

# Olivia Lew *Integrated Engineer*

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## EDUCATION

University of British Columbia

09/2023-05/2028

Bachelor of Applied Science - [Integrated Engineering](#) (Electrical and Mechanical)

## KEY SKILLS

**Electrical:** KiCad, LTSpice, Soldering, Breadboarding, Oscilloscope, Function Generators, DMMs, Reading Datasheets

**Computer:** OnShape, MS Office, C++/Arduino, MATLAB, C, Python, HTML, CSS, Figma

**Manufacturing:** 3D-printing, Waterjet cutting, Machining

**Certifications:** WHIMIS, First Aid and CPR

## TECHNICAL PROJECTS

**Split Keyboard PCB, KiCad, PCB Design**

01/2025-Present

- Collaborating with my friend to design a split keyboard capable of accommodating non-traditional typing habits

**PID Line Following Robot, Circuit Design, C++/Arduino, OnShape, Soldering**

09/2024 – 01/2025

- With *IR sensors, ESP-32 and HC-SR04* to construct a robot capable of adhering to an electrical tape path
- Developed a sensor configuration and PID control algorithm to increase the speed and accuracy of robot movement
- *Designed, assembled and soldered PCB* for sensor interfacing and power distribution to guarantee an efficient use of space and ensuring easy accessibility and maintaining organization
- Integrated effective maneuvering mechanisms to overcome greater than 90 degree turns, gaps and intersections

## ENGINEERING STUDENT TEAMS

**Electrical Payload Member, [UBC Uncrewed Aircraft Systems](#)**

09/2024 – Present

- Designing an auto-stabilizing and positioning gimbal to maintain a consistent camera angle during flight
- Utilized OnShape to recreate payload objects to accurately design and test holding mechanism prototypes
- Troubleshooting previous electrical systems for possible re-use

**Safety/DMB Member, [UBC SUBC](#)**

09/2023 – 05/2024

- Constructed a Deadman's buoy system to deploy a buoy in the event the diver becomes unconscious
- Thermoformed a clear hatch covering accessible from inside and outside the submarine

## WORK EXPERIENCE

**Research Assistant, UBC**

01/2025-Present

- Researching alongside Dr. Edmond Cretu in the realm of MEMS and signal processing

**Shift Lead, Coco's Fresh Tea and Juice**

04/2022 – 08/2023

- Collaborated within a diverse team while upholding a friendly atmosphere
- Delegated tasks to others ensuring smooth operation of the store
- Trained and guided new employees to perform to a higher standard

## INTERESTS

- Nanorobotics, snowboarding, hosting dinner parties, singing

