

OSCAR O'REGAN

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EDUCATION

Bachelor of Mechanical Engineering (BEng)

UNIVERSITY OF VICTORIA, Victoria, BC

Estimated graduation: Fall 2026

Sept 2022 – Present

- Currently in 3rd year, seeking work term #2
- 93% Avg - Fall 2024 term
- Member of Connected Autonomous Vehicle club

TECHNICAL AND CORE COMPETENCIES

CREATIVITY

- Strive to create unique and innovative solutions to problems, demonstrating my design and problem-solving abilities

STRONG COMMUNICATION AND TEAMWORK SKILLS

- Effectively promoted and campaigned for a basketball inter-mural tournament I created with a team of five, communicating to all the teams when and where their games would be happening.

LEADERSHIP

- Lead my high-level hockey team to a City Championship as the team captain

PROJECT AND TASK MANAGEMENT

- Lead many team projects to great success, including a complex automation (SOLIDWORKS) of boxer, utilizing four bar mechanisms.
- Member of 1 club and 3 intermural teams while taking a full course load.

C and C++ PROGRAMMING, MS EXCEL, MS WORD, MATLAB, R-STUDIO, SOLIDWORKS

WORK EXPERIENCE

Quality Co-op, Work Term #1

Sure Grip Controls Inc, Victoria BC

January 2024 – April 2024

- Managed incoming inspection, paying close attention to detail, resulting in the rejection of countless parts.
- Collaborated closely with major supplier, Lycro, to resolve existing non-conformance reports and address significant quality issues, contributing to overall process improvement and product quality and lowering non-conformities by 80%
- Communicated all non-conformities to suppliers and adjusted inventory to account for failed parts during inspection and production
- Performed extensive tests on joysticks for vibration susceptibility, designing and 3D printing Jigs in SolidWorks for testing
- Conducted activation force tests on friction-modulated joystick bases to ensure product reliability and created a 5-page engineering report of findings
- Cleared production floor space by reworking \$6500 worth of parts to meet quality standards, utilizing construction skills and machining tools

Landscaper

CLS LANDSCAPE, Calgary AB

Summer 2023

- Operated small machines to a high ability in a safe and efficient manner.
- Collaborated and communicated with a team of five in order to finish projects quickly while maintaining a high standard of quality. Our crew was given the name “A-Team” by the company’s project manager, indicating our superiority to the other crews.
- Performed hardscaping and soft scaping to a strict level of detail, building fences, retaining walls, patios, and more.

PROJECTS

High-Performance Inspection System

January 2025 – Present

- Implemented conveyer belt item sorter in team of 2, utilizing the ATmega 2560 micro controller in combination with ferromagnetic and reflective sensors to distinguish object material and color.
- Developed code in C and circuitry for full DC and stepper motor control. Gaining an in depth understanding of interrupts, MCU timers, ADC conversions, PWM and LCD’s.
- Created s-curve motion profile in MATLAB, then optimized it utilizing Simulink modelling to achieve maximum stepper motor speed and accuracy.
- Achieved top 5 time out of 30 other groups, sorting 48 pieces in 26 seconds.

15MW Gear Box Proposal

Fall 2024

- Alongside a team of 5, created a detailed proposal for a 3-stage 15MW gearbox, working together effectively over the course of the project to achieve a final grade of 91%
- Personally contributed significantly to failure analysis of shafts, spur gears, bearings, couplings, and fasteners to develop specifications of gearbox
- Created an expansive spreadsheet (Excel) to automatically update specifications given input changes
- Modelled gearbox assembly in SolidWorks, containing over 50 individual parts.

UVEC Senior Design Competition

October 2024

- Competed amongst 70 students within a team of 4 for a design competition hosted by UVic Engineering & Computer Science Students' Society, sponsored by Celerity and RJC
- Designed a VEX robot and developed code (C) that could locate an IR-emitting target, pick it up, and return to its start position, whilst avoiding obstacles and staying within a boundary marked by tape
- Created a 2 DOF levelling arm to pick up and drop off IR-emitter
- Held a presentation for final product to the judges, members of the industry, and alumni

CERTIFICATIONS

Full Alberta **Driver’s License** - Ontario **Boater’s License** - **Bronze Cross** swimming certification

ACTIVITIES/INTERESTS

- Played hockey for over 10 years at a highly competitive level
- Enjoyer of many high-adrenaline sports such as skiing, mountain biking, and surfing

REFERENCES

Available upon request