DANIEL FRANKO

Mechanical Engineer in Training

CONTACT

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https://danielfranko.github.io/

EDUCATION

B.S. Mechanical Engineering
University of Saskatchewan
Saskatoon, SK | 2014 – 2020

PROJECTS

- CUBESAT FRAME DESIGN: 4th Year Capstone Project
- MARS ROVER CHASSIS: University of Saskatchewan Space Team
- ROBOTIC ARM & GRIPPER: University of Saskatchewan Space Team

SKILLS

- SolidWorks: Modeling and GD&T Drawings
- ANSYS Workbench & APDL
- MATLAB, MS Excel, Python
- Precision CNC Machining & Weldment Design
- Jigs & Fixture Design
- Design for Manufacture & Assembly
- Material & Fastener Selection
- 3-D Printing

PROFILE

2+ years of engineering experience designing and analyzing mechanical components. Expert in SolidWorks and proficient in ANSYS, MATLAB, NX, and Inventor. Extensive hands on experience with prototyping and design for manufacture/assembly.

ACCOMPLISHMENT HIGHLIGHTS

- **Developed and supervised** the manufacture of a **$110k custom** grain bulker trailer to drive innovative manufacture.
- **Developed a 6 D.O.F. robotic arm** capable of 1m reach, 5kg payload, and ±2mm repeatable accuracy with custom cycloidal gearboxes achieving 250:1 reduction.
- **Analyzed, optimized, and prototyped** the design of a 2U CubeSat frame for the U of S Space Team targeting to improve the ease of serviceability and reduce mass.
- **Obtained Lean White Belt Certification** and identified $125,000 in annual savings.
- **Reduced the cycle time from 25s to 4s per operation by re-engineering** components and sub-systems to improve machine repeatability and eliminate crashes.

Completed design of a $1.5M automated machine to make pretensioners, tubular components of a seatbelt safety mechanism.

EXPERIENCE

DESIGN ENGINEERING INTERN

Doepker Industries Ltd. | Saskatoon, SK — May 2018 - August 2019

- Overhauled trailer winch design to improve design strength and simplify manufacture, subsequently reducing the trailer mass by 6% and saving 5-hrs per unit
- Developed jigs to improve installation ergonomics and save 10-hrs per unit when installing tire fenders

ENGINEERING CO-OP STUDENT

voestalpine Rotec Summo Corp. | Burlington, ON — May 2017 - August 2017

- Executed systematic troubleshooting and root-cause analysis after machine crashes
- Rapid prototyping and iterative 3-D printed tool and die design before completing CNC machining manufacture

ENGINEERING CO-OP STUDENT

voestalpine Rotec Summo Corp. | Burlington, ON — May 2016 - August 2016

- Developed design calculators to size and select rack and pinions, ball screws, and pneumatics system components
- Designed and drafted mechanical systems for manufacture using SolidWorks