

# Will Donaldson

McMaster University  
Final Year Student

Cell: (705) 543-1625  
Email: [donaldson528@gmail.com](mailto:donaldson528@gmail.com)  
website: <http://www.willdonaldson.ca/>  
LinkedIn: [www.linkedin.com/in/will-donaldson528](http://www.linkedin.com/in/will-donaldson528)

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## HIGHLIGHTS OF QUALIFICATIONS

- Final year student in McMaster Software Engineering & Management Co-op program.
  - 4 Month Engineering Internship at tech startup GymNext.
  - 16 Month IT Applications Developer Internship at Honda of Canada Manufacturing.
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## EDUCATION

McMaster University

*Software Engineering & Management (B.Eng.Mgt.)*

**Expected graduation – May 2022**

- Enrollment in Management option compliments technical studies with core business courses (marketing, accounting, finance).
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## WORK EXPERIENCE

GymNext

*Engineering Intern*

**May. 2021 – August 2021**

- Created and tested a portable Bluetooth timer prototype to add to the GymNext product line.
- Developed schematics and PCB design for the product.
- Designed and 3D printed an enclosure suitable for plastic injection molding to hold the PCB.
- Developed firmware in C to implement hardware buttons, features, and bug fixes on new product while preserving functionality of existing products.
- Completed multiple code changes in Swift and Java for GymNext iOS and Android apps.

McMaster University

*Teaching Assistant - SFWRENG 2XB3*

**Jan. 2021 – April 2021**

- Course name: Software Engineering Practice and Experience: Binding Theory to Practice.
- Course description: Open-ended design of computational solutions to practical problems that involve both theoretical (algorithmic) analysis and implementation; solving computational problems through an experiential approach; revision and version control.
- Lab TA responsible for explaining concepts and assisting students with lab work done in Python.

McMaster University

*Teaching Assistant - SFWRENG 2DA4*

**Sept. 2020 – Dec. 2020**

- Course name: Digital Systems and Interfacing.
- Course description: Memory, binary arithmetic, hierarchical design. Hardware/software co-design and application-specific processors. Interfacing to I/O devices.
- Lab TA responsible for evaluating lab work and assisting students with programming Intel FPGA boards done primarily with Verilog HDL.

Honda of Canada Manufacturing

*IT Applications Development Intern*

**May 2019 – Sept. 2020**

- Deployed and tested Java code changes in production Honda line control and data acquisition software.

- Front end development with Java Swing.
- Backend development of DAO layer using Spring JDBC to connect to IBM DB2 databases.
- Developed a Mitsubishi Unsolicited PLC simulator in Python to facilitate end-to-end QA testing without the use of a PLC.
- Continuous code integration using Git and Agile development with multiple factories across Honda North America IT.
- Development of RESTful Web services that support JSON.
- Implemented IoT communication layer to integrate PLCs with IT systems using Telit deviceWISE, Kepware OPC, and Honda proprietary communication software.
- Provided production support for various IT systems and coordinated with cross functional teams.
- Completed software build testing in QA and Production environments.

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## SKILLS

### *Software*

- Skilled with **Python** and **Java**.
- Experienced with **C/C++**, **VBA**, **Swift**, **JavaScript**, and **React**.
- **Jira** and **Confluence** for Agile development.
- **BitBucket** and **GitHub** for version control.
- **Excel**, **Word**, and **PowerPoint**.
- **Eclipse IDE** for Java and C++ development.
- **MySQL** and **IBM DB2** for backend data integration.
- **AutoCAD Inventor** for 3D modelling, assembly, and simulation.
- **Altium Designer** and **Circuit Studio** for electrical schematic and PCB design.

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## EXTRACURRICULAR ACTIVITIES/ PROJECTS

### McMaster Interdisciplinary Satellite Team (MIST)

#### *Communications Team Firmware Specialist*

**Sept. 2017 – May 2021**

- **NEUtron DOSimetry & Exploration (NEUDOSE) Mission** (More info available at: <http://mcmasterneudose.ca/about/>).
- Developed real-time firmware with C++ to run on communications module embedded microcontroller.
- Implemented device drivers and interrupt handlers to support radio communication on the satellite.
- Designed and implemented multithreaded real-time application logic in C++.