Isaiah Erb

Mechatronics Engineering
University of Waterloo, 2A

www.IsaiahErb.com
Isaiah.Erb@gmail.com
(905) 932 4441

Skillset

- Java, .NET, C++, Python, C
- Javascript, HTML5, CSS3, JQuery
- Bootstrap, Browserify, Moustache
- Visual Studio, Eclipse, Xcode, Netbeans
- Experience with Source control (Git)
- OSX terminal and Linux OS (introductory)
- Experience with Excel and VBA for Excel
- Prototyping with Arduino/Processing

Relevant Experience

Molex, *Software Engineering* Sept. 2015 - Dec. 2015

- Developed windows application that facilitated PROFIBUS communication between network cards; to be used as part of a testing suite.
- Appended existing windows application with module that parses incoming log files from external sites and stores the information in a database.
- Updated logging schemes of two network cards which will be implemented in new products

Kaleidescape, *Mechatronics Engineering* Jan. 2015 - Apr. 2015

- Tested variety of electronic/mechanical components for use in production PCBs.
- Isolated electrical issues in faulty boards collected from customers.
- Created interactive tools in Visual Basic such as a MAC address assigner.
- Conducted voltage, load and thermal tests on HDD/ODDs to be used in future products.

FIRST and VEX Robotics, *Team 1114, Simbotics* Sept. 2010 - Present

- Continually working as a programming mentor and Java developer for four years.
- Worked with Microsoft Kinect skeletal tracking software to move a drivetrain to specific locations depending on arm height.
- Created vision targeting system using a network camera to track goal positions.
- Worked on PID controllers, wheel slippage correction, positioning systems, wheel-acceleration control (for slipping), signal processing and filters, and scheduling.
- Invest around 28 hours every week into the robotics program during the season (Jan-Apr).

Engineering Mentorship at Brock University, *Co-op* Sept. 2013 - Jan. 2014

- Constructed and programmed an autonomous quadcopter.
- Used a PIC32 microcontroller programmed in C to interface with ultrasonic sensors, an accelerometer, a gyroscope and an RF module.
- Created a visual program for displaying sensor data in Microsoft Visual C++.
- Designed the PCB in OrCAD, then soldered and assembled its components.

Hot Glue 3D Printer, *First Year Final Project* Sept. 2014 - Dec. 2014

- Designed, machined and programmed a lightweight 3D printer
- Used NXT controller, programmed in C, to parse G-Code commands used to position XY-gantry and extrude plastic material to create 3D objects.

Hobbies and Interests

- FIRST Robotics Competition
- 3D Printing
- Playing Classical
- Hiking / Squash
- Cubing