

University of British Columbia | B.A.Sc. Engineering Physics (In progress) | GPA 4.33/4.33

Trek Excellence Scholarship | Dean's Scholar

SUMMARY

Engineering Physics student with an interest in innovation, an enthusiasm for learning, and an attention to detail. Seeking opportunities to develop skills, contribute to a healthy work environment, and work on the frontier of science and technology. Dedicated and hardworking, and always undaunted in face of challenges. Outside of my studies, I enjoy performing on the saxophone, and playing Dungeons and Dragons.

SKILLS

- Onshape, Fusion360, 3D printing, Wood & Metal shop operation, Laser cutting, Waterjet cutting
- PCB Schematic Capture & Layout, KiCAD, Altium, Arduino, Soldering, Multimeters, Oscilloscopes
- C, C++, C#, Java, Python, SQL, Azure, Excel, Google spreadsheets, MATLAB, Jupyter notebook

EXPERIENCE

UBC Bionics, Electrical Hardware Team Member | Sep. 2025 – Present

Design team developing EMG prosthetic and BCI interface. Personally working on Battery Management System.

- Developing new BMS system, increasing space efficiency and overall performance
- Carefully selected ICs for battery diagnostics and telemetry data for microcontroller communication
- Modeling circuit with block diagrams and designing BMS in Altium for rapid manufacturing and iteration

Transit Insight, Software Developer | Jul. 2025 – Aug. 2025

Managed big data for a comprehensive performance-driven payment system in cloud data transition.

- Successfully developed SQL data deletion script and test case for cloud data using Azure Data Studio
- Automated data management processes using Azure Automation and PowerShell

FIRST Robotics Competition, Electrician & Team Co-leader | Jan. 2022 – Jun. 2024

International robotics competition to design and build a robot for engineering challenges.

- Utilized rapid prototyping techniques such as CAD, 3D printing, laser cutters, and wood & metal shop operation for efficient and immediate testing in high-intensity, short 4-week manufacturing period
- Effectively bridged needs of different departments for maximal productivity and reduced turnover times
- Independently designed and repaired quintessential custom circuits for robot function
- Participated in World Championship 2022 | Excellence in Engineering Award 2022 | Judges Award 2024

Bell Advanced Vertical Robotics, Co-leader | Sep. 2023 – Nov. 2023

International robotics competition simulating firefighting using drones and small robots.

- Successfully communicated subteam needs and managed deadlines for rapid work processes
- Awarded for engineering process and documentation presentation to judges panel
- Exemplary Team Award | Qualified for international championship as only Canadian team

PROJECTS

Rainwater Harvester Spreadsheet Model | Feb. 2025 – Apr. 2025

- Complex system with hundreds of dynamically-updating parameters simulating five years of operation
- Optimized system performance using high-level, holistic design considerations
- Placed in top quartile in school design competition

Arbitrary Function Generator PCB | May 2025 – Jun. 2025

- Used KiCAD to produce a schematic capture and layout of an arbitrary square function generator
- Soldered and troubleshooted board elements using hand tools, including a multimeter and oscilloscope

Autonomous Retrieval System | Jan. 2025 – Feb. 2025

- Successfully built and competed with a mechatronic claw retrieval system
- Used ultrasonic sensors, Arduino microcontroller, and servos to efficiently automate retrieval process