Elizabeth Morrow

3A Mechatronics Engineering

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Software Skill Summary

Languages
- C, C++, C#, Python, MATLAB

UI Stacks
- XAML/C#
- HTML/CSS/JavaScript

Technical Skills

Software Development
- Embedded Systems
- Language services and tooling
- Mobile Applications
- Web

Design and 3D Modeling
- Interface Design (Balsamiq)
- Mechanical Design (Solidworks)
- Electrical Design and Testing (Altium, AutoCAD)

Project Management
- Excellent communication and presentation skills
- Passion and vision for product design

Personal Interests

Non-programming languages (Bilingual, French)

Outdoor adventures (rock climbing, hiking, skiing)

Recent Projects

2048 on Cortex-M3 ARMv7
- Implemented 2048 game logic on RTX kernel using peripheral joystick control, leveraging multithreaded algorithm for speed and responsiveness
- Optimized graphics processing for available 32 KB RAM to imitate console game interface

Professional Experience

Software Engineering Intern Jan. 2016 – Apr. 2016
Microsoft Corporation

- Co-developed Raspberry Pi/Linux extension for Visual Studio
- Owned remote file sharing and system access between Windows and Linux devices, remote debugging utilizing GDB, as well as templates and libraries for hardware and cloud (Azure) interaction.
- Designed and implemented authentication and remote device connection manager user interfaces using MVVM design principles (XAML/C#).

Explorer Intern May 2015 – Aug. 2015
Microsoft Corporation

- Owned end to end Visual Studio debugging experience for the Lua scripting language, including writing functional and technical specs.
- Implemented out of process debugging using a managed front end (C#) to inject a native (C++) DLL into the target process. Leveraged asynchronous named pipes and function detouring.
- Wrote hand rolled lexer for the Visual Studio Lua language model.

Control Systems Design Assistant Aug. 2014 – Dec. 2014
MedAvail Technologies Inc.

- Designed and developed handset testing application (C#). Used Fast Fourier Transforms to analyze signal quality, saved company $15,000.
- Implemented microcontroller diagnostic package converter (C#). Improved speed by utilizing hashing and multithreading to translate diagnostic messages in real time.
- Electrical layout design (AutoCAD)

Electrical Team Co-op Jan. 2014 – Apr. 2014
Midnight Sun Solar Car Team

- Firmware Development (C)
- Developed CAN network diagnostic tooling (Python, C#)
- Soldered and tested battery and light control boards