Brendan Arciszewski

www.brendanarciszewski.ca

Summary of Qualifications

- Programming in C, C++, & Python in embedded systems; used control theory with IMUs and vision systems
- Using *nix systems, Microsoft Office, and Microsoft Windows
- Designing with SolidWorks, and AutoCAD; prescribing GD&T; manufacturing with Mastercam

Relevant Experience

Government of Canada — *Ottawa, ON*

Software Developer — *September 2019 - December 2019*

- Designed and programmed Linux SPI command-line program for a tunable capacitor to automate physical testing
- Debugged package dependencies and coordinated upgrades in an embedded codebase with Make and Buildroot
- Developed a Debian-distributed Raspberry Pi touchscreen application whose only other input is a barcode scanner; used Qt QML, Python, and a backend REST API
- Unit tested, mocked, and employed defensive programming in C and Python code to check memory safety and network use; verified tests with Valgrind and debuggers

Software Developer — *January 2019 - April 2019*

- Designed an OpenAPI-described REST service, using Python, to communicate a standard API to many endpoints
- Automated software QA by analysing IDL files, using TDD (unit testing) and Jenkins CI to create a build server, to ensure that incorrect builds aren't released
- Reduced execution time by 80% (to under 10s) to improve user experience by using caching in a Django, AngularJS, Bootstrap and jQuery web app

Electrical Contacts Limited — *Hanover, ON*

Junior Manufacturing Engineer, Co-op — *April 2018 - August 2018*

- Debugged PLC setup, discovered problems, and then consulted with colleagues to implement solutions
- Designed and manufactured parts and assemblies using vernier caliper, SolidWorks, and Mastercam
- Consulted operators and led meetings with management to fix manufacturing process problems
- Gathered data and created planning documents using Excel so that information is easily retrieved

Engineering Student Teams — *Ontario*

President (Robot in 3 Days Team Ontario) & Student Team Member — *September 2017 - Present*

- Comprehensively documented the robot, its design and strategy process, including the Gantt chart and BoM
- Programmed, prototyped, and built a competitive base robot to inspire high-school students, with Ri3D Ontario
- Designed and built a robot to follow lines and play sound based on grayscale output within a team of five

Technical Lead (FIRST Robotics Competition Team 781, The Kinetic Knights) — *September 2013 - August 2017*

- Reduced robot mass to 80% of the typical 120lbs by optimizing layout with SolidWorks and DFM
- Worked with other leaders to debug Java, co-lead move to Git, mentor and develop strategies
- Used control theory with OpenCV, encoders, and IMUs to control drivetrains and shooting systems

Education

University of Waterloo — *Waterloo, ON*

Honours Mechatronics Engineering, Co-op (BASc) — *2017 - 2022 (Expected)*

Certifications & Awards

July 2017	SHAD Fellow
May 2017	Diplôme d'études en langue française (Niveau B2)
April 2017	Schulich Leader Nominee