ADAM IANTORNO

Toronto, ON | aiantorn@uwaterloo.ca | adamiantorno.ca

A passionate engineering student looking forward to new opportunities and working on innovative technologies

EDUCATION

University of Waterloo Sep 2019 - May 2024

- Candidate for Bachelor of Applied Science, Mechanical Engineering with Artificial Intelligence Option

Appleby College Sep 2014 - June 2019

SKILLS

Controls & Software: Python | C++ | MATLAB & Simulink | PID | ROS & ROS2 | CAN

Design: SolidWorks | Siemens NX | Altium 365 | Autodesk | GD&T

Other: 3D Printing | Rapid Prototyping | Machine Shop Certification | Arduino | Raspberry Pi

WORK EXPERIENCE

Impossible Metals Collingwood, Ontario

Robotics Developer Sep 2022 - Dec 2022

- Programmed 1DOF Arm in **Python & ROS2**; controlling linear actuator and cameras to test end-effector
- Created robot UI using **React Typescript** to monitor and toggle all housings through **ROS service calls**
- Automated software package sorting and deployment to **Raspberry PIs** by developing **Python** script

Electrans Technologies Ltd. Oakville, Ontario

Mechatronics Engineer May 2021 - Oct 2021

- Designed and built HIL test fixture to test sensors and pneumatics with custom firmware (see portfolio)
- Led design of automotive wire harness with diagramming software and sourced IP6k9k connectors
- Created 3D models and engineering drawings using **SolidWorks** of sheet metal brackets for MVP

University of Waterloo Alternative Fuels (Eco-Car) Design Team Waterloo, Ontario

Autonomous Driving Sensors Diagnostics Lead Sep 2020 - Dec 2020

- Programmed **C++** radar diagnostics algorithm in **ROS** which was implemented into vehicle firmware
- Analyzed sensor data with **MATLAB** to identify error ranges, resulting in more accurate of measurements
- Developed unit test cases for sensors and diagnostics algorithm during operation through **DFMEA analysis**

KEY PROJECTS

Portfolio Website: adamiantorno.ca (code available on GitHub)

Autonomous Pick and Place Robot July 2021

- Developed **object-detection** algorithm based on HSV contrast with **Python OpenCV** for coordinates
- Implemented embedded control system for **multi-DOF manipulator** using **servo** and **stepper motors**
- Designed robot using OnShape, and model linkages with **inverse-kinematics algorithm** using **MATLAB**

Hardware in Loop Test Fixture Sep 2021

- Created **SolidWorks** model, electrical schematics in **Altium,** and sourced components for testing fixture
- Designed **Arduino** function that converts **UART signals** to **J1939 CAN** to communicate with vehicle