

# JOEL DEAN

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Kingston, Jamaica | Timezone: EST | 876-316-1395 | [MRJOELDEAN@OUTLOOK.COM](mailto:MRJOELDEAN@OUTLOOK.COM)

Experienced Remote Software Engineer & Manager with good OOP skills, excellent skill set in Android Development and .NET Web Systems. Proficient in Xamarin Development and Test Driven Development.

## SKILLS

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- *Languages:* C#, Java, PHP, Kotlin
- *Android Related:* Retrofit, Picasso, OkHttp, Mockito, Espresso, Google Play Services
- *Web Frameworks:* ASP.NET MVC | Web API | Web Forms
- *General Toolkit:* Unity, Entity Framework, Simple Injector, JUnit, NUnit, Gradle, Maven, ReSharper
- *ALM:* Visual Studio Team Services, SVN, Git, Circle CI, Firebase Test Labs.
- *Storage:* MSSQL, MySQL, PostgreSQL, SQLite, Azure SQL, Realm.

## PROFESSIONAL EXPERIENCE

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**Senior Software Engineer**, NAFUNDI, SAN DIEGO • Remote

March 2018 – October 2018

**Sector:** Mobile Forms and Data Collection

- Executed a short-term contract to create a SMS submission protocol for ODK Collect that would allow for mobile forms to be compressed and submitted over SMS via gateways to servers and mobile devices for use in challenging environments that lack internet connectivity but require time-sensitive data submissions.
- Performed extensive code reviews on pull requests submitted from a community of over a hundred contributors.
- Assisted in maintaining several repositories within the Open Data Kit ecosystem that helps to support over a million users in over fifty countries with translations in over forty languages.
- Contributed to the governance of the community by participating in technical meetings, user support via a community forum and the creation of product design and PR templates.
- Performed several refactoring efforts on legacy Java codebases that consisted of over 20K LOC written over the span of 8 years.
- Was instrumental in contributions made towards the user interface and experience of the ODK Collect Android app by enforcing several Material Design principles and proper product development processes with the use of low fidelity sketches and high fidelity mockups designed with Photoshop.
- Improved the test coverage and testability of the of the application's architecture by writing unit and integration tests with Dagger, Mockito, Robolectric, and Espresso.

**Mobile Software Engineer**, DEVICE MAGIC, NORTH CAROLINA • Remote

May 2016 – March 2018

**Sector:** Mobile Forms and Data Collection

- Orchestrated several engineering models, plans and architecture to support the wide array of features for the company's main product, a mobile forms solution.
- Was instrumental in redesigning the entire user experience of the app by working with a team of designers to convert several high-quality PSDs to actual working Android UI that adhered to the Material Design specification by writing several custom UI controls and animations and utilizing existing open source contributions.
- Combined my knowledge of math and physics to create interesting experiences ranging from Spring based menus, views capable of accepting signatures/sketches, custom deck based layout manager for forms.
- Created a testing infrastructure using Espresso UI Testing and several other popular Android Testing tools such as spoon that runs tests on Circle CI and Firebase Test Labs so that the app is reliably being deployed to over 25K active users on Google Play.
- Contributed to the company's open source strategy by writing a library in Kotlin and publishing it on Github.

**VP of Engineering**, YARDCODE STUDIO, JAMAICA • Remote

Dec 2016 – July 2017

**Sector:** Digital Signage

- As the VP of Engineering, I supervised the creation of several engineering models, plans and architecture to support the wide array of products that Yardcode Studio has built.
- Developed the Digify Queue platform which consists of a Web App, Android TV app and a desktop app.
- Designed and modelled the database to support all entities required for Digify, the digital signage Android TV platform, using Realm database technologies and job queues.
- Utilized several media APIs in Android to create the functionality that allowed the playing, pausing, skipping and seeking videos and pictures.
- Created a dynamic, event-based download and playback management platform inside the Android TV solution that allowed videos to be started on startup, resuming of downloads, queuing of downloads and the ability for all the respective background services and jobs to communicate with the UI layer using an event bus.

**CTO**, WAKE SOCIAL, JAMAICA • Remote

Jan 2015 – Jan 2016

**Sector:** Entertainment

- Designed and modelled the database to support all entities required for a social alarm, using Entity Framework and its Code First Approach.
- Created the Server Infrastructure using the Onion Architecture which ensures proper separation of concerns and leads to a more maintainable system.
- Created an Audio Service layer using FFmpeg and Azure Blob Storage that allows recordings to be uploaded and then combined with beats and effects.
- Created a Web API layer which allowed the Android application to communicate via a restful interface.
- Developed and designed the entire architecture and feature set of the Android app.

- Utilized several push notifications solutions such as GCM, Pusher, Azure Push Notifications hubs to allow real-time communication between friends when setting alarms and sending multimedia.
- Extensive use of the MediaRecorder and MediaPlayer APIs to create functionality that allowed users to record audio, play beats and perform the playback of both at the same time using Java's CyclicBarrier.

**SOFTWARE ENGINEER, MENTOR, LAS VEGAS • Remote**

Sep 2015– Jan 2016

**Sector:** Video Streaming and Messaging

- Lead a team of two engineers to design and implement the feature set for a real-time video streaming platform that allows individuals to access mentors in real time.
- Configured and administered video streaming servers such as Red5Pro, Wowza Streaming Server and OpenTok to facilitate different levels of broadcasts.
- Created an Android app which was a client that was capable of streaming video to the streaming servers via RTMP, HLS, WebRTC while also playing back existing streams of similar formats.
- Planned and architected backend infrastructure using ASP.NET Web API, ASP.NET Identities, Simple Injector, and NUnit, Pusher to facilitate the management of users, sessions, schedules and messaging.

**SOFTWARE ENGINEER, NORTHERN CARIBBEAN UNIVERSITY, JAMAICA**

Oct 2013– Jan 2014

**Sector:** Education

- Worked with internal stakeholders to improve the user experience and interface of a Learning Management Platform used by over six major institutions in the Caribbean.
- Orchestrated the design and implementation of an Android application that extends the functionality of existing in-house learning management system which improves accessibility for students.

**TEAM LEAD and MOBILE DEVELOPER, POTHOLE POSITIONING SYSTEM, JAMAICA**

June 2012 - August 2013

**Sector:** Business & Enterprise Mapping Solutions

- Lead a software engineering team of four engineers and one designer to assiduously design and collaborate to complete the solution.
- Contributed to the designing of the system architecture for interoperability with multiple client applications (Web application, Android, IOS etc.) using a Service Oriented Architecture.
- Created an Android and Windows Mobile app that was able to map potholes using the accelerometer, GPS and several other sensors that are equipped with the mobile device.

## MY OPEN SOURCE LIBRARIES

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**LIKE BUTTON** - 2,396 stars, 326 forks

December 2015

An Android library that allows you to create a button with animation effects similar to Twitter's heart when you like something. This library topped the Java Trending list in December 2015.

(Animation Framework, Gradle, JitPack)

**GOOGLE DIRECTIONS ANDROID** - 844 stars, 360 forks

2013

An Android library that allows you to calculate the direction between two locations and display the route on a Google Map using the Google Directions API,  
(Google Directions API)

**FLENDER** - 81 stars, 11 forks

July 2015

Annotation triggered connectivity checking for Android using Aspect Oriented Programming.  
(AspectJ, Maven)

See more information about these projects and other contributions on Github: <https://github.com/jd-alexander>

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## ACHIEVEMENTS

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### COMPETITIONS

2012 – Digital Jam 2.0

- 1<sup>st</sup> Mobile Apps Competition
- 1<sup>st</sup> Crowd Choice Award
- 2<sup>nd</sup> USAID Development Award

2009-2013 – Northern Caribbean University, Bachelors in Computer Science

- Dean's List (Cum Laude) – 3.61 GPA



