Software Engineer — Mawed — 2025

Independent Product Development

- Built Mawed in Flutter and Dart for Android, iOS, web and desktop: one appointment product with a Doctor side and a Patient side, and owned the UX of both.
- Designed private clinic-code discovery, weekly Doctor schedules, available slots and booking, plus the decision lifecycle: accept/decline, pending, accepted and declined patient states, and a pending-doctor gate.

Freelance Software Engineer — 2024

Independent · Remote · Parallel with final Master's stage

- Ran independent engagements from requirements through build to handover: application and interface development, database work and troubleshooting.

Academic Software Developer & AI Researcher — Sep 2022 – Dec 2023

Üsküdar University · Türkiye · Research-based · Parallel with Master's

- Researched applied AI for software quality: Python error detection and classification, and the machine-learning experiments behind it.
- Built the hand gesture recognition models and computer-vision pipeline, including dataset construction and checks on result reliability.

Software Engineer — Web Platforms & Secure Systems
Jan 2021 – Jun 2023

Ministry of Education · Egypt · Contract

- Engineered operational education web systems: examination processes, student and data workflows, data collection, electronic surveys, reporting and analytics.
- Implemented permissions, validation and access control, with HTTPS, safe input handling and SQL injection / XSS mitigation as ordinary engineering, not a late review.

IT & Technical Support Specialist
Jan 2020 – Dec 2020

Food Industry Company · Badr City, Egypt · Full-time

- Kept IT operations, networks and end-user systems running: biometric attendance, surveillance, automation and staff training.
- Supported firewall, VLAN segmentation and VPN administration, and monitored traffic with Wireshark and Nmap.

Freelance Software Developer & IT Services
2018 – 2019

Independent · Egypt

- Built desktop applications for independent clients, and handled the databases, troubleshooting and end-user systems that came with them.

SELECTED PROJECTS

MEIA Global Platform · Next.js · Multi-tenant SaaS · Scoped authority · EN/SV — 2026

- A Manager can remove a proposed responsibility but never add one, so an approval can only narrow a request; ports, adapters and a validating composition root keep business rules out of UI and persistence code.

DentalClinic · C# · WinForms · .NET Framework · SQL Server — Real client delivery · 2021

- Built a desktop dental-clinic management system covering patient management, patient files, medical records, clinic workflows and treatment planning.
- Designed a selectable 32-tooth chart with explicit treatment-to-region mappings (Filling → middle, Endo → root, Crown & Bridge → crown, Exodontia → whole tooth) on a PL / BL / DAL layered design.

AI Code Testing · Python · TF-IDF · XGBoost — Applied ML

- Assembled a traceable corpus of 3,502 labelled Python snippets in 7 classes from public repositories, the Stack Overflow API and 31 defect templates, with de-duplication, filtering and balancing (class ratio from about 4.7:1 to 1.43:1).
- Trained a TF-IDF + XGBoost classifier on an 80/20 split: 81.6% accuracy and 0.820 macro F1 on 701 held-out samples, confirmed by re-running evaluation with one consistent label encoder; programmatic-labelling limits documented.

- **Mawed v2** — Flutter · Dart: one codebase behind both sides of the clinic, joined by a single appointment record.
- **Hand Gesture Recognition** — MediaPipe · LSTM: 6 classes, 180 sequences of 30 frames × 126 hand-landmark features; the recorded 9-sequence holdout was classified 9/9 correctly.
- **English Learning App** — Web Speech API · Arabic RTL: vocabulary, pronunciation, listening and letter-ordering practice for Arabic speakers, in the browser and usable without speech recognition.

EDUCATION

Doctoral Studies in Computer Engineering
Present

Karabük University · Türkiye · Pursued alongside active software-engineering and technical-lead work

Master's Degree · Software Engineering
2022 – 2024

Üsküdar University · Türkiye

Thesis: *Enhancing Code Testing through Artificial Intelligence Techniques: An Applied and Analytical Study.* YÖK National Thesis Center · Thesis No. 938448

Bachelor's Degree · Computer Science and Information Technology
2016 – 2020

Sinai University · Egypt · GPA 3.51 / 4.00 · Ranked 3rd in cohort

RESEARCH & PUBLICATION

- First author, "The Role of Artificial Intelligence and Machine Learning in Software Testing," arXiv, 2024 · arXiv:2409.02693 · Ahmed Ramadan, Husam Yasin, Burhan Pektas
- Directions: Applied AI for Software Engineering · Software Quality & Intelligent Code Analysis · Computer Vision & Human–Computer Interaction · Reliable & Secure Software Systems