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

Projects

Midnight Sun 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.
- Documented electrical layout using AutoCAD.

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 • Engineering Ambassador • University of British Columbia Research Assistant

Interests

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