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: Altium, 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

Study-Aid Utilizing Facial Recognition, *HTML, CSS, Figma*   **11/2024-Present**
- *Hackcamp 2024 Winner,* collaborated in a team to create a webapp using OpenCV to reinforce good study habits
- Applied Figma and iMovie knowledge to design and market a project to exceed grading criteria
- Developing a functional and dependable user interface using *HTML* and *CSS*

PID Line Following Robot, *Circuit Design, C++/Arduino, OnShape, Soldering*   **09/2024 – Present**
- With *IR sensors, ESP-32 and HC-SR04* to construct a robot capable of adhering to an electrical tape path and avoiding obstacles
- Developed and adjusted a PID control algorithm using *C++/Arduino* to program the *ESP-32* to increase 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
- Aiming to integrate effective obstacle maneuvering mechanism, minimize signal noise and fine-tune motor control

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 a specific payload object to accurately design and 3D-print prototypes of various holding mechanisms
- Troubleshooting previous electrical systems for possible re-use

Safety/DMB Member, *UBC SUBC*   **09/2023 – 05/2024**
- Designing an auto-stabilizing and positioning gimbal to maintain a consistent camera angle during flight
- Utilized OnShape to recreate a specific payload object to accurately design and 3D-print prototypes of various holding mechanisms
- Troubleshooting previous electrical systems for possible re-use

WORK EXPERIENCE

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

UBC
THE UNIVERSITY OF BRITISH COLUMBIA
Co-op Program
Faculty of Applied Science

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