

EXPERIENCE

Product Integration Intern

Tesla 

May – Aug 2025

- Cut new vehicle rear VC **mass by 28%** via packaging investigation and cross-functional collaboration, establishing controller fit and **surface-modeling** a new mounting interface.
- Designed carbon-fiber manifold for new vehicle, integrating hoses, harnesses, and HVAC while **preserving A-class** surfaces and meeting airflow constraints.
- Proposed aero shield with removable cantilever-snap cap, improving HVAC drain routing, serviceability and general assembly.
- Led supercharger sweep study by designing jig, capturing and validating data to enable accurate charge-port placement

Lead Product Design Engineer

Arche Biotech (Startup) 

May 2024 – May 2025

- Owned **complete design process** for hematuria device, refining prototypes through **client collaboration**—optimizing handling and usability, exemplifying user-centered design
- Implemented a magnetic part tree to streamline component access, enhancing **user experience** and simplifying device functionality for critical use case
- Designed and prototyped **plastic injection molding** suitable casing using CATIA V6

Mechanical Design Intern

Liburdi Engineering 

Jan – Aug 2024

- Led design and development of **100+ parts** and assemblies, applying **GD&T, DFM, and DFMA** principles
- Optimized system safety and durability by designing **sheet metal covers**, protecting robotic arm components from laser deflections
- Executed full design of a steel tube kiosk, presenting **10+ prototypes** through client-review cycles and ensuring safety with design verification calculations
- Achieved **57% reduction in design failure** via **R&D and material selection** of Be-Cu chills, designing “fingers” to improve blade grip, and heat dissipation during welding

Industrial Engineering Assistant

Grad Technik GMBH

Dec 2022 – May 2023

- Conducted stress and FOS analysis to verify structural integrity and prevent failures.

SKILLS

Design & Prototyping

Part/Assembly Design, Surface Modelling, Sheet metal, GD&T, DFM, FEA

3D Printing, CNC (Lathe, Mill), Hand/Power Tools

Software

3DX/Catia, Solidworks, SolidEdge, Blender

PROJECTS

Physio-Device – 1st Place Winner

- Designed a home-use physiotherapy device for assistive-to-resistive stroke rehabilitation
- Created product animation and presented it to a panel of judges

Formula SAE - Chassis

- 35% weight reduction of Aluminum Jack-Bar, optimizing design with FEA and topology optimization
- Designed main hoop, bent steel tubes to specification

Baja Racing SAE - Suspension

- Designed 3D printed Jigs for Suspension to Chassis mounting
- Machined 10+ Parts with Mill, Lathe, Bandsaw to spec

Locomotive Robot

- Designed a self-assembling magnetic leg-to-wheel system
- Machined steel rods and 3D-printed drivetrain gears

EDUCATION

McMaster U

2021-2027

- Bachelor of Mechanical Engineering
- Manufacturing, Mech-Design, Statics, Dynamics

INTERESTS

- 3D Animation/Modelling, Gym, Academy Soccer, REP Volleyball, Guitar