

# Marek Strihavka

905 – 525 – 9140 | [strihavka@mcmaster.ca](mailto:strihavka@mcmaster.ca) | [linkedin.com/in/strihavka](https://www.linkedin.com/in/strihavka) | [github.com/strihavka](https://github.com/strihavka)

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## Highlights of Qualifications

- Currently enrolled in level 4 of a 4-year Mechatronics Engineering co-op program at McMaster University
  - Effective analytical and problem-solving skills developed from work on academic projects such as the Rock
  - Climbing Route App & the Signal Decoder Circuit project
  - Excellent leadership, communication and teamwork skills gained through 2+ years of work experiences
  - Laboratory and project experience in designing, simulating, and verifying digital and analog circuits
  - Experience with C++, C, Java, Python, MATLAB, SolidWorks
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## Education

**Bachelor of Engineering, Mechatronics Engineering** **Sept 2019 – April 2023**  
McMaster University, Hamilton ON

- Cumulative grade-point average of 3.8 on a 4.0 scale; Dean's List for all semesters
  - Awarded Faculty of Engineering Entrance Scholarship for academic excellence
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## Experience

**Curriculum Coordinator | Venture Engineering & Science Camp** **Sept 2021 - Present**  
McMaster University, Hamilton ON

- Independently developed projects for students to execute during the summer programs
- Created 3 schematics and PCBs using Autodesk Eagle
- Utilized strong attention to detail when creating project reports and purchase requests
- Improved communication skills while explaining projects to supervisors and instructors

**Instructional Assistant** **Sept 2020 – April 2021**  
McMaster University, Hamilton ON

- Organized and instructed tutorial sections for over 750 students for the Engineering Profession and Practice course
- Provided technical expertise and support to the faculty, instructors, and teaching assistants
- Facilitated design exercises and guided students through inquiry-based approaches

**Software Analyst Co-op** **May 2019 – Aug 2019**  
Thales Rail Signalling Solutions Inc. Toronto ON

- Created, integrated, and programmed a diagnostic tool with Visual Basic for Applications in Microsoft Excel
- Analyzed data logs to verify operating conditions of communication-based train control systems
- Worked in a team of 7 to review specifications and receive feedback to improve system functionality
- Trained employees on the use of the diagnostic tool; further developing communication skills
- Developed engineering management abilities through planning and implementing product requirements

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## Extracurricular Activities

### Student Member | McMaster Sumobot Club

2020 - Present

- Designed a 20x20cm autonomous robot whose goal was to push opponents out of the sumo-wrestling ring
- Used Autodesk Inventor to model the design's chassis to laser-cut it from sheets of acrylic

### Primary Team Member | The Marauder Drones Club

2019 - Present

- Member of the primary team consisting of 14 out of 158 total members
- Programmed a functioning quadcopter, which was designed for aerial photography

### McMaster Men's Volleyball Team

2019 - Present

- Named as an OUA First Team All-Star for the year 2017
  - Awarded McMaster Athlete of the Week for the week of October 16, 2017
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## Projects

### Rock Climbing Route Application

2022

- Programmed a web application which allows users to take a picture of a rock-climbing route and upload their solution using stick figures
- Implemented the app with Python, Django, HTML, CSS, Bootstrap, JavaScript and jQuery

### Digital Circuits

2021

- Designed, simulated, and implemented a signal decoder circuit for a Sony TV remote using Autodesk
- Produced and presented a technical report to support the design, using Microsoft Word & PowerPoint

### Pacemaker

2020

- Crafted software documents to support the design of a safety-critical system in a group of 6
  - Planned, wrote, tested, and debugged C++ code to be run on a Freescale microprocessor
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## Skills

### Software:

- Autodesk Inventor
- Visual Studio
- C++, C
- Java
- Bash
- MATLAB Simulink
- MS Office Suite

### Laboratory:

- SolidWorks Design
- Complex Calculations
- Statistical Processes
- Circuitry Analysis
- Mechanics & Software Design

### Safety:

- WHMIS Trained
- Standard First Aid Certified

### Languages:

- English
- French (Basic)
- Spanish