


# Mohammad Hewedy

## Solutions Architect

A confident, self-motivated software architect with more than 13 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 / Team Leader / Solutions Architect

#### 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.

#### 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 library 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](#).
- 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. Successfully delivered winning proposals.

### Muqeeem/Premium Residency

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 Muqeeem using *Microservice architecture*.

### 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

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

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 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

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, EJB, PrimeFaces, AngularJS, Angular, Redis, RabbitMQ, Apache Camel, Apache CXF, Apache Tomcat, JBoss AS, Keycloak (IdM), 3Scale, OpenShift, SQL Server, 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.

### 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 stuff 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

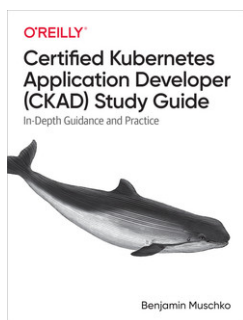
- Good understanding of OOP & Functional style programming.
- Behavior / Test Driven Development - Unit, Integration, E2E Testing.
- Agile Methodologies - Scrum, Kanban.
- Good understanding of type theory and the programming paradigm.
- Good knowledge about JVM ecosystem (Kotlin, Groovy, and Scala).
- 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 (JSP8Servlets, Struts, JSF, Freemarker, MVC, Front-Controller, etc).
- Distributed Programming (App Servers, EJB and JNDI) and messaging (RabbitMQ, Kafka, JMS, Apache Camel).
- A good background in Web Services (SOAP-based and REST) 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 golang and kotlin.
- Basic knowledge Linux programming ([syscalls](#), 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 different RDBMS - [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, 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](#).
- Understanding of [OIDC](#) and [OAuth 2.0](#) protocols.
- Basic knowledge about Machine Learning

## 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 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.
- [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