Project Portfolio

Welcome, and thank you for taking the time to view my portfolio. The goal of this portfolio is to give you a deeper insight into my experiences and skills I have gained over my recent history. It is my hope that this will allow you to better assess how my skills can be applied to your company. I would be happy to talk in more detail and can be reached using the contact information bellow

Bryan Chen Phone: 647-893 6628 Email: Bryan.zj.chen@gmail.com Location: Toronto, Ontario

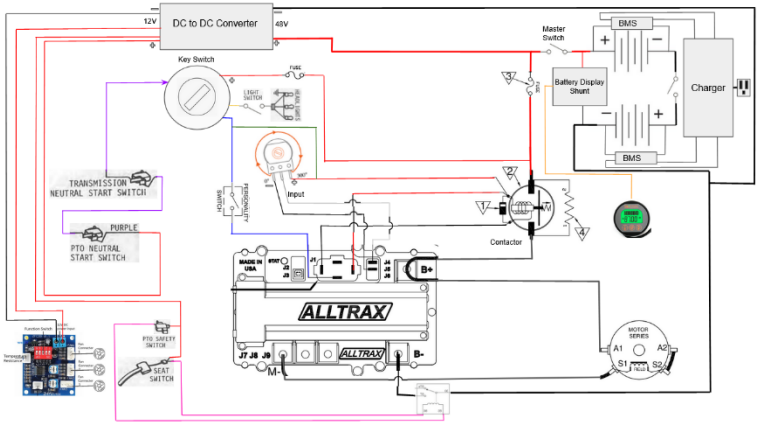
Hello! My name is Bryan Chen. I am an Automotive Engineer in my final year at Ontario Tech University.

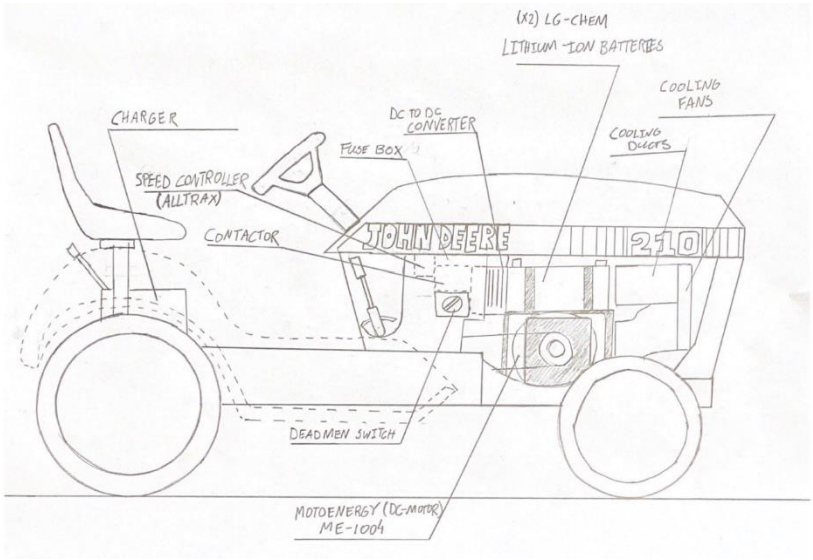
Objective: Seeking for a position as an Engineer within an organization that progresses dynamically and provides me an opportunity to enhance my skills and update my knowledge.

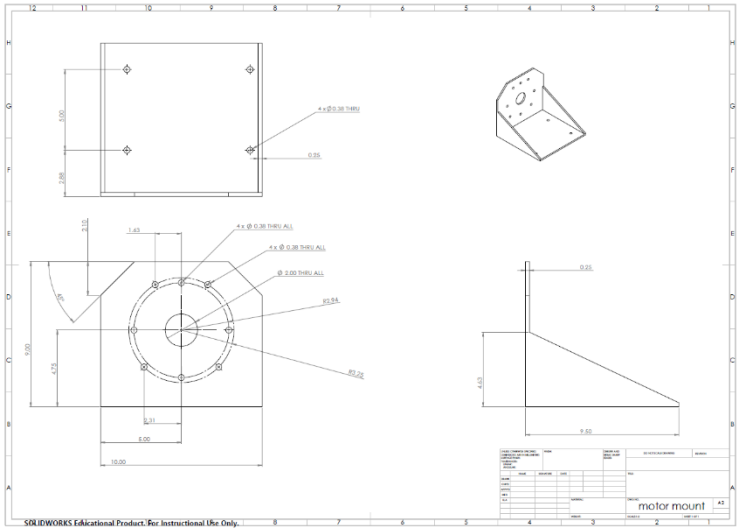
University Projects

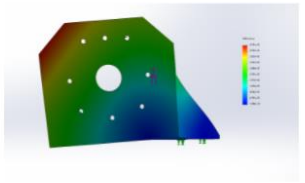
Capstone Design Project

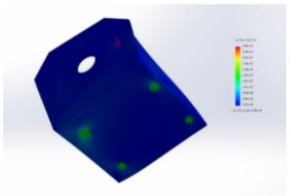
This was the final year project for my university program. We are to use all the skill learned throughout the years and apply the knowledge in a final project. The project was to convert a gasoline lawn tractor into an electric version using lithium technology. We are currently in the building phase of the project for the winter semester (Jan-May) 2022.

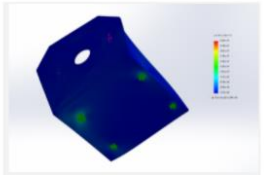






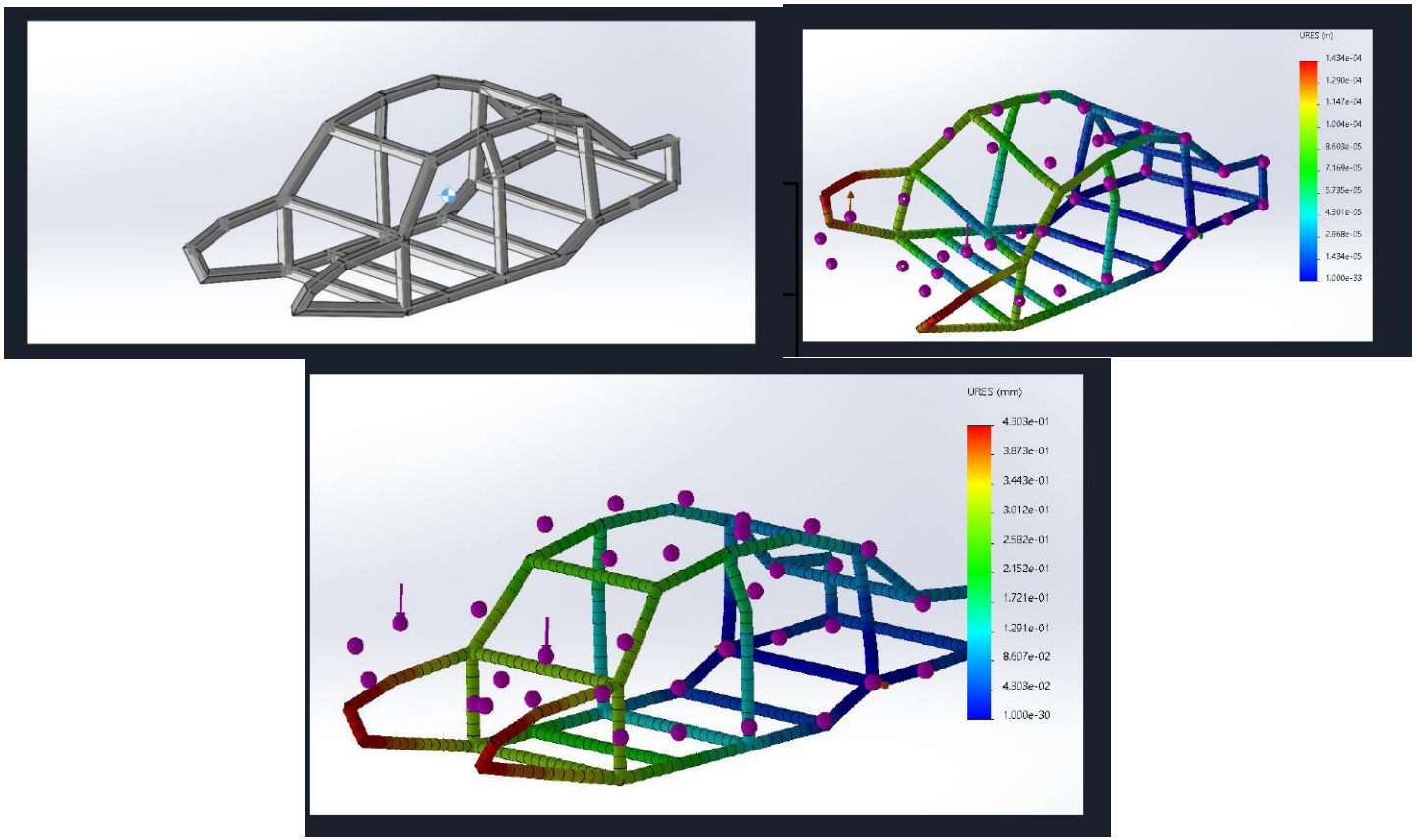






Chassis Design Project

Course project was to use CAD/CAE to analyze a chassis. This project helped to develop an understanding of conceptual vehicle structure design. Using NX and related simulation software the chassis was modeled in NX then a simulation was performed, and its solution analyze. A report was generated and presented to class with our findings.



Professional Experience

Bend-All Automotive

Skills obtained: CAD/ CAE, Professional Engineering Experience, Product Development and Engineering, Teamwork

At Bend-All automotive a first-tier automotive supplier of components and automation tooling. During my internship I was required to assist in the design, manufacturing, and validation processes of engineering samples. These samples would be of new and existing products and any changes would be required to be validated before being approved. I would assist in the engineering drawing revisions using various CAD/ CAE programs applying GD&T principles. Creating samples and working the machines in the manufacturing process was a common task. It was my first professional engineering experience and was an amazing learning experience to apply concepts learned in class in the work field.

Side Projects

BMW E30 restoration.

Skills obtained: Application of classroom knowledge, Hands-on experience, engineering application

I am restoring a 1991 BMW E30 318is. This was my dream car; I was able to purchase this from a friend. I am slowly collecting the parts to put the car back on the road. The car needs rust repair and general maintenance for it being 30 years old. It has taught me a lot of lessons on wrenching on cars and a lot of mechanical skills apart from general oil changes and maintenance. It's a great way for me to apply the things I learned in my degree in practice.




Sip and Puff Mouse

Skills obtained: Arduino coding, 3d printing, Product Development, Troubleshooting

I had a friend request I make a Sip N Puff mouse. Retail models of a product like this cost hundreds of dollars. Using my 3d printer and printing skills along with my coding skills I was able to create a 3d printed Sip N Puff mouse. The mouse is connected by USB interface and is run off an Arduino that converts air puffs in the mouse into inputs. He uses this mouse daily for his computer.

'Sup Sip-n-Puff user manual

Mouse actions:

Action:	Input:	Uses:
Hard sip	Right click	Options for folders, files or web links
Soft sip	Scroll down	To move a webpage down
Soft puff	Scroll up	To move a webpage up
Hard puff	Left click	Open programs, files, links, or items.
2 short hard puffs	Double click	To open programs, files or folders
Holding a hard puff	Clicking & dragging	To move items, files, folders, or programs

3D Printing PPE 2021 COVID

Skills obtained: 3d printing, Product Development, Production 3d Printing

During the 2021 covid pandemic I used my 3d printer to print PPE with a collective and donated them to the hospital systems around the GTA

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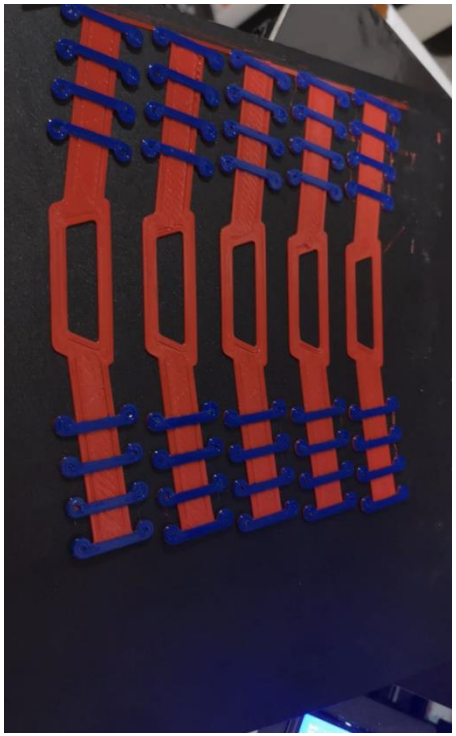

Canoe Restoration

Skills obtained: Composite Materials Experience, Layup Experience, Application of Engineering

I am an avid outdoor enthusiast. This past summer I was able to purchase a canoe. It is a 17’4” Canadian Tripper from the manufacture Langford. It is made out of Kevlar and fiberglass. When I purchased this canoe, it was in a state of disrepair from neglect. This project taught me some valuable skills about composites. I had recently taken a class about advanced engineering materials, it covered composite materials. I was able to get some hands-on experience doing layup and doing some real-life testing of the composite material. I was able to restore the canoe back to its original glory and took it out to Algonquin Park for an adventure over a 100km portage trip.