RICKY MAO

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EDUCATION

University of Waterloo   Sept. 2019 - Apr. 2024
B. Eng Software Engineering 2024
GPA: 3.5
ECE Coursework: Circuits and Systems
Computer Science Coursework: Algorithms and Data Structure, Programming Principles

PROJECTS

Jokes Lab Android App   Dec. 2016 - Jan. 2017
- Joke Lab is an Android application made with Java. The app randomly generates jokes that are locally saved and displays them for the user to enjoy or share.
- Implemented Core Animation, so random emoji's would smoothly bounce out when a joke is generated.
- Used MVC design pattern
- Integrated banner ads for monetization
- <u>Utilized</u>: Java, Core Animation, and Admob

BCSS Wildcats iOS App   Dec. 2018 - Current
- BCSS Wildcats is an iOS application made with Swift. The app is currently helping students manage their academics while also giving them easy access to real-time updated information regarding events, teacher contacts, and more
- Implemented Firebase's JSON database to allow for updates made by administration
- Incorporated MVC and delegate design patterns
- Integrated local persistent storage with Core Data to allow students to keep track of assignments and more
- <u>Utilized</u>: Realtime Databases, Swift, Persistent Data, and Cocoapods

Self-Operating Forest Fire Research Drone   Sept. 2019 - Dec. 2019
- Helped developed and design a drone that automatically seeks for areas of forest fires, and automatically take photos of the proximity. From there, we stitch the pictures together and generate a heat map around the fire
- Designed and developed the heat map generator in Python by using Matplotlib and Seaborn
- The heat map generator uses data points collected by the drone sensors and organizes them into data frames, so it can be used by the libraries
- <u>Utilized</u>: Matplotlib, Seaborn, and Python

SKILLS

PROFICIENT LANGUAGES AND TECHNOLOGIES: C, Java, Swift
FAMILIAR LANGUAGE AND TECHNOLOGIES: Firebase, HTML, CSS, Python

VOLUNTEERING

TEDxYouthDeerLake, *Director of Technology*   Sept. 2018 - June 2019
Burnaby, BC
- Developed and designed a fully responsive website for the Breaking Barriers event hosted by TEDxYouthDeerLake with CSS, HTML, and basic Javascript
- Played a prominent role in delegating and cooperating with other members of the organization when planning out the event's logistics and choice of speakers

Science World, *Robotics Volunteer*   Sept. 2017 - May 2019
Vancouver, BC
- Aided the teaching of basics in robotics and programming at an advanced robotics club (age 8-11) organized by the non-profit organization Science World
- Curated and helped prepare lessons with regards to the programming language Robot C. These lessons taught topics on robotic sensors and motors.