

Bryan Chen

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JUNIOR PROFESSIONAL ENGINEER, PROFESSIONAL SUMMARY

- Experienced in CAD/CAM software with FEA/FEM knowledge (NX 11, SolidWorks, Rhino 6, NASTRAN)
- Competent in MATLAB programming and basic C++
- Experienced user of Microsoft Office Suite (Word, PowerPoint, Excel, Outlook, Publisher)
- Strong people and communication skills demonstrated through years of customer service experience.
- Excellent critical thinking skills and able to work independently or collaborate to complete tasks

PROFESSIONAL EXPERIENCE

Bend-All Automotive

May 2019 – Dec 2019

Product Development Engineer Internship

Ayr, Ontario

- Researched and developed tools using Solidworks and NX 11 for new and existing products, tooling, and automation equipment for Crimping, Endforming, and Quality Assurance.
- Assisted in GD & T, modeling, and simulations for new and existing products
- Completed testing and performance check design revisions to verify standards adherence.
- Obtained experience and technical insight of engineering tasks and expectations during 8-month internship.

Key Projects

Seal to Lock Gauge

- Quality assurance raised concerns of a measurement that was difficult and inefficient to measure on a shadowgraph that was required by customers to pass quality assurance.
- Proposed tool was in the delayed in development phase due to being unable to produce consistent results and failing the **Reproducibility and Repeatability (R&R)** test to be approved in the manufacturing processes.
- Revised and improved tool to pass R&R and raised confidence of measurement from 55% to <5%
- Assisted implementation of tool to be used in international facilities.

Anti-Rotation Feature

- Researched and developed new tooling for existing manufacturing equipment to create the new feature on an existing transmission oil cooling line.
- Revised tooling to reduce O-ring shear, with detection sensors and tooling changes.
- Released tooling and manufacture equipment to be used in international facilities.

RONA Millwork

May 2015 – August 2016

Sales Associate

Oshawa, Ontario

- Provided customer service, by answering product knowledge questions, perform stocking and organizing.
- Assisted with quotations of projects for lumber, window, doors and countertop special orders.
- Performed stocking, organizing, cleaning duties at the request of management team.
- **Scored in the top percentile for annual review of performance.**

Bachelor of Engineering, Automotive Engineering

Ontario Tech University, Oshawa, Ontario

Expected Graduation: May 2022

- President's list Winter 2021

Relevant Courses:

Vehicle Dynamics,
Electric and Hybrid Vehicles,
Chassis Systems Design,
Automotive Structural Design,

Finite Element Methods,
Thermodynamics and Heat Transfer,
Advanced Materials Engineering,
Material Removal Techniques,

PROJECTS

Electric Lawn Tractor Capstone *Oshawa, Ontario*

Sept 2021 – present

- Design and engineer an electric tractor conversion to convert ICE drivetrain to electric drivetrain
- Apply theoretical knowledge of previous courses to engineer and specify parts and design
- Build and test a prototype to meet desired standards and design needs
- Present and produce prototype demonstration and presentation to peers and faculty

OntarioTechU Racing Team *Oshawa, Ontario*

Jan 2020- April 2020

- Designed and built a formula-style electric race vehicle to compete in FSAE competition
- Used NX11 and SolidWorks CAD and FEA package to design and optimize suspension design
- FEA components and analyze the results to create design reports for competition
- Created drawings for various manufactures for custom parts and machine work
- Assisted in chassis development and aerodynamic when required

Driverless Delivery Vehicle Project *Oshawa, Ontario*

Sept 2018 – Dec 2018

- Used NX11 and Rhino 6 CAD software to design and model a Driverless Delivery Vehicle.
- Built small prototype with appropriate sensors to display proof of concept.
- Explored cost effective options to estimate cost and viability.
- Presented design to class to facilitate feedback and discussion.

QUALIFICATIONS, AWARDS, AND INTERESTS

America's Cutting-Edge CNC Machine Training Program, 2020

Mitsubishi Materials Material Removal Process Training, 2020

3D printed and donated over 5000 pieces of PPE during the 2020 pandemic

Designed and optimized 3D printed PPE designs for more efficient and faster manufacturing

Certified SolidWorks Associate (CSWA), Solidworks 2019

Employee of the Quarter (Starbucks Coffee Company) – Spring 2016

Top percentile for annual review of performance – Rona Millwork 2016

Chief Warrant Officer in the Royal Canadian Army Cadets (highest achievable rank as a cadet)

Outdoor Enthusiast (Over 500km of trail covered in Algonquin Park)

Restoring a 1991 BMW E30 at home garage

Home lab networking and DIY enthusiast

