


# Mohammad Hewedy

## Solutions Architect

A confident, self-motivated software architect with more than 15 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.

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

Knowledge and experience in may programming Languages and ecosystems including [Java](#), [Kotlin](#), [Scala](#), [Groovy](#), [Golang](#), [C](#), [Objective-C](#), [Python](#), [Ruby](#), [Nodejs](#), [JavaScript](#), [TypeScript](#), [C#](#), [Elixir](#), [Erlang/OTP](#) and others.

### Contact Information

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## Work Experience

### Solutions Architect / Tech Lead

#### Elm

*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.

Designing and implementing government services while practicing agile methodology to achieve high velocity in delivery in multiple projects.

#### Mazadat

An e-auction service that is provided to one of ELM clients. it is built on top of many successful systems built by ELM.

The system is built and deployed on OCP and built-in Paas Services provided by the Platform Engineering team in coordination with Delivery teams.

#### Tamm Platform

Tamm service helps vehicles' owners in Saudi Arabia to get all updated information of their respective vehicles from their governmental sources.

Participating in the architecture, design, and implementation of Tamm Platform (Tamm v2.0) utilizing OIDC (Keycloak), Api gateway (3Scale) and Openshift.

#### *Some achievements include*

- Participated in the Tamm Revamp docs project (Documenting and reverse engineering the As is).
- Participated in establishing the software practices used by the team (Pull Requests, Code Review, Unit Tests, etc...) to assure high quality of the software.

- Building a Modular Monolith architecture with each module is about a bounded-context with clear interface with the other modules.
- Participated in the Architecture and Design of the Tamm Platform.
- Co-Designed and implemented [jasync](#) concurrency library on top of Java 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](#).

### Architecture and Presales Team

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

Successfully delivered multiple winning proposals.

### Muqeem

Muqeem service allows organizations to review its resident workers data and complete their transactions online, anytime and anywhere.

We've built the next generation of Muqeem based on the *Microservice Architecture* using Spring Cloud.

### 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 Elm Billing System and PTA billing System.

### Mojaz

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 Elm Billing System.

### ETV

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

Basher service allows traffic officers from registering accidents and violations and queries about them.

### Technologies used including

Java (up to [jdk17](#)), Kotlin, [Spring framework](#), [Spring Boot](#), [Spring Cloud](#), [Netflix OSS](#), [Hibernate](#), [EJB](#), [PrimeFaces](#), [Angularjs](#), [Angular](#), [Redis](#), [RabbitMQ](#), [Apache Camel](#), [Apache cxf](#), [Apache Tomcat](#), [JBoss AS](#), [KeyCloak \(IdM\)](#), [3Scale](#), [Openshift](#), [SQL Server](#), [Bitbucket](#), [JIRA](#), [Bamboo](#), [Jenkins](#), [ArgoCD](#), [helm](#) 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.

### 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 iOS/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 App

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 staff they need in designing Electronic Circuits.

The work includes investigating on the issue of Search engine optimization (SEO) and crawling for Ajax Applications.

### *Technologies used including:*

EJB, 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, Apache Tomcat, Spring-jms, git, IntelliJ IDEA, Eclipse, JIRA, Jenkins and YouTrack.

## 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.

- I was responsible for design and implement payment 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*

*Sep 2007 - Very Good*

## Certifications

AWS Certified Solutions Architect – Associate

Aug 2020

License: [SAA](#)

TOGAF® 9 Certified

Jan 2020

License: [140538](#)

DevOps Leader

April 2019

License: [GR685000296MH](#)

Certified Kubernetes Application Developer

Jun 2020

License: [CKAD-2000-004804-0100](#)

TOGAF® 9 Foundation

Nov 2019

License: [603233](#)

DevOps Foundation

April 2019

License: [GR797009838MH](#)

## Skills

- Good understanding of OOP & Functional style programming.
- Good understanding Test Driven Development and Unit, Integration, E2E Testing.
- Agile Methodologies - Scrum, Kanban.
- Good understanding of type theory and the programming paradigm.
- Good knowledge in Linux Configuration & shell scripting.
- Basic understanding of the some compilers architecture, e.g. [GCC](#), [LLVM](#), [GraalVM](#) and others.
- Distributed Programming, messaging, stream processing and data pipelines ([RabbitMQ](#), [Kafka](#), [JMS](#) and [Apache NiFi](#)).
- Good background in Web Services (SOAP-based and REST) and [XML](#) ([SAX](#), [DOM](#), [XSLT](#), [XPath](#)).
- Experience Mobile Programming (Android / iOS).
- 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 golang and kotlin.
- Basic knowledge Linux programming (syscalls, 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 and experience about NoSQL solutions such as [MongoDB](#), [Redis](#), [Cassandra](#) and [Couchbase](#).
- Experience with Searching solutions ([Apache Lucene/Solr](#)).
- Familiarity with Big Data and Stream processing solutions such as [Apache Hadoop](#), [Hive](#), and [Apache Spark](#).
- Experience in different RDBMS - [Oracle](#), [SQL Server](#), [MySQL](#), [PostgreSQL](#).
- Basic understanding of Unicode and other related char encoding standards.
- Basic understanding of OSI model and related protocols ([TCP](#), [UDP](#), [DNS](#), [ARP](#), [FTP](#), [SSH](#), [TLS](#)), and basic knowledge about networking tools like iptables, wireshark, tcpdump, and more.
- Understanding of [OIDC](#) and [OAuth 2.0](#) protocols.
- Good understanding of digital cryptography.
- Hands-on experience in [Jenkins](#), [Ansible](#), [Bitbucket](#) pipelines, [Docker](#), [Docker Compose](#), [Kubernetes](#), [k3s](#), [GCP](#) and [AWS](#).
- Basic knowledge about Data analysis using Python [Pandas](#).

## Technical Reviews

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



## Open Source Projects

- [Spring Data JPA MongoDB Expressions](#)  Allows you to use the MongoDB query syntax to query your relational database.
- [ci-pipeline](#)  Opinionated Devops Pipeline in YAML based on Jenkins.
- [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.
- [meego](#)  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.

## Kubernetes in Arabic (belaraby) (Co-founder)

*July 2020 – Present*  
*Riyadh, Saudi Arabia*

Where we discuss topics related to Kubernetes and its ecosystem

# Languages

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