

Joshua Himmens

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ATLAS Deep Learning Research Student at TRIUMF
Undergraduate Engineering Student at The University of British Columbia

Experience

- **ATLAS Deep Learning Research Student**, TRIUMF, Summer 2024
Using Keras and TensorFlow, will develop panoptic segmentation techniques for calorimeter cells by increasing attribution accuracy by integrating point cloud and graph methods incompatible with traditional convolutional models.
- **Command and Data Handling (CDH) Lead**, UBC Orbit Satellite Team, 2024 – Present
Led the CDH team to develop software to meet mission and testing objectives from ESA (European Space Agency) for the ALEASAT project. Managed a team of 10, presented to ESA in Belgium on project status. Developed mission testing, function testing, and acceptance testing procedures.
- **Embedded Firmware Developer**, UBC Orbit Satellite Team, 2023 – Present
Program device drivers, electrical ground support equipment (EGSE), and developed the ALEASAT Avionics Test Bench (FlatSat). Worked on the ALEASAT onboard computer for launch in Q1 2026.
- **Elections Officer**, Elections Alberta, 2023
Integrated as part of a team to run a safe and fair provincial election, managed public interactions, and vote counting.
- **Advisory Team Member**, Child Rights Connect, 2021 – 2023
Provided guidance at the UN on communication strategies for high-level rights goals. Presented to governments and consulted on international initiatives.
- **Correspondent**, Organization of American States, 2019 – 2020
Created content on human and child rights, attended international conferences representing Canada – attended the 3rd Pan American Child and Youth Forum in Cartagena, Colombia with the Government of Canada.

Academic

- Achieved a 93% (A+) average in Engineering at UBC.
- Completed “Introduction to Quantum Computing”, an 8-month course on quantum computing using IBM’s quantum infrastructure.
- Participated in the “Quantum School for Young Students” at the University of Waterloo.
- Attended “GoPhysics!”, a physics enrichment program at the Perimeter Institute.
- European Space Agency “Fly Your Satellite 4!” participant at ESEC-GALAXIA, a program providing launch for a CubeSat team along with test opportunities.

Technical Skills

- Embedded programming: experienced with FreeRTOS on TMS570 and RP2040.
- Machine learning: worked on multiple Kaggle challenges using scikit-learn and TensorFlow.
- Quantum Computing: used Qiskit to simulate quantum algorithms.
- Programming: fluent in Python and C with beginner Rust knowledge.

Awards

- Erich Vogt First Year Summer Research Experience (FYSRE) award.
- Tom Lawson award for embodying the spirit of Canadian debate.
- Alberta Premier's Citizenship Award for outstanding community service.
- Calgary Flames Foundation Community Involvement Scholarship.
- Julia Turnbull Leadership Award for exceptional community service.
- National Debate Semi-Finalist, Canadian National Style, 2023.
- Ted Rogers Entrance Scholarship for academic achievement.
- 10 Scouts Canada commendations.

Other

- Presented to ESA (European Space Agency) on the ALEASAT project.
- French proficiency at B2 level (B1 DELF certified).
- Public speaker on children's rights and youth engagement, with audiences ranging from 100-1000 people.
- Placed 4th nationally in Canadian National style debate in 2023.
- Scientific Computing with Python certification (300 hours).