

# Earl Ryan Parker

Oakville, ON | EarlRyanParker@gmail.com | (289)-795-3814 | [www.linkedin.com/in/earlryanparker](http://www.linkedin.com/in/earlryanparker)

## Summary

---

Fourth year electrical engineering student with **2+ years of experience in embedded system design and development, microcontroller programming**, computer-aided design, and web development. Dedicated to developing robotic embedded control systems. Seeking to leverage software experience to pursue an intern position as a software engineer

## Education

---

### McMaster University

• Bachelor of Electrical Engineering + CO-OP Program

Sept 2020 - Apr 2024

## Experience

---

### MAC Robomaster Team

#### Controls Engineering Team Member

Oct 2022 – Present

- Design, debug, and develop embedded robotic control systems by using git source control to contribute embedded C to enhance the functionality of control systems of the gimbal, motor drive, and chassis.
- Conducted case studies regarding PID Control Theory, Remote Controller Encoding and Decoding, BLDC Motor Control, CAN Serial Communication, Gimbal Control Theory and IMU, FreeRTOS and Mecanum Wheels Kinematics. Used Microsoft Office to document research and create presentations

## Projects

---

### Arduino Remote-Controlled Car

- Worked independently to design a remote-controlled car with a stepper motor-controlled axle steering, rear-wheel drive, sensor backup assist, wireless controller data transmission (SPI), and a 3D Printed Chassis.
- Skills applied: Arduino, Embedded C, Soldering, Autodesk Inventor, 3-D Printing

### Spatial Mapping Using Time-of-Flight Microcontroller System

- Worked independently to design and build an embedded spatial measurement system using a time-of-flight sensor to acquire information about the surrounding area. The acquired mapped spatial information received via I2C and is stored in onboard memory and is communicated to a personal computer for reconstruction and graphical presentation using python and OPEN 3D.
- Skills applied: Python, Embedded C, Keil and Microsoft Office, OPEN3D

## Skills

---

- Programming: C++, C, Git, Javascript, HTML/CSS, MATLAB, Python
- Software: AutoDesk Inventor, Microsoft Office(Excel, Word, PowerPoint), LTspice
- Electrical: Arduino, ARM, Oscilloscope, Soldering, Wiring, Reading Electrical Blueprints, Logic Analyzer
- Languages: English (First Language), French (Fluent)