

Heather Wubs, BEng

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PROFILE

Mechanical Engineer in Training with 4 years of diverse formal and academic experience within Automotive, Fluid Systems, and Academic environments.

- **Problem-Solving & Decision Making** – Passionate about seeking progressive opportunities to deliver products and improve client satisfaction, systems, and processes. Agile and innovative thinker and resourceful problem solver who seeks to understand underlying issues by gathering information, identifying risks, and considering alternatives to arrive at quality outcomes.
- **Planning & Organization** – Exceptional planning, organization and prioritization skills lead to managing multiple priorities/projects simultaneously in environments where high levels of adaptability to change, attention to detail, and quality work are expected.
- **Interpersonal & Communication** – Team player who builds collaborative partnerships with all organizational stakeholders (management, coworkers, customers, vendors/suppliers, cross-functional departments) through excellent interpersonal and communication (verbal, written, listening, influencing) abilities.
- **Technical Proficiencies** – Proficient in utilizing various systems and software including SolidWorks, Autodesk Inventor, Adobe Acrobat, MS Office (Project, Word, Excel, PowerPoint, SharePoint, Outlook, Teams), etc.

Key Competencies

Prototyping | CAD Modelling | Problem Solving | Creativity | Technical Reporting

CAREER SUMMARY

Toyota Canada, Toronto, ON

Jul. 2021 – Sep. 2023

Consultant, Career Ignition Program (Hybrid)

Offered a one-of-a-kind opportunity to learn about Toyota's operations by developing a deep understanding and gaining a broad base of experience of the business through a rotational program. This opportunity reinforced the desire to focus on design engineering.

- **Accessories Development & Marketing** oversees the planning, design, development, quality, sales, and marketing of Toyota and Lexus accessories in Canada, with some of these products sold in other countries too.
 - Designed and developed parts by working closely with and being mentored by experienced engineers in Electrical and Mechanical engineering.
 - Launched accessories by performing installation tests and related product life cycle management tasks.
 - Prepared RFQs (Request for Quotes) and engaged with suppliers to confirm pricing, design, and product quality before launch.
 - Gained exposure to pre-production quality assurance testing using technical standards and design validation procedures.
 - Took on the roles and responsibilities of a junior design engineer to develop products through all life cycle stages from concept to market.
- **Product Quality & Service Support** ensures the quality, durability, and reliability of Toyota and Lexus vehicles meets and/or exceeds Canadian market expectations through early detection and early resolution of quality improvement opportunities.
 - Detected and reported vehicle product quality issues, including vehicle component technical analysis and communications with Toyota Motor Corporation Design and Manufacturing, vehicle assembly plants, and dealerships.
 - Conducted market analysis to summarize high impact quality issues by gathering data through multiple sources including customer inquiries, warranty claims, and internal surveys.
 - Monitored quality concerns on newly launched models where early intervention is key to customer satisfaction.
 - Performed bench testing of low voltage electrical components to determine cause of failure.

Swagelok Southwestern Ontario, ON

May 2020 – Jun. 2021

Engineering Intern – Custom Solutions (Remote)

- Automated internal company documents to improve efficiency during project utilization using MS Excel.
- Organized large document packages to improve readability for customers.
- Linked information to frequently used Solidworks parts to autocomplete project Bill of Materials to save time when completing customer drawings.
- Revised BOMs and assembly drawings following customer requests to meet their needs.
- Designed a custom pressure testing system using Solidworks to be built for in house testing of high- and low-pressure assemblies before being sent to customers.

Ryerson University Digital Media Experience Lab, Toronto, ON

Sep. 2019 – Apr. 2020 and Sep. 2020 – Jun. 2021

Fabrication & Digital Technology Assistant, 3D Printing Coordinator

- Improved 3D printing quality in the DME Lab by using 3D modelling, laser cutting, and prototyping to build a moisture regulating filament case.
- Involved with the maintenance and cleaning of Prusa 2D printers.
- Taught introduction 3D printing tutorials to Ryerson students and faculty.
- Developed a contactless 3D Printing service for Ryerson student and faculty use.

ANCAM Solutions Company, Oakville, ON

May – Aug. 2019

Engineering Intern – Electric Vehicle Research and Development

- Led the Mechanical Engineering team for an R&D project to convert a 1953 GMC pickup truck into a fully electric vehicle using lithium-ion batteries.
- Created 3D models, performed FEA testing of parts, and upgraded the suspension and drivetrain systems.
- Collaborated with the Electrical Engineering department and various battery and motor suppliers to design a custom high voltage system to power the truck.

PROJECTS

- **BMW E30 Restoration, Jun. 2021 - Present**
Picked up a neglected but running 1986 BMW 325e in 2021 as a project to work on with my dad. We patched up holes in the floor, completely overhauled the suspension, rebuilt the brakes, ran new brake lines and fuel lines, and restored all the original plastic trim. It's now served me as a reliable (summer) daily driver since July 2022!
- **3D Printer - Personal Project, 2019**
Designed and built a 3D printer using scrap parts combined with new electronics. The stepper motors and axes are taken from old flatbed scanners, the frame has been built from recycled metal, and an Arduino MEGA has been used as the controller combined with custom Repetier Firmware to control the printer and generate the G-Code used to print.
- **Tapioca Pearl Roller - Personal Project, 2020**
During the beginning of the COVID-19 pandemic, I was no longer able to buy bubble tea from the store. I began making the drink at home by hand rolling the tapioca pearls, but this was very time consuming to do. To maximise the efficiency of rolling the pearls, I designed and fabricated a rolling tool that would roll 20 pearls at once. I used SolidWorks to create a 3D model of my concept drawings, which I then 3D printed using the printer I built. The Tapioca Pearl Roller reduces the time to roll enough pearls for six drinks from 2 hours to about 20 minutes.

ASSOCIATIONS / MEMBERSHIPS

- Registered in Engineering Intern (EIT) Program, Professional Engineers of Ontario, 2021 - Present

EDUCATION

- **BEng, Mechanical Engineering – Mechatronics**, Ryerson Engineering, Toronto, ON, May 2021
 - ✓ Dean's Honor List, 2019 – 2021
 - ✓ Best Project, Ryerson Mechanical Engineering Capstone Showcase, Apr. 2021

INTERESTS

- Rock Climbing, Mountain Biking, Car Restoration, and Photography.