


# Mohammad Hewedy

## Solutions Architect

A confident, self-motivated software architect with more than 11 year of experience in software Engineering and Architecture. A deep researcher and a passionate learner in every aspect of his life, with good analytical and verbal skills.

**Contributed**  to a number of Open Source projects including [Spring AMQP](#), [Spring Data JPA](#), [Castlemock](#), and [others](#).

Knowledge and experience in many programming Languages and ecosystems including [Java](#), [Kotlin](#), [Scala](#), [Groovy](#), [Golang](#), [C](#), [Objective-C](#), [Ruby](#), [JavaScript](#), [TypeScript](#), [C#](#) and others.

### Contact Information

[mhewedy@gmail.com](mailto:mhewedy@gmail.com) | [Blog](#) | [Github](#) | [Linkedin](#)

## Work Experience

### Software Engineer / Lead / Solutions Architect

#### AL ELM Information Security Company

Nov 2013 – Present

Riyadh, Saudi Arabia

Elm Company is a Saudi Joint Stock Company owned by Saudi Public Investment Fund (PIF), it is specialized in providing secure electronic services, and has been in existence since 1988 as a technical research and development lab for the Saudi Ministry of Interior.

Implementing government services while practicing agile methodology to achieve high velocity in delivery in multiple Projects over the past 8+ years.

- **Tamm Platform:**

Participating in the design, architecture, and implementation of TAMM Platform (TAMM v2.0).

*Some achievements include*

- Participated in the Tamm Revamp docs project.
- Participated in establishing the software practices used by the team (PR, Code Review, etc...) to assure high quality for the produced software.
- Participated in the Design and Architecture of the Tamm Platform.
- Co-Designed and implemented of [async-await](#) concurrency framework on top of Java/Spring concurrency primitives.
- Co-Designed and implemented [spring-data-jpa-mongodb-expressions](#) a library that converts MongoDB queries into SQL.
- Created a custom s2i builder image for jdk15 on top of the *Openshift platform*.
- Applying best practices in DDD, TDD, and Clean Architecture

- **Architecture and Presales Team:**

Working on the Technical presales team to design, document, architect, and price software solutions as a response to RFPs.

- **Muqem (muqem.sa)/Premium Residency (saprc.gov.sa) :**

A portal to allow companies to managing activities for its Residents in Saudi Arabia with cooperation with Jawazat (General Directorate of Passports).

We are building the next generation of Muqem using *Microservice architecture* and [Java](#), [Spring Boot](#), [Netflix SSO](#) ([eureka](#), [zuul](#), [hystrix](#), [Ribbon](#) etc... ), [spring-amqp](#), [RabbitMQ](#), [Redis](#), [Docker](#), and [wiremock/Castlemock](#).

- **Marine:**

A portal for Public Transport Authority (PTA), it is used to give permission and register activities related to the Marine section in PTA, My role mainly to integrate with Companies Billing System and PTA billing System.

- **Mojaz** (<https://mojaz.com.sa>):  
A Portal that allows public users to query about car history (including accident history) and print a full report about it, My role mainly to integrate with Companies Billing System and PTA billing System.
- **ETV** (<https://etv.com.sa>):  
A portal for Saudi Commission for Tourism & National Heritage (SCTH), that allows Umrah visa holder to do tourism activities after finishing the Umrah program by changing the sponsor. (many integrations with NIC, Sejel is being included)
- **Basher** (<https://basher.sa>):  
Bashir is a compound project, consists of a mobile app that connects to REST service and a Portal to manage users, reports, statistics and other aspects.
- **TAMM** (<https://www1.tamm.net.sa/>):  
TAMM is the project and group of services used by multiple user roles (Car Agencies, Show rooms, etc.) to connect these users with the Saudi Arabia NIC, I am working on adding new features and maintaining the old features.

### *Technologies used including:*

Java (up to jdk15), Kotlin, Spring framework, Spring Boot, Spring Cloud, Netflix OSS, Hibernate, PrimeFaces, Angularjs, Angular, Redis, RabbitMQ, Apache Tomcat, JBoss AS 7.x, KeyCloak (IdM), 3Scale, Openshift, SQL Server, Atlassian stack (Bitbucket, JIRA, Bamboo), Jenkins and IBM RTC.

## Software Engineer / Team Leader

### SiliconExpert Technologies - an Arrow Electronics Company

Nov 2010 – Nov 2013

Cairo, Egypt

- Headquartered in Santa Clara, is a leading supplier and innovator of best-in-class products and services for enterprise-wide electronic parts management. Customers are: Avago, Exar, Avnet, Arrow, RS, NASA, Dell, Rockwell, and Toshiba.
- I am working directory with our BA to analyze customer requirements and find rapid solutions for customers continuously requests.
- Develop solutions using **EJB3.0**, **JPA**, **Servlets**, **JSPs**, Custom tags, Filters, **XML**, **JAX-WS**, **Apache Axis**, **GWT**, **JSON**, **JAX-WS**, **Javascript**, **Apache Lucene**, **Apache Solr**, **Android SDK**, **iOS**, **Oracle DB**, **Oracle App Server**, **tomcat**, **Spring-jms**, **git**, **IntelliJ IDEA**, **Eclipse**, **JIRA**, **Jenkins** and **YouTrack**.
- **Build JMS Client to consume logs:**  
Use Spring **JMS** to write a log listener to write logs of one of our services into **Apache Flume**.
- **Modifying Spark (XMPP client):**  
Spark is an Open Source, cross-platform Jabber (**XMPP**) client optimized for businesses and organizations. I was responsible for modifying the app and deliver a windows installation package using install4j/IzPack.
- **Arrow Mobile App:**  
Arrow inc. [www.arrow.com](http://www.arrow.com) is the company that acquired SiliconExpert.  
I am acting as a project leader to provide Arrow inc with iOS and Android Mobile Apps.  
We are building native mobile apps and building a JSON aggregator Service to call existing modules and provide the functionality for the mobile apps.
- **SiliconExpert Mobile App:**  
Building the Company's iPhone/Android Mobile Application front end and build a JSON Service backed by an EJB module connecting to Oracle DB.
- **Avago PartFinder Project:**  
Integration of some of our services into customer's website through a Widget that is hosted on our domain and deployed into the customer's Web App. The work includes running cross-site JavaScript (Same-origin policy) and many other challenges to make it work on Almost all browsers starting from IE6.0.
- **Avago PartFinder Mobile (iPhone/Android):**  
Converting Avago Application into a Mobile Application(Android and iOS). The work included converts the Business layer into JSON Services using a custom home-build framework and then consume the JSON services using Mobile Apps.

- **Exar Project:**  
Integration of some of our services into customer's website.
- **MainSearch:**  
A Lucene Manager tool; a tool with a Web-based interface to allow users to search/create/edit/delete indexes.
- **Design Center:**  
Web Application for Electronic Engineers to search for reference designs and other stuff they need in designing Electronic Circuits.  
The work includes investigating on the issue of Search engine optimization (SEO) and crawling for Ajax Applications.
- Worked on securing companies web services (using HTTPS) and writing clients to consume these web services

## Software Engineer

### CyberSource a VISA Company

April 2009 – Nov 2010

Cairo, Egypt

- Headquartered in Mountain View, California, is a leading provider of electronic payment and risk management services
- Responsible for Design and implement ePayment Solutions
- Worked with payment services like, Auth, Bill, Credit, Refund, many of PayPal Services and others
- Develop solutions using **Java, C, Servlets, XML, XSLT, XPath, JPos, JBoss, Linux, Rational ClearCase** and **AccuRev**.
- Fixed Major encoding issue in China PayEase gateway simulator
- Worked on many PayPal bug fixes. (PayPal EC and Button create service)
- Worked on bug fixes for other Payment gateways as well including Paymentech and APACS30 gateways

## Software Engineer

### ElRowad

Jan 2009 – April 2009

Cairo, Egypt

- Responsible for the Design and Implementation of company's own Stock Management software

## Education

### B.S. Computers and Information

Helwan University, Cairo Egypt

Sept 2007

Grade: Very Good

## Certifications

AWS Certified Solutions Architect – Associate Amazon Web Services Aug 2020 License: <a href="#">SAA</a>	Certified Kubernetes Application Developer The Linux Foundation Jun 2020 License: <a href="#">CKAD-2000-004804-0100</a>
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TOGAF® 9 Certified The Open Group Jan 2020 License: <a href="#">140538</a>	TOGAF® 9 Foundation The Open Group Nov 2019 License: <a href="#">603233</a>
DevOps Leader DevOps Institute April 2019 License: <a href="#">GR685000296MH</a>	DevOps Foundation DevOps Institute April 2019 License: <a href="#">GR797009838MH</a>

## Skills

- Good understanding of OOP & Functional style programming.
- Behavior / Test Driven Development - Unit, Integration, System Testing.
- Agile Methodologies - Scrum, Kanban.
- Good understanding of type theory and the programming paradigm.
- Good knowledge about JVM eco system ([Kotlin](#), [Groovy](#), and [Scala](#)).
- Good knowledge about other languages as well ([C](#), [Objective-C](#), [Ruby](#), [RoR](#), [Golang](#), and [Nodejs](#)).
- Background knowledge in other languages as well ([C#](#), [VB.net](#), [C++](#), [PL-SQL](#)).
- Good knowledge in Linux Configuration & shell scripting.
- Java (Threading, Networking, JDBC, RMI, JPA).
- Basic understanding of the some compilers architecture, e.g. [GCC](#), [LLVM](#), [GraalVM](#) and others.
- Web (JSP&Servlets, Struts, JSF, Freemarker, MVC, Front-Controller, etc).
- Distributed Programming (App Servers, EJB and JNDI) and messaging ([RabbitMQ](#), [JMS](#), [Apache Camel](#)).
- A good background in Web Services (SOAP-based and RESTful) and XML (SAX, DOM, XSLT, XPath).
- Good knowledge about the internals of Spring framework, Hibernate, Spring Security, Spring Data (JPA, Mongo), Spring Boot and Spring AMQP.
- Experience Mobile Programming (Android /iPhone).
- Experience with full-Stack Web Development ([Angular](#), [Vue.js](#), [Mustache.js](#), and others).
- Good understand parallelism and concurrency and related patterns (e.g. CSP) and its implementations in go and kotlin.
- Basic knowledge Linux programming ([syscalls](#), [strace](#), LKM, LSM, filesystems, namespaces and others).
- Basic understanding of the different storage types (object, block, file) and its use cases.
- Basic understanding Hypervisors and containerization (the theory and practices).
- Good understanding of RDBMS, NoSQL databases, Big Data and Database Sharding techniques.
- Basic knowledge about NoSQL solutions such as Apache [Cassandra](#) and [Couchbase](#).
- Basic understanding of Data Engineering processes.
- Experience with Searching solutions ([Apache Lucene/Solr](#)).
- Familiarity with Big Data and Stream processing solutions such as [Apache Hadoop](#), [Hive](#), [Pig](#), and [Apache Spark](#).
- Experience in RDBMS and ORM - [Oracle](#), [SQL Server](#), [MySQL](#), [PostgreSQL](#).
- Experience in NoSQL - [MongoDB](#).
- Basic understanding of ISO 8601, Unicode and other related standards.
- Basic understanding of OSI model and related protocols ([TCP](#), [UDP](#), [DNS](#), [ARP](#), [FTP](#), [SSH](#), [TLS](#)), and basic knowledge about networking tools like iptables, iproute2, wireshark, tcpdump, and more.
- Good understanding of digital cryptography.
- Good understanding of ESB, EAI, Queues, BPM, and related enterprise solutions and patterns`
- Hands-on experience in [Jenkins](#), [Bitbucket](#) pipelines, [Docker](#), [Docker Compose](#), [Kubernetes](#), [GCP](#) and [AWS](#).










- Basic knowledge about Machine Learning

## Technical Reviews

- Technical reviewer for “[Certified Kubernetes Application Developer \(CKAD\) Study Guide](#)” book from O’Reilly.

[ckad study guide] | <https://learning.oreilly.com/library/cover/9781492083726/250w/>

## Open Source Projects

- [Spring Data JPA MongoDB Expressions](#)  Allows you to use the MongoDB query syntax to query your relational database.
- [ci-pipeline](#)  Opinionated Jenkins Pipeline in YAML
- [vermin](#)  The smart virtual machines manager.
- [SBO-video-extension](#)  Safari Books Online Video Downloader Extension to Google Chrome.
- [spwrap](#)  Simple Stored Procedure call wrapper with no framework dependencies.
- [ews](#)  Go package wrapper for Exchange Web Service (EWS)
- [gitblame](#)  Simple Web Application to show each member in team work in a web-based interface
- [aqarme](#)  Service to query <https://sa.aqar.fm/> for certain criteria and notifies me back by Facebook messenger on the list of apartments that matches my criteria.
- [mego](#)  The MS Exchange meeting organizer

## Volunteering Experience

### Riyadh Java Meetup (Founder)

April 2019 – Present  
Riyadh, Saudi Arabia

- The Riyadh Java Meetup is a meetup concerted about Java and the JVM, with the main focus is on Spring framework and spring boot.

### k8s Araby Meetup (Co-founder)

July 2020 – Present  
Riyadh, Saudi Arabia

## Languages

- **Arabic** - Native
- **English** - Professional working proficiency