Abigail Adam

Engineering Physics Student

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Website | LinkedIn

Education

Bachelor of Applied Science, Engineering Physics - University of British Columbia
GPA: 86% | Dean's List | Expected Graduation: May 2028

Summer Program – Harvard University
GPA: A | June-August 2022

Skills & Abilities

Applied Physics | C | C++ | Git | Java | Linux (Xubuntu 20.4) | Machine Learning | MATLAB | PCB Design | Prototyping | Python | Robotics | ROS | Simulations | Soldering

Technical Experience

Summer Research Student | Technion, Faculty of Physics | July 2024

- Participated in the International Undergraduate Summer Research Program, and worked with the High Energy Physics Group, supervised by Professor Yotam Soreq
- Analyzed electrical and mechanical functioning of instruments used in high energy physics

Designer Co-op | Jablonsky Ast & Partners | January to May 2025

- Performed an in-depth analysis of top-down construction based on hundreds of case studies, a method for building skyscrapers yet to be adopted in Canada, and pitched my conclusions directly to senior partners
- Helped develop models to predict rebar consumption on large projects to assist with accurate budgeting

Automation Team Member| UBC Agroponics | 2024 – present

- Assisted in the creation of an automated hydroponic system, while working on implementing a server using MQTT communication to interface between sensors and actuators, creating a secure and scalable system
- Working on C++ libraries and calibration procedures for lab-quality sensors to ensure data integrity

Projects

Exoplanet Characterization | The Life and Death of Stars Cumulative | June – August 2022

- Characterized a binary stellar system using data from the Transiting Exoplanet Survey Satellite (TESS), modelling using EXOFAST v2, and wrote a technical paper on my findings

Autonomous Robot Competition | Coursework | July – August 2025

- Worked in a team to create an autonomous robot, including designing the robot's electrical systems (PCBs, power distribution, sensor nodes) and making libraries to interface with several sophisticated sensors in C++

Machine Learning Robot Competition | Coursework | September – December 2025

- Worked with a partner to create an autonomous robot to be simulated in Gazebo using ROS in an Xubuntu 20.04 environment, with the code done in Python
- Utilized TensorFlow and Keras to construct and train convolutional neural networks to enable the robot to drive and detect and read clues from its environment