

# MICHAEL CAI

3A Electrical Engineering  
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## SKILLS

- Development experience with **React Native**, **Java**, **JavaScript**, **GO**, and with **Espresso** automation.
- Familiar with web development using **HTML**, **CSS**, **JavaScript**, and **Python**.
- Tools & Frameworks: **Android SDK**, **Bluemix**, **MySQL**, **RESTful API** and **Git**.

## EXPERIENCE

### MOBILE SOFTWARE ARCHITECTURE INTERN | IXM DIGITAL INNOVATION LAB, IBM CANADA LTD.

Jan - May 2017 | Toronto, ON

- Designed and architected an internal employee rewards mobile application using a cryptocurrency realized on **IBM Blockchain**.
- Created and utilize a **REST** based JavaScript library for integration with **Hypderledger Fabric v0.6** chaincode. Implemented core Blockchain functionalities using **Go**.
- Built a native mobile application and developed core application features and structure using **React Native** with integration of native platform modules on **iOS** and **Android** operating systems.
- Create a **NodeJS** backend for communications between **Slack**, **Bluemix Services** and the application frontend.

### AGILE SOFTWARE ENGINEER | ENGINEERING, PIVOTAL LABS.

May - Aug 2016 | Toronto, ON

- Developed the **Ford** Android application and boosted app downloads by **30%** and achieved a **4-star** rating in the Play Store.
- Improved network performance **2x** by implementing reactive programming practices with **RxJava** and **RxAndroid** and caching systems to reduce load on the main thread.
- Designed and developed with the **Model-View-Presenter** architecture to separate business logic from Android and allow for the development different build variants.
- Maintained the code base by designing **Robolectric** unit tests and used **Dagger** with **Mockito** to efficiently find dependency errors earlier in compile time.

### TECHNOLOGY DEVELOPMENT ENGINEER | DISTRIBUTION AND ASSET MANAGEMENT, HYDRO ONE INC.

Jan - May 2015 | Toronto, ON

- Identified and developing key tools for effective decision making for the transmission and distribution businesses and recognized factors such as economics, performance and risk
- Archived and documented technical business information for aging equipment using **SAP** and other methods and tools are to help with decision-making for managing aging equipment and systems
- Created an automation script for PSS/E program, **InfoExtract**, with **C#** for data collection and analysis

## PROJECT EXPERIENCE

### TINGIT

Sept 2016 - Present | Android Application.

- An **Android** app based on Pockethub which allows a mobile friendly view of Github source codes and repositories with unique feature for viewing pull request and accepting issues.
- Utilized **Retrofit** and **Github API** with **RxJava** and to pull data, all on a beautiful **material design** interface.

### INFOEXTRACT

Jan - May 2015 | Independent Project | Hydro One Inc.

- Proposed, developed and tested a computer application that would enable user to extract data of a specific type and preform analysis on the data collection
- Made using **C#** for PSS/E Load Flow and PSS/E Harmonic Frequency Scanner Tool

### ELECTRICAL DESIGN ENGINEER

Sept - Dec 2014 | UWaterloo Hydrid Team.

- Used **Altium Designer** to create schematics of circuit boards and collaborated with team to build the entire electrical network of the electric car
- Involved in building circuits, soldering, and the use of many tools from wiring insulating compressors to power tools

## EDUCATION

SEPT 2014 - PRESENT | UNIVERSITY OF WATERLOO

- Bachelor of Applied Science in Electrical Engineering (GPA: 3.6/4)