

BRANDEN VOSS

BS Electrical Engineering (4th year) at the University of Victoria

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Experience

Industrial Plankton

System Design/Manufacturing 2022 Victoria, BC
Worked with a team of professionals to aid in design and manufacturing of Industrial Plankton's product line of bioreactors for aquaculture. Responsibilities included:

- Product design and assembly
- PCB assembly in compliance with ETL/EN
- Implementing PLC operated control systems for bioreactors
- System calibrations, diagnostics, and testing

Research at University of Victoria

Research Assistant 2021 Victoria, BC
Independently developed a robust algorithm to detect static eccentric faults in three phase induction motors using MATLAB. Skills displayed from this work are:

- Applying signal processing techniques on motor current and voltage signatures
- Worked with various machine learning algorithms to interpret motor data
- Authored a conference proceeding and will be presenting at IEEE Energy Conversion Congress and Exposition in Detroit, Michigan October 2022.

Defence Construction Canada

Contract Services Coordinator 2020 Victoria, BC
Managed engineering contracts on behalf of the Department of National Defence, and the Canadian Forces. Supported various interdisciplinary projects alongside a team of professionals. This entailed:

- Developing complex Excel sheets to manage energy performance contracts allowing for insight to more sustainable energy usage
- Assisting on ground fault detection upgrades for ship to shore power supply at jetty
- Analysis of jetty project to advise on a solution for ground fault detection issues

Corn Ranches

Ranch Hand 2016 – 2018 Camrose, AB
Operated heavy machinery and software to plant corn used for livestock feed. Demonstrated skills include:

- Creative diagnostics, troubleshooting and repairing equipment failure under time pressure as a key part to operation success
- Developed practical problem-solving skills in a time sensitive environment
- Worked with livestock, further developing creative problem-solving skills

Education

University of Victoria

BS Electrical Engineering (4th year) 2018 – Present

- Assistant Captain for the University of Victoria Vikes Men's Hockey Team
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Projects

Music Reactive LED Strip: Designed and programmed a PCB for an LED system that responds to audio input. The system can communicate with a smart phone through a proprietary app using Bluetooth.

PWM Generation and Monitoring System:

Developed an embedded system for monitoring and controlling a PWM signal.

ADS-B Receiver Antenna: Designed and assembled hardware and software for an antenna capable of receiving RF signals in the 1090 MHz range for aircraft tracking.

Alarm Clock: Designed and programmed a PCB for an alarm clock capable of keeping real time.

Autonomous Cable Robot: Constructed a mobile robot capable of locating an IR emitting target to deliver a payload.

Scrabble Word Solver: Created a C++ program to work in conjunction with provided code that can determine the best word and its score from a given set of game tiles.

Technical Skills

- KiCAD for schematic entry and PCB layout
 - Fluent with C/C++ programming languages
 - Proficient using MATLAB software
 - Experience developing and working with microcontroller and PLC systems
 - Amateur Radio Certified
 - Familiarity with oscilloscopes, multimeters, and function generators
 - Developed, tested, and analyzed both analog and digital electronic circuits
 - Experience with SolidWorks
 - Microsoft Office Suite
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Non-technical Skills

- Team oriented worker
- Intrinsically motivated
- Confident Leader (Captained sports teams)
- High attention for detail
- Enthusiastic learner