Aidan **Bruneel**

SYSTEMS DESIGNER · EDUCATOR · COMPUTER PROGRAMMER

91 Ashfield St, Goderich, ON, Canada, N7A 3X9

+1 (519) 859-1466 | aidan@aidanbruneel.com | aidanbruneel | aidanbruneel

Technical Skills
`Proficiency` `Familiarity`

COMPUTER LANGUAGES	`C++` `C` `MATLAB` `Python` `LaTeX` `VBA` `C#` `Java` `Assembly` `PLC` `Digital Logic`
TOOLS & APPLICATIONS	`SolidWorks` `Catia V5` `Arduino` `Visual Studio` `Simulink` `Git` `Jupyter` `CMake`
FRAMEWORKS & LIBRARIES	`OpenCV` `ArUco` `Matplotlib` `NumPy` `SciPy` `Pandas` `Unity` `ROS` `TensorFlow`

Education

BESc Mechatronic Systems Engineering
London, ON

WESTERN UNIVERSITY — *Sep. 2016 - Apr. 2021*
- **GPA**: Overall = 3.7. Senior Year = 3.9.
- **Academic Awards**: Dean's Honour List (2021, 2019, 2017), The Western Scholarship of Excellence (2016).
- **Courses**: Robotic Manipulators, Control Systems, Embedded Systems, Microprocessors, Image Processing, Signal Processing.

Work Experience

Occasional Supply Teacher
Zurich, ON, London, ON

HURON-PERTH CATHOLIC DISTRICT SCHOOL BOARD & LONDON DISTRICT CATHOLIC SCHOOL BOARD — *Mar. 2022 - Pres.*
- **Supported** student learning by troubleshooting concerns and mediating peer conflict across multiple grade levels and subject areas.

Teacher of the Deaf
London, ON

ROBARTS SCHOOL FOR THE DEAF — *Jan. 2022 - Feb. 2022*
- **Instructed** classroom lessons and laboratory 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.
- **Sparked** curiosity and passion for computer programming in Deaf youth by planning and supervising coding activities and projects.

Operations Manager
London, ON

TAILORED BRANDS, INC. — *Sep. 2021 - Dec. 2021*
- **Organized** tuxedo rental service by automating the inventory tracking and reservation auditing systems using scripting on iOS.
- **Established** strong customer relationships through empathy, insight, and consciousness of customer needs and experience.

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 Engineering Student
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 Engineering Student
Chatham, ON

CONTINENTAL TIRE CANADA, INC. — *May. 2017 - Aug. 2017*
- **Designed** measurement fixtures to test engine 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 to navigate indoors via haptic wearable technology.
- **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 developed process and product design improvements.
- **Bolstered** customer rapport by directly discussing engineering improvements while adapting to changing customer requirements.
- **Implemented** process improvements and testing measures to reduce production losses (e.g., downtime, rejects, etc.) by **$1.2M/year**.