

Elizabeth Morrow

1B Mechatronics Engineering

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Technical Skills

Programming

- Embedded Systems (C, C++)
- Applications Software (C#, Python)
- Database Integration (SQL)
- Web Development (HTML/CSS, JavaScript)

Design

- Software Architecture (Visual Studio)
- Mechanical Component Conception and CAD (SolidWorks, AutoCAD)
- Electromechanical Systems Integration

Production

- PCB Bring Up (Altium, Soldering, Debugging)
- Machining (Parts for Formula SAE race car)
- Robotics (Arduino, NXT platforms)

Work Experience

Electrical Software Coop – **Midnight Sun Solar Race Car Team**

January – April 2014

- Independently developed data acquisition software (C#, SQL)
- Programming for embedded systems (C)
- Lead design and CAD of electrical test harness
- Soldered and debugged battery box and human interface PCBs



Education

Candidate for Honors Bachelor of Applied Science, Mechatronics Engineering
University of Waterloo

2013 - Present

Projects

Wireless CAN bus/Console Communication

- Developing a system to upload real time data from CAN to website. Using a Raspberry Pi and coding in C#, Python, Django.

Watchtower Robot Design and Software

- Constructed and programmed a robot that scans an area using ultrasonic sensors, and upon sensing movement, fires projectiles until the target is subdued

MSP430 Fuel Cell Car

- Programmed a hydrogen fuel cell powered chassis in C using MSP430 microcontroller to perform various tasks such as line following and maze navigation

Web Based Puzzle Game Challenges

- Develops simple web-based logic puzzles and games in spare time for enjoyment of friends and colleagues using HTML and JavaScript

Activities and Interests

Bilingual (French) • Traveling • Hockey • Rugby • Acting in Musicals • Slalom waterskiing