MICHAEL CAI

4A Electrical Engineer

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SKILLS

- Languages: **Java**, **C/C++**, **JavaScript**, **Python**, **HTML**, **CSS**, **SQL**, **Golang**
- Tools & Frameworks: **React/React-Native**, **NodeJS**, **MongoDB/CouchDB**, **IBM Bluemix**, **Git**, **Tensorflow**

EXPERIENCE

SOFTWARE CONSULTANT INTERN | IBM CANADA LTD

Jan - May, Sept - Dec 2017 | Toronto, ON

- Led a multi-disciplined team in a full-stack application development project, from scratch to full-fledged production under strict scheduling, adapting to new technologies and training others accordingly
- Architected a simple and scalable end-to-end system composed of a **NodeJS** backend, **Slack** chatbot, **Bluemix Cloud Services** and reduced application development time by **50%** by learning and integrating **React Native**
- Created a **RESTful API** for simple and efficient communication and integration with **Hyperledger**'s blockchain frameworks
- Hosted effective correspondences and technical presentations to help inform and create solutions for clients and senior executives in the conversational commerce space

AGILE SOFTWARE ENGINEERING INTERN | PIVOTAL LABS

May - Aug 2016 | Toronto, ON

- Developed the **Lincoln/Ford** Android app and boosted downloads by **30%** and achieved a **4-star** rating in the Play Store
- Improved application performance by implementing reactive programming with **RxJava** and **RxAndroid**
- Designed and developed with the **Model-View-Presenter** architecture and used **Dagger** for dependency injections

AGILE AUTOMATION ENGINEERING INTERN | PIVOTAL LABS

Sept - Dec 2015 | Toronto, ON

- Developed automation tests for various **Android** applications using **Espresso** and logged with **Pivotal Tracker** and **Jira**
- Performed exploratory testing on mobile devices in an **Agile/Extreme Programming** environment

PROJECTS

TESTIFY - INTERVIEWING DONE RIGHT!

May 2018 - Present | Fourth Year Design Project

- All-in-one service to facilitate take-home coding tests, eliminating the juggle of applicant data across scattered services
- Proceeded based on design tradeoffs for web-based platforms such as **Ember**, **React** and **Angular**, oriented towards optimizing architecture flexibility, logic separation and rendering speed

NAMETHATNUMBER

April 2018 - Present | Machine Learning Project

- Designed neural networks using genetic algorithms with graph generation systems to recognize grayscale images of handwritten digits from **MNIST** data set
- Implemented a proof-of-concept two-layer convolutional neutral network trained using the **Keras Sequential Model** and interfaced with **Tensorflow**

RIDEBUDDY

Jan 2018 - Present | Mobile Application

- Designed and developed an **Android** and **iOS** application for university ride-sharing and carpools
- Mobile application built using **React-Native** and a **Python** server, integrating **Facebook** and **Twilio**

INFOEXTRACT

Jan - May 2015 | Windows Application | Hydro One Inc.

- Designed and created a Windows script using **C#** to sort and execute research data extraction tasks systematically, reducing process time by **95%**

EDUCATION

SEPT 2014 - PRESENT | UNIVERSITY OF WATERLOO

- Bachelor of Applied Science in Electrical Engineering (GPA: 3.7/4.0)
- **Relevant Courses:** Data Structures and Algorithms, Computer and Communication Networks, Cooperative and Adaptive Algorithms, Operating Systems and Systems Programming