

ASADRABBANI

SENIOR ODOO FULL STACK DEVELOPER

Systems Integration Architect · Custom Odoo Module Developer · AI & RAG

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Available for remote work

PROFESSIONAL SUMMARY

Senior Odoo Full Stack Developer and Systems Integration Architect specializing in enterprise ERP platforms, distributed systems, AI integration, and production software delivery. Independently architected and deployed seven production systems — spanning retail kiosks, biometric HR automation, omnichannel commerce, IT asset governance, an AI-driven loyalty platform with on-premise LLM fine-tuning and pgvector RAG search, and a feature-complete HRM suite extending Odoo Community with enterprise payroll, GCC localization, and full employee lifecycle management. Every system is live, maintained, and operating across a real multi-branch retail environment.

KEY ACHIEVEMENTS

7	24+	160+	10K+	6	5
ODOO SYSTEMS DEPLOYED	CUSTOM ODOO MODELS BUILT	REST & XML- RPC ENDPOINTS	LOC — ITAM MODULE	BRANCHES LIVE	CLIENT APPS BUILT

TECHNICAL STACK & CORE EXPERTISE

ODOO & ERP CORE · Odoo Community & Enterprise · Custom Module Development (Python) · Odoo ORM & Model Inheritance · OWL Web Framework (ES6+) · QWeb Reports & Templates · XML-RPC & JSON-RPC APIs · Odoo POS Customization · HR, Payroll & Inventory Modules · Wizards, Security Rules & Cron Jobs	BACKEND, AI & MOBILE · Python & Node.js · FastAPI & Express · React Native (Expo) · Flutter & PyQt6 · REST API & Event-Driven Architecture · JWT Authentication · On-Premise LLM Hosting (Ollama) · LoRA Fine-Tuning (Unsloth) · pgvector RAG Search · Git & Linux	IOT, STORAGE & SECURITY · Raspberry Pi Edge Sync · ZKTeco ADMS Protocols · Docker & CI/CD · SQLite WAL & PostgreSQL · pgvector & pg_trgm Indices · MongoDB · Chart.js 4 OWL Integration · SCSS & CSS Variable Design Systems · Fernet AES Encryption · RBAC & Immutable Audit Trails
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PROFESSIONAL EXPERIENCE

IT Manager / Odoo Full Stack Developer

2022 — PRESENT

Ahmed Al-Muhaysini Holding (SAPT Central Markets) · Buraidah, Saudi Arabia

Led enterprise software development, Odoo ERP customization, full-stack application delivery, and systems integration across 6 retail branches. Independently architected, developed, deployed, and continue to maintain seven production systems throughout their full lifecycle without external development resources.

- Architected and deployed 7 production systems covering retail UX, HR automation, IT governance, omnichannel commerce, biometric payroll, AI-driven loyalty, and enterprise-grade HRM.
- Engineered custom Odoo modules, business workflows, and enterprise integrations using Python ORM, XML-RPC/JSON-RPC, security rules, wizards, QWeb reports, and REST APIs.
- Built and maintained 160+ REST and ERP endpoints enabling secure communication between Odoo, mobile applications, kiosks, biometric devices, and third-party services.
- Delivered a full-stack omnichannel commerce platform integrating Odoo with a React Native customer app, delivery app, admin portal, and Node.js API backbone.
- Designed and deployed an on-premise AI loyalty platform featuring a fine-tuned LLM, pgvector RAG search, and a Tool-Wait streaming protocol guaranteeing zero price hallucination.
- Extended Odoo Community with a feature-complete HRM suite delivering enterprise payroll, Saudi GOSI, End-of-Service settlement, biometric sync, and full employee lifecycle management.
- Commercialized the Biometric Attendance System as a SaaS product with tiered licensing, client quotations, and SLA framework.
- Managed multi-branch IT infrastructure across 6 branches — servers, networking, virtualization, workstations, backup, and cybersecurity.

IT & Design Manager · Himalayan Healthy Foods

2020 — 2022

- Managed IT infrastructure and digital design operations across the business.
- Built internal automation tools saving 15+ manual work hours weekly.

Executive Assistant · China Gezhouba Group Corporation

2018 — 2020

- Coordinated operations and logistics for large-scale engineering infrastructure projects.

PRODUCTION PROJECTS (ODOO-INTEGRATED CASE STUDIES)

01. ODOO RETAIL PRICE CHECK KIOSK

LIVE · 6 BRANCHES

Shop Floor Hardware Integration

PROBLEM

Odoo pricing is locked in the back office. Customers cannot verify unit or carton prices without staff assistance, creating operational bottlenecks across all branches.

SOLUTION

Custom Odoo XML-RPC integration performing live pricelist traversal at query time — no middleware, no cache. Supports Windows kiosks, Android tablets, staff mobile, and PDT scanners from a single Flutter codebase.

IMPACT & METRICS

- ✓ Live pricelist engine traversal — quantity thresholds, date-range rules, and active promotions at query time
- ✓ Auto session recovery and watchdog restart — 24/7 unattended operation
- ✓ Zero staff-reset cycles across all 6 branches since deployment

STACK Python · Odoo · XML-RPC · PyQt6 · Flutter

02. RETAILSYSNC — OMNICHANNEL COMMERCE PLATFORM PRODUCTION · SELF-HOSTED

High-Performance Dual-Layer Architecture

PROBLEM

Odoo ERP cannot efficiently serve read-heavy queries for multiple simultaneous applications without degrading transactional performance.

SOLUTION

Dual-layer architecture with Odoo as the write source-of-truth, synced to a MongoDB read layer via a Node.js API gateway. Powers four simultaneous applications from one authenticated backend.

IMPACT & METRICS

- ✓ 160+ REST endpoints — products, orders, delivery, inventory, promotions
- ✓ Automated full order lifecycle — customer order to Odoo SO, invoice, and stock move
- ✓ Bilingual EN/AR customer and delivery apps with full RTL support

STACK Odoo · Node.js · React Native · Next.js · MongoDB · Redis · Cloudinary

03. ODOO BIOMETRIC ATTENDANCE INTEGRATION CUSTOM MODULE · COMMERCIAL SAAS

ZKTeco to Odoo HR Automation

PROBLEM

Biometric events stay trapped on physical devices. Manual payroll data collection creates overhead, errors, and no audit trail.

SOLUTION

Installable Odoo Python module with a Dockerized edge sync service per branch. SQLite WAL queue buffers events on disconnects. Composite deduplication engine prevents double counting. Commercialized as SaaS with tiered licensing.

IMPACT & METRICS

- ✓ Dual-protocol sync — ADMS push and direct polling with automatic fallback
- ✓ Daily Activity Engine calculates worked minutes, overtime, delays, and CTO bank
- ✓ One-click payroll CSV export — eliminated all manual attendance processing

STACK Python · Odoo · Docker · Raspberry Pi · SQLite WAL · ZKTeco ADMS

04. ENTERPRISE IT ASSET MANAGEMENT MODULE

Credential Vault · Lifecycle Tracking · Offboarding

PUBLISHED · ODOO APP STORE

PROBLEM

Spreadsheets cannot securely manage IT assets, software licenses, and credentials. Offboarding is manual, error-prone, and a compliance risk.

SOLUTION

Complete enterprise Odoo module — 23 custom models, 22 views, 10 workflow wizards, 10K+ LOC. Fernet AES credential vault, automated offboarding wizard, dynamic custom field framework, and immutable audit log.

IMPACT & METRICS

- ✓ One-click offboarding wizard auto-discovers and revokes all assets, licenses, and credentials
- ✓ Fernet AES vault — key stored separately, every access logged immutably
- ✓ Dynamic custom fields — administrators define category fields at runtime without code changes
- ✓ Full RBAC with field-level security and chain-of-custody trail from procurement to retirement

STACK Python · Odoo · OWL · QWeb · PostgreSQL

05. SAPT LOYALTY & DUAL-INTENT AI SHOPPING ASSISTANT

pilot

Production Staging- live

On-Premise Fine-Tuned LLM · pgvector RAG · React Native

PROBLEM

SAPT required a loyalty app to replace manual phone-number lookups and a bilingual conversational assistant for product and price queries. Commercial cloud LLMs created unsustainable costs and privacy concerns. Direct DB queries for fuzzy text search overloaded Odoo.

SOLUTION

React Native app backed by Odoo with a fine-tuned on-premise LLM hosted on Ollama. Dual-intent routing: product queries go to pgvector cosine similarity search with a Tool-Wait streaming protocol that interrupts generation until real Odoo data is injected. Vision search sends photos to an on-premise vision model, extracting product text and routing into the RAG pipeline automatically.

IMPACT & METRICS

- ✓ Zero price hallucination — Tool-Wait protocol replaces AI guesses with live Odoo data
- ✓ Zero ongoing LLM API costs — commercial cloud fees eliminated via on-premise hosting
- ✓ Vision search — photograph a product to trigger automatic price and stock lookup
- ✓ Dynamic CMS weekly flyer — marketing pushes updates without app store releases

STACK React Native · Odoo · PostgreSQL · pgvector · Ollama · Unsloth · JWT

06. ADVANCE HRM & PAYROLL SUITE

Enterprise HR for Odoo Community · GCC Localization · OWL Design System

ENTERPRISE MODULE ·

PROBLEM

Odoo Community removed the entire Payroll Engine in version 13. Community also lacks GCC localization, advanced lifecycle management, hardware integration, and delivers a cluttered UI. Organizations face expensive Enterprise licensing or a broken HR operation.

SOLUTION

Comprehensive suite of custom Odoo modules providing enterprise-grade HR on Community: (1) Payroll Engine — salary structures, payslip batches, automated loan deductions, salary advances, and full accounting integration with journal

IMPACT & METRICS

- ✓ Eliminated Odoo Enterprise licensing requirement — full payroll and GCC compliance on Community
- ✓ Saudi GOSI and End-of-Service calculations fully automated — zero manual computation
- ✓ Document expiry alerts — prevents government fines from lapsed Iqamas and visas

entry generation. (2) GCC Localization — Saudi GOSI automation, End-of-Service gratuity settlement per labor law, UAE WPS reporting. (3) Lifecycle — onboarding/offboarding checklists, document expiry alerts, custody management, resignation workflows, shift scheduling. (4) Hardware — direct ZKTeco biometric sync over IP. (5) OWL Design System — Chart.js 4 dashboard, CSS variable light/dark theming, 5-stage visual approval pipelines, hero banners.

- ✓ ZKTeco biometric sync — attendance bridged directly from hardware into Odoo HR
- ✓ Chart.js 4 OWL dashboard — live ORM data with zero latency, legacy D3.js eliminated

STACK Odoo Community · OWL · Python · JavaScript ES6+ · SCSS · Chart.js 4 · PostgreSQL · ZKTeco

ENTERPRISE SPECIALIZATIONS, EDUCATION & LANGUAGES

ENTERPRISE SPECIALIZATIONS

- ERP Solution Architecture & Implementation
- AI-Integrated Business Applications
- On-Premise LLM Deployment & Fine-Tuning
- Distributed Enterprise Systems
- Odoo Community Enterprise Capability Extension
- Production Software Delivery & Lifecycle Maintenance
- Enterprise Security, RBAC & Compliance
- Mobile-ERP Integration & Offline-First Architecture
- Business Process Automation

EDUCATION

Bachelor of Science — Engineering
Hazara University · Graduated 2018

Diploma in Information Technology
Hazara IT Institute · 2017 – 2018

LANGUAGES

English Professional Fluency

Arabic Professional Fluency

Urdu / Punjabi Native Speaker

TECHNICAL PORTFOLIO

<https://www.asadrabbani.systems/>



Architecture diagrams · Live demos · Production documentation · System walkthroughs

SCAN TO VERIFY SYSTEMS