

# Brandon Fong

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## Education

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### University of Calgary

Expected graduation: May 2026

*Bachelor of Science in Electrical Engineering, Minor in Computer Engineering*

GPA: 3.58/4.00

Relevant Courses: Digital Systems Design, Analog Electronic Circuits, Digital Circuits, Embedded Systems Interfacing, Electronic Devices and Materials, Computer Organization, Circuits II, Signals and Transforms

## Experience

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### Electrical Engineer Intern

May 2023 – Aug. 2023

Asia Infrastructure Solutions

Hong Kong, HK

- Effectively utilized AutoCAD for diagramming road layouts and overlaying with electrical infrastructure
- Utilized Dialux to simulate multiple lighting scenarios, ensuring fulfillment of government specifications
- Applied agile workflow by participating in daily scrums and monthly sprints

### Web Developer

Nov. 2022 – Apr. 2023

University of Calgary

Calgary, AB

- Designed a web application to visualize geothermal well drilling data, resulting in a 25% increase in data accessibility
- Developed a React dashboard boosting query speeds by 30% and accurately analyzed data from PostgreSQL
- Created a new dynamic selection interface that enhanced the load time of a frequently trafficked tab by 80%

## Projects

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### Water Quality Tester

- Spearheaded a team of 3 to develop a water tester incorporating a turbidity sensor and a conductivity sensor
- Adapted the AVR128DB28 MCU for real-time data processing and acquisition, enhancing measurement accuracy
- Led the assembling and soldering of components onto the PCB, ensuring a compact and reliable design

### Personal Portfolio Website

- Developed a fully operational and responsive personal portfolio website/dashboard
- Maintained cross-platform responsiveness, delivering a smooth user experience across all devices
- Enhanced code maintainability through the utilization of Tailwind for styling and UI elements

## Extracurricular

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### Electrical Team Member

Sept. 2023 – Present

Relectric Car Team

Calgary, AB

- Designed various test cases and formulated documentation for validation of the motor controller
- Conducted comprehensive design reviews for the electrical components of the vehicle
- Educated team members on the principles of EV technologies

### Electrical Team Member

Oct. 2022 – Apr. 2023

University of Calgary Solar Car Team

Calgary, AB

- Performed thorough solar cell testing to enhance energy efficiency and competitiveness of the vehicle
- Assembled and tested PCBs as required employing the use of lab measurement equipment and soldering tools
- Improved the wiring and organization within the car to make it more efficient

### Events Commissioner

May 2023 - Current

Code the Change YYC

Calgary, AB

- Reached out to non-profit organizations to provide volunteering and learning opportunities for students
- Collaborated with other students to organize and plan educational workshops regarding tech
- Attended multiple events to promote the club to prospective students

## Skills

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**Hardware:** Oscilloscope, Function Generator, PIC24, AVR128, Breadboard Circuit Design, Soldering

**Languages:** Python, C, HTML/CSS, SystemVerilog

**Technologies:** React, Git, MATLAB, MPLAB X, AutoCAD, Quartus, Xilinx Vivado, Multisim, Fusion 360, Altium Designer