

# MICHAEL KWOK

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🐙 n30phyte

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📍 Edmonton, Alberta

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## EDUCATION

BSc. Computer Engineering

University of Alberta

📅 September 2017

📍 Edmonton, AB, Canada

## WORK EXPERIENCE

Contract App Developer

AdMore Lighting Inc

📅 4 August 2020 – 31 December 2020

- Worked part time as a developer for an app that controls motorcycle lightbars, including firmware updates and configuration over Bluetooth Low Energy.
- Improved modularity by splitting up large widgets, and replacing redundant ones with built-ins.
- Improved app performance by removing busy loops and using Dart async features.
- App is currently awaiting approval on the Apple App Store.
- Replaced unmaintained BLE library with a modern one.
- **Technologies:** Dart, Flutter, Firebase, Protobuf, Bluetooth Low Energy

## PROJECTS

Rustracer

📅 15 Aug 2020 – 16 Aug 2020

🐙 n30phyte/rustracer

- A simple raytracer written in Rust completed mostly within 24 hours with small optimizations over the following week.
- Was a vehicle to learn the language while doing something interesting.
- Got to grips with using AMD uProf for profiling, Rayon for multi-threading and Rust for general programming.
- **Technologies:** Rust, Rayon

BudgetPacman (Hackathon Project)

📅 19 Jan 2020

🐙 loravocado/BudgetPacman

- A project for HackED 2020 with the goal of making a version of tag that used a phone and GPS locations.
- Implemented a server using Socket.io and Typescript, learning both technologies overnight.
- **Won:** Best Use of Google Cloud Platform APIs.
- **Technologies:** React Native, Typescript, JavaScript

AI Pong (Hackathon Project)

📅 28 November 2018

🐙 n30phyte/HackEDBeta2018

- Written during HackED Beta 2018, a hackathon hosted by the University of Alberta Computer Engineering Club.
- First non-toy program in C++, using SFML to write a Pong clone to be controlled by a Python AI agent.
- Experienced becoming a leader for programming project.
- **Technologies:** C++, SFML, Python, Keras, TensorFlow

## TECHNOLOGIES & PROGRAMMING LANGUAGES

Proficient

C++ Python Java C#  $\LaTeX$  SQL  
CMake Git Flutter Google Test

Familiar

MongoDB C Rust JavaScript VHDL  
React SFML Firebase Ghidra

Interests

- Currently learning about systems programming and backend services.
- Computer Graphics and Computer Architecture are some things that I'd like to know more about.

## VOLUNTEERING

VP Finance

Indonesian Students' Association Edmonton  
PERMIKA Edmonton

📅 January 2019 – December 2020

- Helped restart the chapter after 2 years of inactivity due to lack of manpower.
- Manage finances and budgeting for events and fundraisers.
- Successfully budgeted a fundraisers that allowed us to operate comfortably.
- Secured funding in the form of grants and sponsorships that allowed our group to grow.

Software Team Member

Autonomous Robotic Vehicle Project

📅 May 2018 – December 2019

- Increased productivity by writing scripts that help automate various repetitive tasks, interfacing with Google App APIs, GitHub's API and simulation scripts for ROS in C++ and Python.
- Improved test coverage for robot's control systems by writing Google Test unit tests in C++.
- Updated toolchain migrated code from 5 year old tools, improving build times and allowing the Computer Vision team to use modern libraries.
- Updated legacy undocumented code in Mission Planning program to fix issues and add features.