LOGAN UNDERWOOD

North Vancouver, BC

✉ loganu@shaw.ca in https://www.linkedin.com/in/logan-underwood-ubc-engphys ⬤ github.com/soulFood5632

Experience

Stantec Inc. **Vancouver BC**

Data and Systems Intern *Spring 2023*

- Designed, built, and tested iOS application to assist operators in day-to-day activities for the TransLink Yard control system.
- Built infrastructure to interface with communication module on the rail signalling machine E-LogIXS.
- Developed the user interface and added features to satisfy the requirements provided by TransLink.

Vancouver Golf Tour **Vancouver BC**

Assistant of Tournament Operations *Summer 2022*

- Successfully curated content for the tour's Instagram account driving an increase in engagement.
- Adapted procedures and directives to provide smooth operations of golf tournaments.

Personal Projects

Engineering Physics Robotics Competition - LINK **Summer 2023**

- A 6-week design and build exercise in which you work in teams to build an autonomous robot capable of traversing a Mario Cart style track.
- Managed group tasks and personal dynamics by analyzing team member passions and building group vision in biweekly meetings.
- Used CAD to design, print/fabricate and build parts and robot elements.
- Integrated code modules for usage in a state machine, included a complicated state switching logic which required the integration of many different inputs.
- Wrote and tested PID algorithms for tape following and IR following.

Golf Scorekeeping iOS Application - LINK **Fall 2023**

- An iOS application used to collect golf statistics using the strokes gained model. The application contains round entry, account management, Firebase backend, and statistical analysis/insights.
- Synthesized literature about modern golf analysis techniques augmenting the app's statistical analysis tools.
- Developed an object-oriented model for the data used in the application.
- Experimented and used stakeholder input to improve the UI design to maximize accessibility.
- Built login infrastructure and built a connection to a backend which contained user data and course data.

Weightlifting Logbook iOS Application - LINK **Fall 2023**

- An iOS application tracking weight on your exercises to help the user define their improvements.
- Explored UI design features to optimize the use case of entry during the workout.
- Included pages which show statistical insights into a user's trends and their improvement.

Tic Tac Toe Computer - LINK **Fall 2022**

- Constructed and optimized a SVM which learned how to play Tic Tac Toe.
- Created the unsupervised learning environment where my computer models perfected their weights.
- Tested the computer models in a user interface to verify their performance against human players.

Technical Skills

Languages: Java, Swift, Python, C/C++, HTML/CSS, JS/TS
Developer Tools: Linux, macOS, Windows, Git, Command Line, Test Flight
Frameworks: React, SwiftUI, OpenCV, TensorFlow, PlatformIO, Gazebo, ROS, Gradle, JUnit
Electrical: Oscilliscope, Function Generator, Circuit Design, Noise Reduction
Mechanical: OnShape, AutoCAD, Laser Cutter, 3D Printer

Education

UBC **Vancouver, BC**

Bachelors of Applied Science in Engineering Physics *2021 - 2026 (projected)*

- **Selected Coursework:** Robotics Competition (ENPH 253), Software Construction I (CPEN 221), E&M (PHYS 301), Machine Learning (ENPH 353)