

Saleh Abbaas

Software Engineer

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PROFESSIONAL SUMMARY

- 5+ years of experience as a software engineer, including 4+ years specializing in healthcare interoperability, delivering standards-compliant integration solutions in regulated clinical environments.
- Bachelor's Degree in Management Information Systems; AWS Cloud Practitioner, Data Science certification.
- English (Professional Working Proficiency), Arabic (Fluent), French (Basics).
- HL7, FHIR APIs, Rhapsody, Mirth, Epic EHR, HIPAA, ServiceNow, DICOM, PACS.
- Designed and implemented enterprise HL7 and FHIR integrations for laboratory and clinical systems, improving data accuracy by up to 98% and supporting secure, high-volume healthcare data exchange.
- Strong communicator with the ability to translate complex interoperability and security requirements into clear technical solutions for clinical and technical stakeholders.
- Full-stack and integration-focused engineer with experience across backend services, data pipelines, infrastructure, analytics, and open-source healthcare platforms.

PROFESSIONAL EXPERIENCE

Programmer Analyst

The Ottawa Hospital

📅 12/2024 - 09/2025 📍 Ottawa, Ontario

- Implemented and maintained HL7 and FHIR integrations using Rhapsody Integration Engine to support secure, high-volume clinical and laboratory data exchange.
- Designed and monitored laboratory result ingestion and routing workflows, ensuring data integrity, availability, and compliance with HIPAA and hospital policies.
- Resolved incidents via ServiceNow, enhancing system stability and continuity.
- Developed Power BI dashboards to provide real-time visibility into interface performance, message volumes, and laboratory workflows.
- **Skills:** HL7 | FHIR APIs | Rhapsody Integration Engine | Mirth Connect | Epic EHR | ServiceNow | HIPAA & PHIPA Compliance | Power BI | Microsoft SQL Server.

Senior Software Engineer

Arab Hospitals Group

📅 08/2023 - 11/2024 📍 Ramallah, Palestine

- Designed and implemented LIS integrations connecting laboratory analyzers, medical devices, and HIS platforms using HL7, FHIR, and ASTM standards.
- Built RESTful integration services and backend APIs to automate laboratory result processing, reducing manual entry and improving result accuracy by 98%.
- Defined integration patterns, authentication mechanisms, and security controls aligned with healthcare data protection and compliance requirements.
- Defined system integration patterns, authentication models, and security controls aligned with healthcare compliance requirements.
- Collaborated with clinical, laboratory, and IT stakeholders to translate operational needs into scalable, maintainable technical solutions.
- **Skills:** HL7 | FHIR | ASTM | LIS | HIS | RESTful APIs | DICOM | PACS | OHIF Viewer | Docker | Python | ReactJS.

Information Technology Programmer

World Health Organization (WHO)

📅 12/2020 - 07/2023 📍 Jerusalem, Palestine

- Designed and supported enterprise data platforms for large-scale public health and laboratory data collection.
- Implemented relational database integrations and backend services supporting secure access for 3,000+ users.
- Delivered analytical and reporting solutions using Power BI to support evidence-based public health decision-making.
- **Skills:** Kubernetes | Linux | PostgreSQL | Python | Git | Bash | Nginx | Power BI | Public Health Data Platforms.

EDUCATION

Bachelor's Degree in Management Information Systems

An-Najah National University

📍 2014 - 2018 📍 Nablus, Palestine

CERTIFICATIONS

AWS Cloud Practitioner

Amazon Web Services (2025)

AI Fundamentals

IBM (2024)

Data Science

Birzeit University & IDRC Canada (2022)

CCNA

Experts Turnkey Solutions

PROJECTS

Integration of Medical Devices with HIS

- Designed and implemented enterprise integrations between laboratory analyzers, medical devices, and Health Information Systems (HIS) using HL7, FHIR, and ASTM standards.
- Architected secure result ingestion and distribution workflows supporting laboratory operations, clinical systems, and reporting platforms.
- Improved data accuracy, turnaround time, and system interoperability in regulated healthcare environments.

Medical Imaging System - PACS

- Architected a PACS solution enabling centralized storage, retrieval, and sharing of medical imaging data across three healthcare facilities.
- Improved compliance by integrating two imaging systems with one clinical apps, ensuring 100% privacy and security compliance.
- Significantly improved clinician access to diagnostic images and cross-facility collaboration.

Predictive Analytics for Hospital Resource Optimization

- Designed data pipelines and analytics models to support hospital operational planning, including bed occupancy forecasting.
- Enabled leadership teams to make data-driven decisions by integrating predictive insights with existing hospital information systems.
- Improved resource utilization and operational efficiency through advanced analytics.

Enterprise Data Engineering for Public Health Research

- Increased public health reporting efficacy by 90% by architecting data platforms for epidemiological research.
- Led the integration of relational database systems to enable secure, governed access for **3,000+ users**.
- Supported advanced analytics and reporting informing national and international health decision-making.