

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).
- Hardware bring-up and debugging (Altium).

Education

Candidate for Honors Bachelor of Mechatronics Engineering, University of Waterloo 2013 - present

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 Lab Assistant

Interests

Bilingual (French) • Traveling • Hockey • Performing in Musicals