

Aidan Bruneel

SYSTEMS ENGINEER · EDUCATOR · SOFTWARE DEVELOPER

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Work Experience

Teacher of the Deaf

ROBARTS SCHOOL FOR THE DEAF

London, ON

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

SCHAEFFLER CANADA, INC.

Stratford, ON

May. 2019 - Aug. 2020

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

Product Design Student Engineer

CONTINENTAL TIRE CANADA, INC.

Chatham, ON

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

CONTINENTAL TIRE CANADA, INC.

Chatham, ON

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.

Education

BESc Mechatronic Systems Engineering

WESTERN UNIVERSITY

London, ON

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).
- **Grade Point Average:** Overall = 3.7/4.0. Two-Year = 3.9/4.0.

Awards & Certifications

AWARDS

2017 **NSERC Experience Award**, NSERC

Chatham, ON

CERTIFICATIONS

2019 **Certified SolidWorks Associate in Simulation**, Dassault Systèmes

London, ON

2017 **Certified SolidWorks Associate in Mechanical Design**, Dassault Systèmes

London, ON

2017 **Advanced Metal Shop Training**, Western University

London, ON

Projects

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

WESTERN UNIVERSITY

London, ON

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

SCHAEFFLER CANADA, INC.

Stratford, ON

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.

Technical Skills

LANGUAGES **C++** **C** **MATLAB** **Python** **L^AT_EX** Visual Basic for Applications (VBA) Java Assembly

TOOLS **Arduino** **SolidWorks** **Catia V5** **Visual Studio** Simulink Visual Studio Code Git/GitHub

FRAMEWORKS & LIBRARIES **OpenCV** **NumPy** **SciPy** Matplotlib ROS Linux TensorFlow

Proficiency Familiarity