

MOHAMED GALAL

Software Solution Architect | PMP® · TOGAF® · PSM®

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PROFESSIONAL SUMMARY

Software Solution Architect with 20+ years of experience designing and delivering enterprise-grade systems across diverse technologies and industries. Specialized in scalable, cloud-ready architectures, microservices, system integration, data-driven platforms, and cross-platform mobile applications, with strong experience in highly regulated domains such as healthcare and government. TOGAF-, PMP-, and PSM I-certified, bridging business strategy and technical execution, and leading cross-functional teams from requirements through to secure, maintainable, high-performing solutions.

CORE COMPETENCIES

Architecture & Design Solution & enterprise architecture, microservices, modular monolith, event-driven architecture, Domain-Driven Design, Clean / Hexagonal Architecture, CQRS, API-first design, SOLID, GoF & enterprise integration patterns	Architecture Governance TOGAF ADM, capability mapping, current / target-state & transition roadmaps, Architecture Decision Records, design reviews, NFRs & quality attributes, build-vs-buy, technical debt management, C4 model / UML
Integration & Messaging API gateway (Ocelot), RabbitMQ, pub/sub & async messaging, REST, SOAP, OpenAPI / Swagger, webhooks, ETL & data sync, government & payment integrations, Oracle ERP, ICH E2B(R3), MedDRA	Security & Compliance Secure-by-design, Keycloak SSO, OAuth 2.0 / OpenID Connect, JWT, ASP.NET Core Identity & Data Protection, OWASP Top 10, CSP, rate limiting, XSS sanitization, security remediation, regulatory compliance
Cloud, DevOps & Infrastructure Microsoft Azure, IIS, Nginx, Linux, Docker, CI/CD (Jenkins), Git, environment & release management, cloud-native and scalability design, performance & capacity planning	Observability & Reliability OpenTelemetry, Serilog structured logging, .NET Aspire Dashboard, health checks, monitoring & alerting, distributed tracing, background jobs (TickerQ, Worker Services), resilience patterns
Backend & Data C#, .NET 10 / ASP.NET Core (MVC, Web API), MediatR, AutoMapper, EF Core, Python (Flask), SQL Server (partitioning, columnstore, SMO), Oracle, PostgreSQL, data modeling, caching, TDD (MSTest, NUnit)	Frontend & Mobile React, AngularJS, JavaScript (ES6), HTML5/CSS3, Bootstrap, jQuery/AJAX, bilingual RTL/LTR UI, Quill, DOMPurify; Flutter (Dart) with 14 apps on Google Play, React Native, Android, iOS (SwiftUI), Firebase, Google Maps
AI, Workflow & Analytics LLM integration (Microsoft.Extensions.AI, Ollama), workflow engines (Elsa Workflows), web analytics (GA4, Matomo), data warehousing (SQL Server Analysis Services), GIS & LiDAR data	Leadership & Delivery Technical leadership, Agile / Scrum, PMP project management, requirements engineering, estimation, risk management, vendor evaluation, stakeholder management, code reviews, mentoring

PROFESSIONAL EXPERIENCE

Solution Architect

Oct 2024 – Present

Saudi Food & Drug Authority (SFDA) — via NTG Clarity, Riyadh

- Own end-to-end solution architecture for SFDA digital platforms, translating regulatory and business requirements into scalable, secure, and maintainable target architectures.
- Define architecture standards, reference architectures, and reusable patterns (Clean Architecture, CQRS with MediatR, repository / unit of work) adopted across delivery teams.
- Architect microservices, API, and integration strategies connecting SFDA with government entities (MOH, Tawakkalna, Ministry of Commerce, HRSD) and enterprise systems such as Oracle ERP.
- Govern non-functional requirements — security, performance, availability, observability, and compliance — through design reviews, Architecture Decision Records, and quality gates.

- Lead application security architecture: centralized identity (Keycloak / OpenID Connect), CSP with nonces, rate limiting, XSS sanitization, data protection, and concurrent-session control.
- Design data architecture for high-volume workloads, including SQL Server table partitioning, columnstore indexes, and concurrency-safe reference-number generation.
- Partner with business owners, project managers, and vendors on scope, estimates, and roadmaps; mentor technical leads and developers and evaluate emerging technologies.

Key Projects

- **Customer Journey Portal:** Unified bilingual (Arabic/English, RTL) portal managing SFDA customer requests and service journeys end-to-end. Clean Architecture on ASP.NET Core with MediatR, AutoMapper, JWT, and Serilog; SQL Server partitioning for high-volume request history and a hierarchical journey-node management module.
- **Mwasfah:** Solution architecture and delivery of the Mwasfah platform, including its service design, integrations, and security model.
- **Enterprise SSO (Keycloak):** Centralized identity and single sign-on across SFDA applications using Keycloak with OpenID Connect / OAuth 2.0, including hybrid authentication for legacy ASP.NET applications.
- **Oracle ERP (HR) Integration:** Integration between SFDA applications and the Oracle ERP HR module for reliable employee and organizational data synchronization.
- **Shared Microservices Platform:** Reusable services — Authentication, Email, File Management, Lookup, and Request — behind an Ocelot API gateway with RabbitMQ asynchronous messaging, background workers, and admin dashboards.
- **Pharmacovigilance (ICH E2B R3):** ICSR submission pipeline to the national vigilance API, byte-level repair of corrupted E2B(R3) XML, MedDRA dictionary synchronization, and a signal-management data model.
- **Observability Platform:** OpenTelemetry-based monitoring dashboard for ASP.NET Core applications on IIS, backed by SQL Server columnstore storage and scheduled background jobs.

Technical Lead / Senior Software Consultant

Oct 2017 – Oct 2024

Saudi Food & Drug Authority (SFDA) — via NTG Clarity, Riyadh

- Led design, development, and delivery of mission-critical regulatory platforms and national-level integrations for SFDA.
- Led and mentored a cross-functional development team: sprint planning, estimation, task allocation, and tracking delivery against daily, weekly, and monthly goals.
- Gathered and analyzed requirements with SFDA business owners and translated them into technical designs, work plans, and delivery schedules.
- Designed scalable APIs and service layers; set coding standards, ran code reviews, and enforced design patterns, dependency injection, and unit testing (MSTest, NUnit).
- Designed and optimized databases on SQL Server and Oracle — data models, stored procedures, views, and query performance tuning.
- Drove secure-by-design practices, remediated security findings from assessments, and integrated with government entities and external services.
- Managed technical risks and contingency plans, coordinated with management, QA, and infrastructure teams, and supported CI/CD releases (Jenkins).

Key Projects

- **Saudi Vigilance (Tiaquz):** National platform for reporting adverse drug and medical-device events, processing 30,000+ reports monthly and integrated with the Ministry of Health, Tawakkalna, and Tammeni.
- **Tasreeh:** Transport-permit system during the COVID-19 quarantine with QR-code validation, integrated with all SFDA systems for unified user authentication.
- **NRC:** Online requests for import permits of controlled products by establishments.
- **Merase:** Establishment permit requests to SFDA through the Ministry of Commerce portal.
- **Tahseel:** Integration with an external payment gateway for online payment of SFDA services.
- **Eltizam:** Weekly employee-data integration from Oracle DB to the Ministry of Human Resources.
- **Tammeni API:** Search API for the Tammeni mobile app across SFDA food, drug, and cosmetics product registries.
- **CRM API:** Integration API for Odoo CRM built with Python, Flask, and PostgreSQL.
- **Enjaz:** Task creation, assignment, and monitoring system for SFDA employees.
- **Maintenance & Security:** Security remediation and new requirements across FRCS, AFNR, PCS, Standard Store, Tasdeer, PNR, RadioActive, and other SFDA systems.

Senior Software Developer

Jan 2009 – Oct 2017

Saudi Unicom, Riyadh

- Developed solutions for the Saudi Red Crescent Authority (SRCA), including operational and vehicle-tracking systems.
- Built GIS 3D scanning solutions using LiDAR, including King Khalid Airport Terminal 5, and drone-based camera scanning of Al Madinah.
- Designed and developed the backend and mobile application for the Yalla Taxi ride-hailing service.
- Delivered web applications with ASP.NET MVC, Web API, and SQL Server, and built responsive UIs with HTML5, CSS3, jQuery, and Bootstrap.

Software Developer — E-Learning

Jan 2007 – Oct 2008

Supreme Council of Universities — National E-Learning Center, Cairo

- Courseware engineering and web development for online courses; IBM-certified e-content development.
- Administered Moodle and Centra (Siemens) learning management systems and virtual classrooms.

Software Developer

Jan 2006 – Jan 2007

Wiztel, Cairo

- Migrated the company website from Classic ASP to ASP.NET, optimized and tuned databases, and built VoIP web services.

Software Developer

Jul 2005 – Jan 2007

Cairo University

- Built a data warehouse with SQL Server Analysis Services and decision-support scenarios such as what-if and gap analysis.

MOBILE DEVELOPMENT — 14 APPS PUBLISHED ON GOOGLE PLAY

Independent Flutter apps designed, built, and released end-to-end: [play.google.com](https://play.google.com/store/apps/details?id=com.mohammedgalal) › Mohammed Galal

- **Productivity & Finance:** Masareefy (expense tracker with wallets, categories, reports, and cloud backup), Attendance Tracker (geofencing, SQLite offline storage, Firestore sync), Work Timer (location check-in/out and duration), and Daily Home (weather, news, and quotes dashboard).
- **Health & Lifestyle:** Aura Health (vitals and lab-results tracker, Firebase, bilingual AR/EN), Prayer Calendar Pro (Qibla compass, Hijri calendar), Weather Pro (real-time forecasts with location), Coffee Pro (offline caffeine tracker), and Wisdom Pro (daily quotes).
- **Games, Education & Tools:** Tetris Game Pro, Quiz Game (Firebase Auth, Firestore, AdMob), Elemento (animated periodic table for kids), What Eat Today (meal randomizer, Hive, CustomPainter), and Level Scaler Pro (sensor-based digital level).
- **In Development:** Amaken — location saving and sharing app with Google Maps, Firebase, Material 3, and Arabic/English support.

CERTIFICATIONS

- TOGAF® Certified
- Microsoft Certified Professional Developer (MCPD)
- Project Management Professional (PMP)®
- IBM E-Learning Content Development
- Professional Scrum Master (PSM I)
- IBM Content Producer

EDUCATION

B.Sc. Computers & Information Systems

2004 – 2005

Faculty of Computers & Information — Cairo University

B.Sc. Computer Science

2005 – 2007

Arab Academy for Science, Technology & Maritime Transport

LANGUAGES

Arabic — Native **English** — Professional working proficiency





Microsoft Certified Professional

MOHAMMED GALAL SAYED

Has successfully completed the requirements to be recognized as a Microsoft Certified Professional.

Date of achievement: 04/16/2012
Certification number: F309-9799

Satya Nadella
Chief Executive Officer

Microsoft
CERTIFIED
Professional

Part No. XES-43700