

Jason Baik

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Education

McMaster University | Expected Graduation: **May 2028**
Electrical Engineering

Hamilton, ON

Project Experience

Bus Time Display

Hamilton, ON

- Designed and developed a **Python** web scraper leveraging **Selenium** and **PySerial** to **automate** the extraction of real-time bus schedule data from Google Maps. The process involved configuring browser automation and handling dynamic web content.
- Processed and formatted the extracted schedule data in Python to ensure compatibility with an **Arduino** microcontroller, utilizing serial communication protocols to transfer the information seamlessly between the software and hardware.
- Programmed the Arduino to control a crystal LCD display module, implementing logic to dynamically update and present bus arrival times. This demonstrated advanced skills in Python development, hardware integration, and real-time data visualization for practical applications.

Blind Opener

Richmond Hill, ON

- Developed an automated blind opener controlled via remote, enhancing home automation and convenience.
- Programmed the system using C++ on an Arduino, enabling interaction between an IR sensor and the remote control for seamless operation.
- Designed the electrical system to interface the Arduino with motorized blinds, ensuring smooth and responsive control over opening and closing mechanisms.
- Successfully integrated hardware and software components, allowing the blinds to operate reliably based on user input from the remote.

Rear-View Camera

Hamilton, ON

- Led the development and installation of a rearview camera system, increasing the client's field of view from **90° to 360°** for enhanced mobility and safety.
- Selected and integrated a wide-angle HD camera with a display, allowing the client to monitor surroundings in real-time with **less than 1-second latency**.
- Designed an adjustable camera mount using **Autodesk Inventor**, allowing flexible attachment to various surfaces for optimal positioning and user convenience.

Recycling Robot

Hamilton, ON

- Designed and implemented a system using a linear actuator for an automated guided vehicle (AGV) to dispense recyclables efficiently.
- Created a detailed mechanical assembly on **Autodesk Inventor**, ensuring precise integration of components for seamless interaction between the actuator and AGV, enabling smooth and reliable operation.
- Focused on key performance indicators (**KPIs**), including the volume of recyclables moved by the actuator and operational success rate, achieving a **100% success rate** in all test scenarios.

Experience

Staples

Richmond Hill, ON

Technical Sales Associate

June 2022 – May 2023

- Provided technical assistance to customers, offering guidance on the use of computers, printers, and other office technology.
- Advised customers on electrical components and sold relevant tech products, ensuring they selected the right tools for their needs.
- Supported the sales team by identifying customer needs and recommending appropriate tech solutions, contributing to overall store sales goals.

Skills

Project Management: Microsoft Suite

CAD: Autodesk Inventor

Robotics: Arduino, Quanser Labs

Software: Python, Matlab, Simulink, C, C++, HTML, CSS, PSpice,