

Brendan Arciszewski

www.brendanarciszewski.ca

Summary of Qualifications

- Designing APIs in C, C++, & Python for use in embedded systems, by users and developers
- Discovering documentation; using CLIs, RPCs, *nix systems, Microsoft Office and Microsoft Windows

Experience

Apple

Remote

Cellular Protocol Software Engineering Intern

January 2021 - Present

Infinera

Ottawa, ON

Firmware Engineering Intern

May 2020 - August 2020

- Designed intuitive interfaces to embedded devices, so that users can quickly identify and report device configuration and programming errors—by connecting to drivers using gRPC and Protocol Buffers in C++
- Automated and consulted on QA tasks by parsing and retaining additional information, enabling standardized reports; made debug info more easily accessible for both testers and supervisors
- Reduced surface area of software regressions by identifying opportunities and requesting time to create fixes

Government of Canada

Ottawa, ON

Software Developer

September 2019 - December 2019

- Automated validation of a tunable capacitor by building a Linux SPI program in C, with defensive programming, unit tests, mocks, Valgrind, and debuggers (eg. GDB) to ensure correctness and memory safety
- Performed package upgrade to reduce build configurations after evaluating size, build, and runtime cost of dependencies; created custom Buildroot package in embedded codebase
- Tracked hardware by creating a Raspberry Pi GUI with barcode scanner and touchscreen inputs, using Qt QML

Software Developer

January 2019 - April 2019

- Prevent incorrect builds and automate software Quality Assurance (QA) by analysing and improving interface description (IDL) files, using Test-Driven Development (TDD) and Jenkins Continuous Integration (CI)
- Reduced execution time by 80% (to under 10s) to improve user experience (UX) by incorporating caching into a Django, AngularJS, Bootstrap, jQuery, and Flask web application
- Designed an OpenAPI-described REST service, using Python, to communicate a standard API to many endpoints

Electrical Contacts Ltd.

Hanover, ON

Manufacturing Engineering Intern

April 2018 - August 2018

- Debugged PLC setup, discovered problems, and then consulted with colleagues to implement solutions
- Consulted operators and led meetings with management to fix manufacturing process problems
- Gathered data, created plans using Excel, and wrote SOP to categorize costs, lead times, and improve processes

Engineering Student Teams

President (Robot in 3 Days Team Ontario) & Technical Lead (FIRST Robotics Team 781)

- Used control theory with OpenCV, encoders, and IMUs to control drivetrains and shooting systems
- Designed and built a robot to follow lines and play sound based on grayscale output within a team of five
- Comprehensively documented the robot, its design and strategy process, including the Gantt chart and BoM
- Worked with other leaders to debug Java, co-lead move to Git, mentor and develop strategies

Education

University of Waterloo

Waterloo, ON

Honours Mechatronics Engineering, Co-op (BASc)

2017 - 2022 (Expected)

Certifications & Awards

May 2017

Diplôme d'études en langue française (Niveau B2)