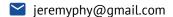
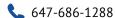
JEREMY PHY

Mechatronics Engineering Student at University of Waterloo





in linkedin.com/in/jeremyphy

qithub.com/jeremyphy

SKILLS

Object Oriented Design

Debugging

Soldering

Electronic Prototyping

TOOLS

C/C++

Java

Git

HTML

CSS

Linux

Java AWT

Bootstrap 4

EDUCATION

BASc. in Mechatronics Engineering

University of Waterloo

GPA: 79.9% 2019-Present

TOPS (Talented Offerings for Programs in the Sciences)

Marc Garneau C.I. 2015-2019

INTERESTS

Filmmaking

Skate / Longboarding

Basketball

EXPERIENCE

Embedded Software Developer PerkinElmer, Inc.

Jan - Apr 2021

- Implemented RS485-to-SPI transceiver in C++, for communication between existing hardware and new motor control system
- Installed evaluation hardware for ATMega328 Microcontroller and MAX485 Transceiver on a mass spectrometer for successful concept validation
- Collaborate with Sr. electrical designer to produce circuit schematics for production

Embedded Software Developer PerkinElmer, Inc.

May - Aug 2020

- Developed 3-axis motion control system using PowerSTEP01 controller for accurate calibration of mass spectrometers sample injector
- Programmed SPI transfer framework with C, allowing for X/Y/Z/Pump motor control with single daisy-chained connector
- Integrated motor controllers into an existing hardware system, saving up to \$500/unit in production costs

Electrical Engineering Intern Sunnybrook Research Institute Jul - A

Jul - Aug 2018

- Developed Bash script for Linux-based microcontroller, capable of applying a reflow heat profile in under 5 minutes
- Built an automated solder reflow oven from existing chassis, capable of a peak internal temperature of 235°C
- Presented successful project results to leading Focused Ultrasound (FUS) researcher
 Kullervo Hynynen, Ph.D. and audience of 40+ researchers

PROJECTS

Project Cerberus A prototype 3-wheeled robot

Winter 2021

- Design triangle-style chassis to support 3 omni-directional wheels
- Program control software with arduino for obstacle detection and autonomous navigation

Personal Website Jeremyphy.github.io/

Winter 2020

- Created site layout using HTML and CSS for a purposeful and intuitive user experience
- Implemented Bootstrap 4 framework resulting in accessible viewing on both mobile and desktop devices

ACHIEVEMENTS

Merit Award Merit Bursary Program

2019

For 'exceptional community contributors'

Young Scholar Award Finalist Young Scholar Foundation

2018

For 'demonstrating exemplary leadership'

Champions & Best Engineering Award OTU Sumobot Engineering Comp.

- The best performance overall, out of 58 teams

2018