Luke Parna-Gile

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Technical Skills

Microsoft Suite	GitHub	Python	Robot Operating System (ROS)
3D CAD and Production Drawings	C++	CMake	Project organization
MATLAB/Simulink	HTML	C	Industrial power tools

Relevant Experience

Summer Intern – Thomson's Metal by Design 2023
- Designed and fabricated metal products for customers to fix, replace or create industrial parts or equipment.
- Restructured company file organization while assembling 3D models and production drawings on SolidWorks.
- Calculated moments on structural members and machined and manufactured from production drawings

Production Associate – Honda of Canada Manufacturing 2022
- Assembled and inspected high quality automotive vehicles with great attention to detail and total accuracy in fast paced environment
- Supported co-workers in team environment to maintain quality and efficiency of production line

Teams And Projects

System Integration Team Member – Queen's Autodrive Team 2021 to Present
- Integrating sensors using ROS2 and CAN with the goal of creating an autonomous car
- Communicating between sub teams as liaison for system integration to hardware sub team

Attitude Determination Control System (ADCS) Team Member – Queen's Engineering Satellite Team 2022
- Modeled geocentric satellite orbits using Python and C++ for the relocation of the craft for satellite imaging
- Analyzed changes communicated from the team and iterated design accordingly

System Engineer - International Engineering Def Hacks Worldwide 3.0 2021
- Developed a system for COVID safety measures by engineering and integrating electrical and mechanical components with software being awarded 1st place in COVID Innovation category
- Worked with small team through design iteration to achieve minimum viable product for presentation

Lead Mechatronics Engineer – Mechatronics and Robotics Design II Project 2023
- Developed prototype autonomous mobile robot by integrating LiDAR and IMU Sensors with Motor drivers and encoders using Raspberry Pi with ROS, expanding skills in open ended mechatronics design
- Collaborated with group of three in a four-month time frame to produce a product for a design exhibit

Education

Mechatronics and Robotics Engineering – Queen's University 2021 to Present
- PEO Simcoe-Muskoka Chapter Professional Engineers Scholarship
- Distinction of Dean's Scholar, Entrance Scholarship

Key Courses
- Data Structures and algorithms: Algorithm development and numerical and statistical analysis of data sets
- Mechatronics and Robotics Design I: Test engineering and calibration of sensors and actuators