Systems Engineer · Educator · Software Developer

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Technical Skills ______ Proficiency Familiarity

TOOLS Arduino SolidWorks Catia V5 Visual Studio Visual Studio Code Git Jupyter CMake Simulink

FRAMEWORKS & LIBRARIES OpenCV ArUco NumPy Pandas Matplotlib Unity ROS TensorFlow

Education

BESc Mechatronic Systems Engineering

London, ON

WESTERN UNIVERSITY

• **GPA**: Overall = 3.7. Two-Year = 3.9.

Sep. 2016 - Apr. 2021

- Courses: Robotic Manipulators, Control Systems, Embedded Systems, Microprocessors, Image Processing, Signal Processing.
- Academic Awards: Dean's Honour List (2021), Dean's Honour List (2019), Dean's Honour List (2017), Scholarship of Excellence (2016).

Work Experience

Teacher of the Deaf London, ON

ROBARTS SCHOOL FOR THE DEAF

Jan. 2022 - Feb. 2022

- Instructed classroom lessons and coding activities for Deaf students in secondary-level Mathematics, Science, and Technology.
- Collaborated with interpreters and students to establish clear vocabulary of scientific and technical concepts in English and ASL.

Process Engineering Leader Intern

Stratford, ON

SCHAEFFLER CANADA, INC.

May. 2019 - Aug. 2020

- Managed process engineering projects in safety, quality, and productivity by planning and leading the work of multiple departments.
- Conducted studies on process repeatability, cycle time, downtime, machine faults, and reject rate to inform engineering decisions.
- Improved parameters, tooling, and technologies of production processes with a focus on cost savings and LEAN manufacturing.
- **Documented** thorough setup and testing procedures, parameter modifications, ongoing work requests, and actualized cost savings.

Product Design Student Engineer

Chatham, ON

CONTINENTAL TIRE CANADA, INC.

May. 2018 - Aug. 2018

- **Applied** detailed GD&T to engineering drawings using CAD for machinists to manufacture fixtures and performance equipment.
- Analyzed thermal management product test data using data filtering algorithms and implemented into macros for company use.

Product Testing Student Engineer

Chatham, ON

CONTINENTAL TIRE CANADA, INC.

May. 2017 - Aug. 2017

- Designed measurement fixtures to test powertrain product lines for vibration, pressure leak/vacuum, corrosion resistance, etc.
- Presented test results to product design engineers using data visualization to inform design and specification revisions.

Projects

Haptic Guidance System to Assist Blind Persons to Locate Points of Interest

London, ON

WESTERN UNIVERSITY

Sep. 2020 - Apr. 2021

- **Developed** 3D camera pose estimation vision system which directs blind users via a haptic wearable to navigate indoors.
- Integrated Bluetooth communications from smartphone app hosting C++ OpenCV vision system to Arduino haptic wearable.
- Empowered users to confidently locate specific points of interest indoors without the use of vision or hearing with 90.32% success.

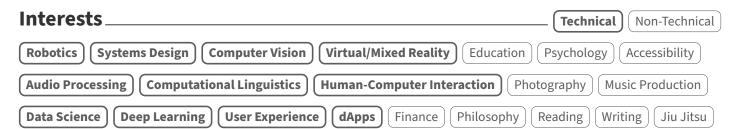
Production Launch of Honda Wheel Bearing

Stratford, ON

SCHAEFFLER CANADA, INC.

May. 2019 - Aug. 2020

- Prepared existing automated assembly line for new Honda product by reworking tooling/parameters and training production staff.
- **Investigated** root causes of failure to meet customer specifications and proposed product design and process improvements.
- Implemented process improvements while adapting to changes quickly to bolster customer rapport and prevent downtime costs.



AIDAN BRUNEEL · RÉSUMÉ APRIL 13, 2022