

## Elizabeth Morrow

2A Mechatronics Engineering

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### Software Skill Summary

Languages: C#, Java, C/C++,  
HTML5

OS: Windows 8/8.1,  
Ubuntu, Fedora

IDEs: Visual Studio,  
Eclipse,  
CodeComposer,  
Android Studio

### Technical Skills

#### Software Development

- Embedded Systems
- Applications
- Mobile

#### Design and 3D Modeling

- Interface Design  
(Photoshop, Balsamiq)
- Mechanical Design  
(Solidworks)
- Electrical Layout  
(Altium, AutoCAD)

#### Process Automation

- Powershell/Bash  
Scripting

### Projects

#### Midnight Sun Solar Race Car Team Electrical Lead

- Ongoing firmware development (C), CAN network specialist, C#/Python diagnostic applications development, team manager.

#### Watchtower Robot (C++)

- Built and programmed a robot to scan a user-defined radius for movement using an ultrasonic sensor and fire projectiles until the target is subdued.

### Professional Experience

#### Control Systems Design – MedAvail Technologies Aug. – Dec.

- Lead designer and developer of handset testing application(C#). Used Fast Fourier Transforms to analyze signal quality. Saved company \$15,000.
- Reworked machine log converter application(C#), implemented hashing and multithreading resulting in a 300% improvement in execution speed.
- Integrated log converter into utility software, translating machine logging events in real time.
- AutoCAD electrical layout design.

#### Software Co-op – Midnight Sun Solar Jan. – Apr.

- Developed CAN message parser and database(C#,SQL) for diagnostic use on solar car.
- Wrote firmware for lights control board (C).
- Lead design and CAD of electrical system test harness (SolidWorks).
- PCB soldering and debugging (Altium).

### Education

Candidate for Honors Bachelor of Mechatronics Engineering  
University of Waterloo, Class of 2018

#### Relevant Courses:

- MTE 140 Data Structures and Algorithms (Structured software design, algorithm analysis)
- MTE 262 Microprocessors and Digital Logic (PLC & FPGA programming, ARM Assembly)

### Volunteer Work

Student Design Teams Director • Engineering Ambassador • University of British Columbia Research Assistant

### Interests

Bilingual (French) • Traveling • Captain of Intramural Hockey Team • Performing in Musicals