Tony **Wu**

3A ELECTRICAL ENGINEERING

www.tonyhuiwu.com · *tonyhuiwu@gmail.com*

Skills

Programming Python · C · C++ · Perl · SQL

Equipment Digital Multimeter · Function Generator · Oscilloscope · Soldering Iron · Spectrum Analyzer

Other Arduino · MATLAB · Multisim · Photoshop · Visual Studio · HTML · CSS · LaTeX

Experience

Hydro One Brampton

Brampton, Ontario

Asset and Project Management Intern

September 2015 - December 2015

- Designed and implemented a pathfinding algorithm which saved the company $10,000 and provides detailed information about connections within the city grid that was previously unavailable — *Python*
- Created a comprehensive database of all underground conductors in the city grid which improved the company's understanding of conductor condition and reactive capital expenditures from 2009 - 2015 — *Python*
- Improved the quality of data in the company's GIS by writing various scripts that automatically identify and list errors in the company's GIS database — *Python*
- Redesigned existing splice record form to be concise, preventing entry of vague and incorrect data

SkyWave an ORBCOMM Company

Kanata, Ontario

Hardware Test Automation Intern

January 2015 - April 2015

- Developed an application to automate power consumption tests of SkyWave satellite terminals as well as providing real-time analysis of collected data — *Python, Visual Studio*
- Created a framework for communicating with various SCPI-enabled testing equipment allowing test scripts to be written quickly and easily — *Python*
- Tested satellite terminals in a lab environment to collect control values for current draw at different stages of operation

General Electric

Markham, Ontario

Hardware Design Validation Intern

May 2014 - August 2014

- Tested EEPROM chips from 4 vendors to determine suitability to replace obsolete components on existing boards
- Modified firmware to allow compatability with selected vendor EEPROM — *C*
- Prepared Hardware Test Reports and Engineering Instructions as part of an Engineering Change Order (ECO)
- Created scripts to normalize and organize test output for analysis — *Perl, SQL*

Projects

Arduino Music Player

Created a charlieplexed circuit with 13 LEDs to mimic a single octave on a piano. Sequences of notes are played through a piezo speaker and the corresponding notes are represented visually by the LEDs — *Arduino*

Microcontroller Circuit

Designed and soldered a circuit to control an LCD display with both analog and digital inputs (controlling contrast and screen on/off respectively) — *C, PIC18 MCU*

Education

University of Waterloo

Waterloo, Canada

Candidate for B.A.Sc in Electrical Engineering

Sept. 2013 - Present

- Current ENGSoc Representative; liason between the engineering society and the ECE class of 2018
- Relevant Courses: *Analog Control Systems* · *Data Structures & Algorithms* · *Electronic Circuits* · *Project Management*