TONI OGUNMADE

UNIVERSITY OF WATERLOO
MECHATRONICS ENGINEERING (SECOND YEAR)

Phone: +1 (226)-600-2697
Email: oogunma@uwaterloo.ca
Website: oluwatoni.github.io

TECHNICAL SKILLS

- Proficient in C++ and Python
- Familiar with Java and C
- Introductory knowledge of ROS
- Familiar with Linux, Git and SVN
- Experience using a CNC Router & a 3D Printer
- Experience Soldering and designing Electrical Schematics
- Experience with SolidWorks and EagleCAD

WORK EXPERIENCE

Robotics Engineer/Programmer, Solus Robots — April 2015 – September 2015

- Redesigned a humanoid robot's head unit and arms, effectively increasing the range of motion of the head unit and reducing manufacturing costs of an arm by **35%**.
- Implemented **C++** code to assist debugging of the robot from the on-board computer and online interface
- Implemented code to enable the teleoperation of the humanoid robot
- Developed calibration code for the joints and tuned each joint's **PID controller**

PROJECTS

Ackerman Mobile Robot Platform (The Learner) — July 2015 - present

- Wrote a **Python** script to graphically visualize the sensor data and control the robot over **Bluetooth**
- Developed **C++** code for the **Arduino** controller which reads, filters, and relays data to a PC
- Used **EagleCAD** to design and solder power distribution circuit board for various sensors
    - Sensors include: ultrasonic sensors, an IMU, an GPS and a battery monitoring circuit

University of Waterloo Robotics Team: Robot Racing — September 2014-present

- Implemented **C++** code that enabled remote control of the **ROS** powered autonomous race car
- Refactored the team's **C++**code to improve readability and versatility

ScanTRON 2019: Multiple choice marking robot — November 2014

- Programmed a robot to mark answer sheets and record individual student grades in **RobotC**

Pscycle — May 2015

- Coded **Arduino** powered device that helps cyclists navigate while keeping their eyes on the road

VOLUNTEER AND EXTRA-CURRICULAR ACTIVITIES

Director, RidgidWare Electronics Store (School Non Profit) — September 2015-present

- Reorganized the inventory to be more beginner friendly by obtaining more hardware kits and platforms

Research Team Lead, Engineers Without Borders: UW Chapter — September 2015-present

- Co-wrote a **case study** to be used in a society and technology course that focuses on global engineering

Hardware Mentor, Waterloo Tech Retreat — August 2015

- Taught high school students how to wire up simple circuits and program Arduinos