

Aidan Webb

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EDUCATION

Engineering Physics, Bachelor of Applied Science

University of British Columbia

CGPA: 86%

Vancouver, BC

Sept. 2023 – Present

TECHNICAL SKILLS

Programming: C++, Python, Java, Verilog, HTML, ARM Assembly

Hard Skills: Signals and Systems, Data Analysis, Circuit Analysis, 3d Printing, Machining and Fabrication, PCB Design, CAD/CAM, FPGA Programming

Design Tools: SolidWorks/Onshape, Quartus simulation, KiCad/Altium, After Effects, Premiere Pro, Blender

Certifications: First Aid (HCP CPR-C & AED), DELF B2 French

PROJECTS

Autonomous Collection Robot

Summer 2025

Team Project

UBC

- Built a fully autonomous robot to sense, locate, and retrieve 7 unique pet-shaped payloads while navigating an obstacle course.
- Designed and fabricated custom PCB using KiCad with clean/noisy power separation, sensor integration, and ESP32 programming.
- Developed navigation algorithms and PID motor control in C++.
- Used Hall-Effect sensors for homing procedures, wrote custom servo control code to account for positional discrepancies.
- Learned serial communication protocols to communicate between ESP's, as well as I2C protocols to interact with a magnetometer chip.
- Utilized laser cutting, water-jet sheet metal fabrication, and 3d printing for rapid prototyping.

16-bit RISC-based CPU — Verilog

Winter 2024

Solo Project

UBC

- Designed and implemented a 16-bit RISC-style CPU in Verilog.
- Used Quartus and Modelsim to verify behavior ultimately building my design on a DE1-SoC FPGA.
- Wrote complete test benches both in Verilog to test individual modules as well as ARM Assembly that could be run on the CPU as a whole.

Ski lift and Snow Cat Design: UBCO SolidWorks Design Competition

Jan 2024 – Apr 2024

Co-Lead

UBC

- Led 5-member team to design a snow-cat and ski lift system, winning **1st place out of 94 teams**.
- Produced a multiple detailed SolidWorks assemblies taken together having over 12,000 parts with correct motion constraints.
- Ran motion studies and used visualization software to create shaded 3d renders of the model, also awarded **Best Videography**.

EXPERIENCE

Math Tutor and Teaching Assistant

Sept 2019 – Jun 2023

Charles Best Math Center

Coquitlam, BC

- Tutored students one-on-one and assisted in classroom instruction.
- Graded tests and quizzes while providing additional learning support.