

ASAD RABBANI

Systems Integration Architect · ERP Integration · IoT Infrastructure · Mobile Platforms

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PROFESSIONAL SUMMARY

Systems Integration Architect with hands-on production deployment experience across five business domains. Specializes in building the integration layer between ERP systems and real-world operations — connecting Odoo to IoT hardware, mobile applications, commerce platforms, and enterprise security infrastructure.

Five architected and deployed systems across Retail UX, Workforce Management, IT Operations, ERP Commerce, and EdTech. Deep Odoo expertise combined with full-stack engineering in Python, Node.js, Flutter, and React Native. Experienced in offline-first edge computing, multi-branch deployments, and commercial SaaS product development.

Focused on enterprise systems integration, ERP architecture, and operational infrastructure engineering across retail, HR, and IT operations environments.

CORE COMPETENCIES

ERP & Integration	Odoo Community & Enterprise · Custom Module Development · Python ORM · OWL · QWeb · XML-RPC · RBAC
Backend & API	Python · Node.js · REST API Design · Event-Driven Architecture · XML-RPC Webhook Design
Frontend & Mobile	Flutter · React Native (Expo) · Next.js · React · PyQt6 · Compiled Kiosk Apps · PWA
IoT & Edge	Raspberry Pi · ZKTeco uFace/iFace · ADMS Protocol · Docker · Offline-First Design · Edge Sync
Data & Storage	PostgreSQL · MongoDB · SQLite WAL · Dual-Layer Architecture · Real-Time Sync
Security	Fernet AES (FIPS 140-2) · Token Auth · IP Allowlist · Immutable Audit Log · SOC 2 / ISO 27001 Aligned

PRODUCTION SYSTEMS

Price Check Kiosk System Retail UX Live · 6 Branches · 24/7

Multi-form-factor price check platform connecting Odoo to shop-floor hardware. Windows (PyQt6), Android (Flutter), Staff Mobile, and PDT Scanners all powered by one integration. Runtime pricelist engine resolution, silent session recovery, watchdog auto-operation. Eliminated staff-reset cycles across 6 commercial branches.

- Runtime unit-type resolution at query time — no hardcoded product structure assumptions
- Full Odoo pricelist engine traversal: quantity thresholds, date-range rules, active promotions
- Silent retry and watchdog auto-recovery — 24/7 operation without staff intervention
- Single Flutter codebase serving three of four form factors; compiled .exe for Windows

Stack: PyQt6 · Flutter · Odoo · XML-RPC · Python

RetailSync — Distributed Commerce Platform ERP Commerce Production-Ready · Self-Hosted

Dual-layer ERP commerce architecture: Odoo as write source-of-truth, MongoDB as read-optimized layer. Node.js API backbone with 150+ endpoints powering four simultaneous applications — Customer Mobile App, Delivery App, Admin Web App, and storefront. Full bilingual EN/AR with RTL across all applications.

- 150+ REST API endpoints organized by domain, serving four apps from one authenticated layer
- Automated order lifecycle: customer order → Odoo SO → invoice → stock move → fulfillment
- Customer Mobile App (Expo RN): bilingual EN/AR, loyalty points, cart with 15% VAT, order tracking
- Delivery App: shift management, per-item checklist, 5-digit PIN delivery verification, earnings tracking
- Admin Web App (React + Vite): full catalog CRUD, Cloudinary, promotions engine, PDF invoicing, PWA

Stack: Node.js · React Native · Expo · Next.js · MongoDB · Odoo 17 · Redis · Cloudinary

Biometric Attendance System HR & Workforce Commercial SaaS Offering

ZKTeco-to-Odoo attendance pipeline eliminating manual payroll data entry. Dockerized edge service on Raspberry Pi with SQLite WAL offline queue, dual-protocol sync, and event deduplication. Full Daily Activity Engine in Odoo: overtime, shifts, CTO bank, payroll export. Commercialized as SaaS with tiered pricing model.

- Dual-protocol sync: ADMS push (device-initiated) + direct polling with automatic fallback
- SQLite WAL-mode queue — events survive connectivity failures before Odoo transmission
- Event deduplication engine — composite fingerprint prevents double-counting across protocols
- 6 Odoo feature groups: Registry, Daily Activity Engine, Deduplication, HR Review, Export, Dashboards

Stack: Python · Odoo · Docker · Raspberry Pi · ZKTeco · SQLite WAL · ADMS Protocol

IT Asset Management System IT Operations Enterprise Module · Self-Hosted

Complete enterprise Odoo 17 module built to solve real internal IT visibility gaps — 23 models, 22 views, 10 workflow wizards, 10,000+ LOC, 65+ test scenarios. Fernet AES credential vault, dynamic custom field framework, automated offboarding wizard, and immutable audit log. SOC 2 and ISO 27001 aligned.

- Fernet AES (FIPS 140-2) credential vault — key stored separately from records, every access logged
- One-click offboarding wizard: auto-discovers all assets, licenses, credentials; executes all revocations
- Dynamic custom field framework — administrators define category fields at runtime without code changes
- Full asset lifecycle: procurement → assignment → maintenance → retirement with chain-of-custody trail

Stack: Python · Odoo · Fernet AES · PostgreSQL

DomeLearn — Mobile Learning Platform EdTech Published · Google Play

Scroll-based mobile learning app on the Neural Story pattern — concept to connection in under 90 seconds per unit. No session commitment required. End-to-end: architecture, development, and Play Store deployment.

- Neural Story Engine: Concept → Why → Analogy → Visual → Connection in under 90 seconds
- Scroll-based consumption — no navigation commitment before learning begins

Stack: React Native · Expo · i18next · AsyncStorage · Google Play

PROFESSIONAL EXPERIENCE

IT Manager | Ahmed Al-Muhaysini Holding — SAPT Central Markets, Saudi Arabia

2022 – Present

Responsible for enterprise IT operations, Odoo ERP administration, infrastructure management, and the architecture of operational systems across a multi-branch retail environment.

- Identified operational gaps across retail, HR, and IT workflows and independently designed systems to address them without external development resources
- Designed and deployed the Price Check Kiosk System across 6 commercial branches with centralized Odoo integration and 24/7 kiosk operation
- Architected multiple ERP integration and operational platforms including RetailSync, Biometric Attendance System, and IT Asset Management System
- Developed and commercialized the Biometric Attendance System as a SaaS-ready product with tiered pricing, quotations, contract structure, and SLA framework
- Built the IT Asset Management System internally to address real operational requirements in infrastructure tracking, credential governance, and offboarding workflows
- Led Odoo 17 ERP administration, custom module development, and third-party system integration initiatives
- Managed multi-branch IT operations including servers, networking, user support, workstation deployment, and operational continuity
- Oversaw procurement, deployment, and maintenance of enterprise hardware, biometric devices, printers, and branch infrastructure
- Maintained VPN connectivity, access control policies, backup workflows, and internal operational systems
- Coordinated software deployment, infrastructure troubleshooting, hardware lifecycle management, and branch-level technical support

IT & Design Manager | *Himalayan Healthy Foods*

2020 – 2022

- Built internal automation tools reducing manual operational overhead
- Managed IT infrastructure and digital design operations across the business

Executive Assistant | *China Gezhouba Group Corporation*

2018 – 2020

- Operations and logistics coordination for large-scale engineering infrastructure projects

EDUCATION

Bachelor of Science — Engineering · Hazara University · 2018

Diploma in Information Technology · 2017–2018

LANGUAGES

Arabic — Working Proficiency **English** — Professional Fluency **Urdu** — Native **Punjabi** — Native

Portfolio & Live Demos: asadrabbani.systems