Tristan Lee

Last Updated on 13th November 2022

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Skills

ELECTRICAL
Altium • Oscilliscope • Eagle • Soldering

PROGRAMMING
Python • Java • C++ • PlatformIO

MECHANICAL
OnShape • SolidWorks • Fusion 360

MISCELLANEOUS
Git • Linux • LaTeX • 3D Printing

Education

U. OF BRITISH COLUMBIA
Engineering Physics
Grad. 2026 Vancouver, BC
Third Year, 88.8% Avg.

Links

in Linkedin **tristanrlee**
GitHub **trlee02**

Awards

PRESIDENTIAL SCHOLARS
University of British Columbia
Awarded to accomplished Canadian students.

TUUM EST EXPERIENTIAL
University of British Columbia
Awarded to students with excellent academic standing and strong personal profiles.

TREK EXCELLENCE
University of British Columbia
Awarded to top 5% of UBC undergraduate students.

Interests

~~TECHNICAL~~
Robotics
Machine learning
Rocketry

~~NON-TECHNICAL~~
Downhill Skiing
Mountain Biking
Surfing
Hiking
Powerlifting

Technical Experience

MANUFACTING TEST ENGINEER
Enersys - Alpha Technologies
Jan. 2022 – May 2022 Vancouver, BC

- Built several PCB test stands, validated their functionality using an oscilliscope, troubleshot and repaired problems to ensure proper performance.
- Used Altium Designer to document PCB test points and build and understanding for a variety of DC-DC converter circuits.
- Created Python and LabVIEW software to enable data collection and PDF conversion for PCB tests, then implemented the software into 10 different test stands.
- Constructed test stand circuit schematics and documented PCB test points in Altium Designer for DC-DC coverter circuits.

Project Experience

ENGINEERING PHYSICS ROBOT COMPETITION
University of British Columbia
May 2022 – Aug 2022 Vancouver, BC

- Collaborated with a group of four to design and build a line following, IR following and item retrieval robot that acheived 4th place.
- Designed and constructed several different circuits including power distribution, motor driver, and IR sensing circuits.
- Troubleshot and tested many circuits constructed by my teammates and myself, to ensure the presence of desired signals using an oscilliscope.
- Wrote firmware to control a linearly translating robot arm and claw, as well as sense retrievable items.
- Created CAD designs for the chassis and claw sections of our robot using OnShape.

ENGINEERING PHYSICS MACHINE LEARNING COMPETITON
University of British Columbia
Sep 2022 - Dec 2022 Vancouver, BC

- Worked in a group of 2 to design and create state machine architecture to control a robot using ROS Noetic on a simulated course in Gazebo.
- Implemented imitation learning to identify key objects inside a simulated enviroment.
- Setup a working tree and Gazebo enviroment in Linux, needed to collect data for neural network training and to test robot behaviour.
- Investigated reinforcement learning and explored Qlearning using Gym Gazebo

UBC ROCKET AVIONICS
University of British Columbia
Oct 2022 - Present Vancouver, BC

- Designed half-bridge e-match ignition PCB in Altium designer, as a part of a stackable, modular flight computer.
- Learning manufacturing and testing methods for our teams PCBs.
- Currently collaborating with a team of six to begin testing and manufacturing of flight computers.