

Technical Skills

Software

- Embedded C Programming
- Software Architecture Design
- Control Algorithm Development
- Vector CANoe and CANalyzer
- MATLAB
- Motor Control
- LabVIEW Programming
- Altium Designer
- Microsoft Office

Electronics

- Circuit Design and Layout
- Reading Circuit and Wiring Diagrams
- Soldering Electrical Components (Through hole and SMD)
- Hardware verification
- Utilization of Digital Multimeters
- Utilization of Oscilloscopes

Other Skills

- Private Pilot's License
- Glider Pilot's License
- Project Management
- Resource Management
- Standard First Aid
- Cabinetry and Furniture Design
- Framing
- Use of Power Tools

Technical Work Experience

SeaStar Solutions - Canada

May 2015 - Present

Software Development Engineer

- Developed embedded software for safety critical CAN based actuators used for vessel control
- Created and conducted functional test plans to ensure software performance and reliability
- Introduced automated test development to ensure repeatability and reduce time required to conduct regression tests
- Conducted field testing to ensure product performance and system usability

SeaStar Solutions - Canada

January 2014 - August 2014

Coop Product Designer - Mechatronics

- Developed, tested and implemented PCB design verification equipment to efficiently verify operation of assembled circuit boards
- Tested and verified operation of new software releases by following a test plan and making modifications where necessary
- Updated functionality and maintained test benches using Labview

Argus Control Systems Ltd.

May 2013 - August 2013

Electrical Engineering Coop Student

- Worked with Senior Engineering staff to develop efficient control strategies while minimizing resource usage
- Interfacing and testing capabilities of new remote displays while learning about different communication protocols
- Evaluating CO2 sensor performance and categorizing quality of sensors based on sensor accuracy and precision
- Testing and validating new versions of a Windows based application for "environmental monitoring"

Argus Control Systems Ltd.

June 2012 - December 2012

Electrical Engineering Coop Student

- Engineering efficient control strategies for greenhouses and environmentally controlled chambers to minimize energy usage and maintaining positive control of the environment under different failure conditions
- Engineering custom control strategies requested by the customers to fulfill different requirements of the plants that are being grown

University of British Columbia

October 2011 - April 2012

Research Assistant

- Conducted independent research and experiments in a lab environment to determine the minimum quantity of platinum required within the membrane
- Fabrication of membranes for proton exchange membrane (PEM) fuel cells
- Experimenting with different methods of fabrication to find the optimum method which yields the greatest power output
- Research electrochemistry, fabrication, fuel cells, and fundamental analytical skills

Education

University of British Columbia
Bachelor of Applied Science/Electrical Engineering

September 2010 - April 2015

Technical Projects

Capstone Design Project September 2014 - April 2015

- Designed, developed, and tested hardware for a fuel cell power system for use in a fixed wing UAV

LED PCB Controller July 2012 - November 2012

- Designed electronic circuit and PCB layout using the MSP430 Microprocessor and IO expanders that is able to control 17 RGB LEDs using pulse width modulation to generate different patterns.
- Hand soldered surface mount components onto manufactured PCB

Hovercraft Design Competition February 2012 - April 2012

- Designed a hovercraft that was able to carry three kilograms and maneuver around an obstacle course within 2 minutes

Published Blackberry Application January 2012 - February 2012

- Published an application for the Blackberry Playbook written in Action Script 3.0

Engineering One Design Competition January 2011 - April 2011

- Designed and manufactured a prototype can crusher in a team of five that was able to automatically crush, sort, and count three different sizes of cans
- Programmed by bit banging a USB-Serial device to gain access to several IO pins that were monitored to activate the crusher and to sort and count the number of cans in each size

Other Work Experience

Royal Canadian Air Cadets November 2011 - Present

Second Lieutenant

- Spending weekends assisting in the safe operation of the Royal Canadian Air Cadet gliding program by helping with the launching and the retrieval of the gliders as well as taking the Cadets for familiarization flights.
- Mentoring and supervising developing youth leaders

Volunteer Work Experience

Vancouver Olympic Committee November 2009 - February 2010

Closing Ceremonies Performer

- Attended and participated in eight, five hour practices, one all day dress rehearsal, and the Closing Ceremonies of the Vancouver 2010 Winter Olympics with 1200 youth volunteers

Professional Affiliations

APEGBC-Member Advantage Program for Students
Canadian Forces - Cadet Instruction Cadre

Activities and Interests

- Electronics and Technology
- Sailing
- Gliding
- Flying Single Engine Aircraft
- Ultimate Frisbee