

# Elizabeth Morrow

2A Mechatronics Engineering

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## Software Skill Summary

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

OS: Windows, Linux

IDEs: Visual Studio,  
Eclipse,  
CodeComposer,  
Android Studio

## Technical Skills

### Software Development

- Embedded Systems
- Applications

### Design and 3D Modeling

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

### Process Automation

- Powershell & Bash  
Scripting

## Interests

Bilingual - French

Traveling - Last seen in Rio

Hockey - Team captain

Musicals - Triple threat

## Projects

### Solar Race Car Team Electrical Lead

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

### Watchtower Robot

- Designed and wrote C++ software for 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

Aug. 2014 – Dec. 2014

*MedAvail Technologies Inc.*

- Lead designer and developer of handset testing application in C#. Used Fast Fourier Transforms to analyze signal quality, saving 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.

### Software Co-op

Jan. 2014 – Apr. 2014

*Midnight Sun Solar*

- Developed CAN message parser using C# and SQL database for solar car diagnostics.
- Wrote firmware for lights control board (C).
- Lead design and CAD of electrical system test harness (SolidWorks).
- Soldered and debugged PCBs referencing layouts in Altium.

## Education

### Candidate for Bachelor of Applied Science

2013 - present

Honours Mechatronics Engineering

*University of Waterloo*

### Relevant Courses:

- Data Structures and Algorithms (structured software design, algorithm analysis)
- Microprocessors and Digital Logic (PLC & FPGA programming, ARM assembly)

## Volunteer Work

### Student Design Teams Director

- Liaison between design teams and university administration, in charge of organizing, scheduling and running events and demos

### University of British Columbia Research Assistant

- Extracted and analyzed DNA from blood samples, attempting to detect blood doping more efficiently in Olympic athletes