

# Caylia Bonnick

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🌐 <https://github.com/cayliab03>

## EDUCATION

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### McMaster University

09/2021 – 04/2026

Pursuing a bachelor's degree in Electrical Engineering and a minor in Music

## TECHNICAL SKILLS

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### Programming Languages

Python, C/C++, CSS, JavaScript, HTML, MATLAB, R, Verilog, VHDL, Assembly

### Tools

GitHub, Hubspot, Visual Studio Code, Eclipse IDE, R Studio, Analog Discovery 2, Autodesk Inventor, Raspberry Pi, Microsoft Office, ORCAD PSpice, Quartus II

### Equipment Expertise

Breadboard, Oscilloscopes, Digital Multimeters, Signal Generators, Function Generators, Voltage and Current Probes, Integrated Circuits

### Spoken Languages

Fluency in English and French

## EXPERIENCE

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### Procter & Gamble

05/2024 – Present

*Process & Manufacturing Engineer*

- Leading investigation into cause for ultrasonic welding failure in non-woven material, testing hypothesis, and recommending solution
- Improving consistency in bag sizes and using product data to predict bag size data
- Supporting digital quality using artificial intelligence and machine learning to digitize current business methods

### McMaster Women\* in Science and Engineering (WISE)

11/2022 – Present

*Crest Conference Operations Executive Director*

- Spearheading the “Current Research in Engineering, Science, and Technology” annual regional conference
- Along with a team, organized keynote address, panels, workshops, and research presentations
- Facilitating interdisciplinary networking for students, postdocs, and faculty

### Real Canadian Superstore

10/2019 – 04/2024

*Joe Fresh Sales Associate*

- Ensured all customers receive excellent service through courteous salesmanship, and prompt service. Maintaining a **100% positive** customer and employer feedback score
- Assigned to “Ship from Store” service based on efficiency and ability to thrive under pressure
- Handled sales, shipments, and returns through a POS software system

## PROJECTS

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### Microprocessor Systems Project [↗](#)

*Associated with McMaster University*

- Built a device that scans surroundings and uses serial communication to create a 3D rendering of a room
- Used a ToF Sensor, a Microcontroller, and a PC to collect, send, receive, interpret, and visualize measurement data
- Wrote C++ code to receive and transmit data to the PC and a Python code to store received data, used Open3D for data visualization

### Bend Your FootPrint [↗](#)

*Elle Hacks*

- Developed a website with an embedded python-coded quiz with a team in 36 hours
- Utilized Hubspot CRM, HTML, and JavaScript to make the website interactive and styled using CSS to implement easy navigation for users

### Personal Website [↗](#)

- Created a static website hosted on GitHub Pages with files written in HTML, CSS, and JavaScript
- Showcases my experiences, projects, and achievements
- Uses Google Sheets to receive contact from clients

### Sorting Robot [↗](#)

*Associated with McMaster University*

- Used Python to program a recycling robot to sort, transport, and deposit containers made of different materials to their corresponding recycling bins in the Quanser Interactive Labs interface
- Used a colour sensor to ensure each container was properly identified and deposited into the correct bin
- Used an infrared sensor to have the robot follow a leading line around the track