

## Education

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<b>McGill University</b>	(09/2013 - ) BSc. joint major physics and computer science Transcript available upon request.
<b>Winston Churchill High School</b>	(09/2009 - 05/2013) Alberta High School Diploma International Baccalaureate Diploma

## Practical experience

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<b>Course marker</b>	09/2017 -  <i>McGill University</i>  Responsibilities include marking assignments for the course MATH 223, linear algebra.
<b>Research assistant</b>	05/2017 - 08/2017  <i>McGill University</i>  Conducted research in the field of physics under the supervision of Dr. Brigitte Vachon, assisting in the Phase-II upgrade of the ATLAS detector at CERN. Responsibilities included implementing an optimal filtering algorithm on a field-programmable gate array, as well as some data analysis using the ROOT framework. Authored a scientific poster with the design process, as well as the resource usage and performance of the FPGA design.
<b>Communications subsystem specialist</b>	01/2017 - present  <i>McGill Space Systems Group (CSDC team)</i>  Responsibilities include researching and implementing communications protocols, telemetry, and coordinating with the ground station for a 3U CubeSat. Also a liaison between the communications and software subsystems, working on implementing communications code with Kubos on an MSP430 microcontroller.

## Practical experience (continued)

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**Project manager, financial officer**

09/2016 - 04/2017

*McGill Robotics (RoboHacks)*

Responsibilities included coordinating and organizing the event, allocating tasks and resources, and ensuring proper communication among team members. Also responsible for keeping track of expenses incurred throughout the year, preparing projected and final budgets for the academic year, and handling reimbursements.

**Director of technology**

02/2016 - 03/2016

*McGill Robotics (RoboHacks)*

Responsibilities included coordinating and organizing the event, as well as providing consultation related to hardware and electrical components.

**Electrical specialist**

11/2015 - 12/2016

*McGill Robotics (Mars Rover)*

Responsibilities included contributing to printed circuit board design with the use of specialized software (DipTrace), as well as searching for suitable integrated circuits. Also responsible for soldering, testing, and running diagnostics on the circuit boards.

**Research assistant**

06/2014 - 08/2014

*University of Lethbridge*

Conducted research in the field of biochemistry under the supervision of Dr. Steve Mosimann; approximately 35 hours/week. Responsibilities included recording data, protein purification, and running polyacrylamide gels.

**University of Lethbridge high school team member**

03/2012 - 05/2013

*International Genetically Engineered Machines*

Assisted in brainstorming project ideas; researching prospective ideas; doing lab work (culturing cells, performing genetic mutations, and running agarose gels); interacting with the community; and working on the project wiki. Co-authored a scientific poster with results of the project.

**Research assistant**

06/2012 - 08/2012

*University of Lethbridge*

Conducted research in the field of biochemistry under the supervision of Dr. H.J. Wieden; approximately 35 hours/week. Responsibilities included protein purification and creating and presenting a scientific poster.

## Languages

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**Computer languages and software** (Gitlab: [shammamah](#))

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|-----------------|-----------------|---------------------------------------|
| • Python/MATLAB | • VHDL          | • Arduino IDE                         |
| • Mathematica   | • MIPS assembly | • Processing                          |
| • Java          | • Bash          | • DipTrace                            |
| • C             | • $\LaTeX$      | • LTSpice                             |
| • C++           | • HTML/CSS      | • MS Office (Word, PowerPoint, Excel) |
| • ROOT          | • JavaScript    |                                       |

**Spoken languages** English, French, Bengali

## Lab skills

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|--------------------------------|------------------------|
| • FPGA programming             | • Cell culturing       |
| • Printed circuit board design | • Protein purification |
| • Oscilloscope operation       | • Gel electrophoresis  |

## Publications

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[Graphite Publications](#),  
15/09/2016

[The Autonomy Olympics: RoboSub 2016](#)

[Graphite Publications](#),  
14/07/2016

[Redefining Experiences: the Implications of Augmented Reality](#)

[Graphite Publications](#),  
18/03/2016

[Hacking Away at Tech's Borders](#)

[Engadget Public Access](#),  
09/09/2015

[Show me how to use the face book!](#)