FAHAD A. ALSHAYA

Senior Systems & AI Architect | Technical Founder

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PROFESSIONAL SUMMARY

Senior Systems & AI Architect and Technical Founder with 25+ years of experience designing, building, modernizing, and operating enterprise software and product platforms. Deep expertise in distributed systems, identity and access management, AI-augmented engineering, .NET architecture, container platforms, and complex data/spatial integrations. Combines architecture leadership with hands-on product engineering, infrastructure operation, security boundaries, and production-oriented delivery.

CORE EXPERTISE

- Systems Architecture: Distributed systems, event-driven architecture, modular monoliths, microservices, DDD, Clean Architecture, integration boundaries, messaging, fault tolerance.
- AI-Augmented Engineering: Codex CLI, Claude CLI, Grok CLI, OpenCode CLI; multi-model and agent workflows for architecture analysis, implementation, code/security audits, documentation, and verification.
- Identity & Security: OAuth 2.0, OpenID Connect (OIDC), FIDO2/WebAuthn, passkeys, LDAP, Active Directory, RBAC, trust boundaries.
- Platform & Infrastructure: Docker, Kubernetes, Proxmox virtualization, TrueNAS/ZFS, CI/CD, high availability, disaster recovery, infrastructure modernization.
- Backend & Data: C# / .NET 10 / ASP.NET Core, Blazor, Python, RabbitMQ, PostgreSQL/PostGIS, MSSQL, Power BI, Dynamics 365 F&O.
- Spatial & Integration Systems: Esri Enterprise, PostGIS, SRU, MARC21 XML, transliteration engines, spatial applications and data-service integration.

PROFESSIONAL EXPERIENCE

Senior Systems Architect | Independent | March 2025 - Present

- Architect and build a portfolio of products and engineering systems spanning AI-assisted communication, kiosk/edge computing, family media, document intelligence, Arabic education, geospatial platforms, local-first infrastructure, link infrastructure, and reusable engineering foundations.
- Develop AI-augmented engineering workflows using multiple coding CLIs, model families, and agents for architecture analysis, implementation, technical documentation, code/security auditing, and implementation verification.
- Design event-driven and modular .NET architectures with explicit system boundaries, messaging, operational concerns, and failure-aware integration patterns.
- Consult on OAuth2, OIDC, FIDO2/WebAuthn, passkeys, and enterprise authentication/authorization architecture.
- Modernize legacy .NET workloads toward .NET 10 and containerized environments using Docker and Kubernetes.
- Operate a 7-node Proxmox/Kubernetes private cloud with 20TB+ TrueNAS/ZFS storage for HA, DR, networking, storage, and deployment R&D.

Senior Development Leader (Systems & AI Architecture) | NeoSpace Group, Riyadh | Dec 2022 - Mar 2025

- Led systems and application architecture across enterprise platforms, introducing AI-assisted engineering practices for refactoring, analysis, and technical documentation.
- Designed and deployed a proprietary Identity Provider using OAuth2 and OIDC as a centralized authentication foundation for high-security application environments.
- Modernized legacy services into Docker-based deployments and designed/established a Kubernetes cluster environment.
- Directed architecture for geospatial applications using Esri Enterprise and PostGIS, including spatial-query and visualization workloads.

IT Infrastructure Lead | Prisoners Care Committee, Qassim | Jan 2021 - Dec 2022

- Designed and built a local data center with four servers and two racks; virtualized 15+ mission-critical applications using Proxmox.
- Built operational software including a donation-management store and marketing URL tracker using Blazor and MSSQL.

Founder & Technical Director | Botas IT, Qassim | Jan 2008 - Dec 2020

- Founded and led a team of 15+ specialists delivering ERP, CRM, HRM, and custom business systems for the Saudi market.
- Developed an Arabic transliteration engine for converting Romanized Arabic bibliographic data into Arabic script.
- Architected library-system integration using the SRU protocol for synchronization with the Library of Congress.
- Implemented FIDO2/WebAuthn for passwordless authentication early in its adoption cycle.

Independent Software Development | Jan 1998 - Dec 2007

- Delivered custom business systems, including digital notary and distribution applications using C# and .NET.

SELECTED CURRENT ARCHITECTURE WORK

- Qanivo - AI-assisted social communication and growth platform spanning Inbox, Posting Center, Ads Center, governed AI assistance, integrations, analytics, identity/security, and operational tooling.
- Niosk - Offline-first kiosk/edge platform with central administration, resilient device runtime, synchronization, diagnostics, telemetry, AI/voice interaction, and unattended operation.
- Qasas / قصص - Private family storytelling and cartoon-generation platform with Creator Studio, Kids Theater, reusable assets, approval boundaries, asynchronous media generation, provider orchestration, storage, and rendering.
- Cartostead - Geospatial publication and serving platform covering catalogs, permissions, asynchronous publication jobs, validation, styles, map/vector/tile delivery, and audit operations.

EDUCATION & PROFESSIONAL DEVELOPMENT

- Diploma in Software Programming | Alkhaleej Institute of Applied Sciences | 2006
- Artificial Intelligence (AI) & Machine Learning (ML) | Mercury Training Center, London
- Enterprise ERP Development | Dynamics 365 Finance & Operations / MB-500 specialization
- Agile Project Management & Delivery | Agile methodologies
- Microsoft Power BI Desktop | Business Intelligence