Coleton Myers

University of Waterloo Mechanical Engineering, BASc | 2019-2024 | 3.9 GPA

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Experience

Tesla | Chassis Mechanical Design Intern   Jan - Apr, Sep - Dec '23

Owned Pre-Production Mule Rework
- Enabled vehicle dynamics testing 4 months prior to Beta vehicle builds
- Redesigned rear suspension components to be beta representative
  - Knuckle, links, shock tower mount, and tubular subframe designed in CATIA
  - Strength, stiffness, and assembly clearance analysis for each component
  - Created drawings for and procured parts from internal and external machine shops
- Reworked brakes, hose, and harness layouts using IPS
- Designed new tubular subframe, lowering lateral stiffness error from 57% to 1%
- Coordinated build, including vehicle movement, work allocation, and task definition

Designed Modular Stroke Testing Rig
- Design of frame, mounts, and drive system capable of being configured for any program
- Designed drive system to produce representative suspension motion using 1st principle kinematics calculations and validated using Catia simulation
- Validated the system successfully with Cybertruck front suspension quarter
- Unconstrained validation for future programs, allowing harness/hose testing 9-12mo earlier

Design & management of high volume production components
- Harness bracket: iterative design considering strength, vibration, and DFM requirements
- Model 3 rear suspension link: achieved 1lb/vehicle mass down using 1st principles design
- Cybertruck RLCA aeroshield: injection molded plastics design from Studio A-surface
- Model S and X air spring top mount and seal cap
  - Implemented 2D & 3D changes to production parts; managed rework with supplier

Managed Beta joint validation for all Cybertruck chassis fasteners.

Newterra | Mechanical Engineering Co-op   Oct - Dec '21

Designed a modular polymer makeup system to reduce engineering cost in all future projects.
Produced detailed mechanical designs and drawings in SOLIDWORKS for water treatment systems.

GeoSpectrum Technologies | Mechanical Engineering Co-op   Jan - Apr '21, May - Aug '20

Designed piezoelectric transducers using MAVART, Mathematica, Excel, and SOLIDWORKS.
Produced signal processing code using C++ for an ASW system sold to the Canadian Navy.
Designed a Vibration Isolation Module for use in a sonar system sold to the Canadian Navy.
Designed components, created drawings with GD&T, managed part procurement, and began testing.

Bid to Beat Blood Cancer | Founder & Organiser   Jan '18 - Present

Founded and organised an organisation supporting blood cancer research, raising $150,000 to date.
Kicked off while undergoing a stem cell transplant and completing the IB diploma.

Skills

Design | Catia, IPS, SHARK, SOLIDWORKS, Fusion 360, NX, AutoCAD, Hypermesh
Owned product designs from concept to production using 3D CAD software, FEA, and prototyping
Used SOLIDWORKS & Catia to draft drawings with GD&T, and worked with suppliers to procure parts
Personal and school projects, including a modular espresso machine, FPV quadcopter, and 12' long crossbow

Prototyping | Machining, 3D Printing, Laser Cutting
Have used mill and lathe to produce parts for the UW Mars Rover Robotics Team
Extensive experience laser cutting and 3D printing for internships, school courses, and personal design projects
Experience assembling and validating many of my designs