# Khalid Alnuaim

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**GitHub** https://github.com/kaluaim/

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Experience

## **Graduate Teaching Assistant**

Worcester Polytechnic Institute

August 2021 - Present

Assisted students in the graduate courses "Design of Software Systems" and "Big Data Management," in addition to grading students' assignments and projects.

#### Software Engineer Intern

Nokia Bell Labs

June 2023 - August 2023

Architected and developed a companion app for a personal monitoring device. This app is compatible with Android and iOS using Kotlin Multiplatform. It's responsible for handling various monitoring tasks and efficiently loading and unloading machine learning models onto the device. Additionally, the app takes care of user preferences and provides a user-friendly interface for viewing and storing historical data.

## Software Engineer Intern

Nokia Bell Labs

June 2022 - August 2022

Built a fully functional simulator for Nokia Environmental Monitoring (NEMo). The simulator can simulate +100 devices, and each device works independently as if working in a real-world environment. In addition, the simulator can run with different strategies: replaying previous events stored in InfluxDB, reading actual data from various APIs, or running based on descriptive profiles.

#### **Solution Architect**

Saudi Authority for Intellectual Property

November 2019 - January 2021

Stabilized the authority's portal and optimized the performance and security. Designed and implemented in-house solutions. Provided consultation and support for other teams and developers in the authority.

#### Software Engineer

King Faisal Specialist Hospital and Research Centre

November 2013 - November 2019

Developed applications for different platforms: Web applications using JavaServer Faces, console applications using Java and iOS applications using Objective-C.

## Software Engineer Intern

RVEALR

February 2018 – May 2018

Prototyped a client dashboard and REST API back-end, with multiple views and functionalities, to allow the client to manage and monitor the resources.

## Software Engineer Intern

TURBO Studios

September 2017 - January 2018

Developed a connection to AWS in a supporting tool (Admin Tools) which perform multiple AWS related actions. In addition to Improving and fixing bugs in Spring Framework back-end system.

## Software Engineer Intern

King Faisal Specialist Hospital and Research Centre

June 2012 - August 2012

Enhanced Emergency Management System (EMS) by adding administrative features to allow the administrator to configure and set up the emergency unit.

#### Education

#### **Worcester Polytechnic Institute**

Ph.D. In Computer Science (2020 - Present)

#### Stevens Institute of Technology

M.S. In Computer Science (2017 - 2018)

#### **Imam University**

B.S. In Computer Science (2008 - 2013)

## **Projects**

#### Various Big Data analytics projects

Developed many MapReduce jobs for massive datasets on HDFS to perform spatial join, detecting outlier based on distance, and performing K-Means clustering. Also developed many Spark workflows to perform indexing of high relative density of grid cells, generating the Frequent Pattern Mining using the Apriori algorithm and producing progressive approximate answers for aggregation queries. In addition to creating a variety of Apache Pig queries and Apache Hive scripts.

## Various full-stack development projects

Developed many full-stack projects for different areas (Healthcare, Education, Social, and others) using multiple technologies for front-end like React, Vue.js, JQuery, and Vanilla JS. And multiple technologies for back-end like Spring Boot, Express.js, and Flask. That interacts with different data sources like SQL, NoSQL, REST API, and GraphQL. And communicate with other services like ActiveMQ Artemis and Keycloak.

More projects https://kalua.im/projects/

#### Awards & Achievements

## Winner Best Hack Using a NYC API

HackNY Hackathon Spring 2017

Intel, MongoDB, Twilio and others

https://devpost.com/software/mansplaintome

## Winner Most Original Project

DuckHacks Hackathon 2017

Google and JPMorgan Chase & Co.

https://devpost.com/software/duckhacks-share-your-taste

#### Certificates

## **Advanced Study in Software Construction**

Massachusetts Institute of Technology

http://web.mit.edu/6.031/www/fa19/

## **React Nanodegree**

Udacity

https://confirm.udacity.com/563VRG2S

#### A developer's guide to the Internet of Things (IoT)

Coursera (9J6KF7RTGT3H)

https://www.coursera.org/account/accomplishments/verify/9J6KF7RTGT3H

## **Red Hat Certified System Administrator**

Red Hat (140-006-149)

https://www.redhat.com/rhtapps/certification/verify/?certId=140-006-149

#### Skills

Languages TypeScript, Java, Python, JavaScript, Kotlin, Objective-C

Frameworks Express.js, Spring Boot, Flask
Frontend React, Vue, HTML5, CSS3

Infrastructure SQL, NoSQL, Node.js, RabbitMQ, GraphQL, InfluxDB, etcd,

Redis, Hadoop, Spark, Pig, Hive

