# Alex Klemenchuk — Embedded Developer

Seattle, Washington, United States

☐ +1 425 496 0126 • ☐ alex@alextech.cc • ⑤ alextech.cc • ⑤ alextech.cc

Broad experience in low level software, and a keen interest in building embedded devices.

# **EDUCATION**

#### University of Toronto Mississauga

HBSc - With High Distinction - Computer Science Specialist

GPA: 85.6/100

Mississauga, Ontario, Canada

June 2019

#### **EXPERIENCE**

### **Embedded Software Engineer II**

Seattle, Washington, USA

Amazon

March 2020 - September 2022

Halo Devices (7 months)

- O Developed customer facing features on an ARM-based fitness smartwatch.
- Rearchitected build workflows and rewrote build/flash/debug/test developer documentation.

- O Contributed to internal software development kit which assists in the development of saftey-critical algorithms, and simulation for avionics platforms.
- Contributed in planning overall software development strategy.

(C, C++, RTOS, SDK Development, Agile)

# **Embedded Display Software Engineer**

Markham, Ontario, Canada

Qualcomm Canada

October 2019 - April 2020

- Enabling, debugging, and verifying hardware features on Windows display drivers for mobile ARM SoCs using protocol analyzers and hardware debuggers.
- Collaborating with internal and external teams in order to deliver features in a timely manner.

(C, C++, Driver Development, Software Architecture)

# Firmware Developer Co-Op

Waterloo, Ontario, Canada

Cognitive Systems

May 2017 - December 2017

- Created efficient software implementation of WiFi 802.11g PHY layer transmitter on resource constrained custom vector processor with test suite involving remotely instrumenting spectrum analyzers.
- Created Linux kernel driver patches and improved speed and sensitivity of LTE cell detector.

(C, Python, Matlab, RF Encoding, Embedded Systems)

## Open Source Project Work Course (ReviewBoard.org)

Mississauga, Ontario

Beanbag, Inc.

September 2018 - December 2018

- O Developed plugins, feature additions and bug fixes to the web back-end and front-end with consistent code style, documentation, and test suite.
- Maintained consistent code quality through collaborative code review, and produced demo videos of features. (Code Review, Python, Django, Backbone.js)

#### ACADEMIC FOCUS

#### AWARDS AND ACHIEVEMENTS

Embedded Systems

Compilers

- Networking
- Computer Graphics
- Systems Programming
- Parallel and scalable
- Machine Learning, Image Understanding
- programming

Math & Computational Sciences Honor Roll - University of Toronto

- O Gamma Award (3 CS Courses 90%+): 2018-2019
- O Gamma Award (3 CS Courses 90%+): 2017-2018
- O Gamma Award (3 CS Courses 90%+): 2016-2017
- O Delta Award (2 CS Courses 90%+): 2015-2016

Dean's List Scholar - University of Toronto

# PERSONAL PROJECTS

### PebbleMIDI - github.com/alextechcc/PebbleMIDI

2019

Pebble Smartwatch and Android app that forwards accelerometer and button press data from the watch as MIDI over USB to control audio effects while playing an instrument.

#### Taco Compass - github.com/alextechcc/taco\_compass

2018

A plush taco that acts as a compass pointing at the nearest taco restaurant. Uses a Raspberry Pi, 3D printed parts, homemade PCB, USB GPS, 9-DOF motion sensor, and scraped Google Places API data.