

Samuel Carlson

(503)-860-6443

stcarlson.09@gmail.com

Education and Certifications

BS Mechanical Engineering, Brigham Young University, Provo, UT Aug 2019
• AutoCAD, Finite Element Analysis, Heat Transfer, Thermodynamics, Materials, Manufacturing Processes, Technical Writing, Communication

Engineer in Training (EIT), The Texas Board of Professional Engineers and Land Surveyors June 2020

CSWA-Certified Solidworks Associate

Projects

Capstone Project, Brigham Young University, Provo, UT Sept 2018-Apr 2019
• Learned of and became capable with the computer program FEMAP in 40 hours.
• Collaborated in group of six to exceed expectations by reducing weight of commercial aircraft galley model by 13% and cost by 19% through the use of Finite Element Analysis program FEMAP.
• Developed several alternative panel layouts for review.
• Under Zodiac Aerospace's sponsorship, spearheaded engineering possibilities for future industrial use, at the company's discretion.
• Managed critical parameters of aviation industry.
• Provided weekly and bimonthly status updates of project.

Small-Scale Rocket, BYU Student Rocketry, Provo, UT Sept – Dec 2017
• Directed a group of three students in the design, manufacture, and launch of small-scale rocket at cost of \$15
• Rocket reached maximum height of 1920 feet, 10% away from target of 1750 feet
• Our group was 3rd closest to goal of 15

Single-Piston Air Engine, Brigham Young University, Provo, UT Jan – Apr 2015
• Collaborated with a partner to design in Solidworks a single piston air engine and technical drawings using GD&T.
• Wrote the process sheets for and manufactured the individual parts with a lathe and end mill.
• Performed cost analysis for the machining of one and 10,000 machined en masse.

Portfolio:

https://drive.google.com/drive/u/0/folders/1GBCuZqdA3qgJH8ZWuVba_RFYEW1Clg5I

Work Chronology

HVAC Estimator, BG Metals, Inc, China Grove, TX Feb 2020 – Mar 2020
• Construct 3D models in AutoCAD MEP of ductwork in order to produce a cost estimate.
• Isolate and highlight relevant information from that provided by clients.

Machine Operator, Lone Star Bakery, Inc, China Grove, TX Sept 2019 - Feb 2020
• Optimized machine maintenance of three machines at the same time to reduce downtime by 60%.
• Aid in the training and supervising of one machine operator.

Teacher's Assistant (Thermodynamics), Brigham Young University, Provo, UT Sept 2016 - Apr 2017
• Assisted students with understanding of classroom material and technical issues with grading site.
• Graded 60 assignments/hour based off grading rubric.

Teacher's Assistant (Statics), Brigham Young University, Provo, UT Mar 2014 - Feb 2015
• Prepared lesson material for professor.
• Enhanced student understanding (Ten students per hour) through individualized feedback and visual aids.
• Taught test reviews with 20+ students for midterms and finals.

Skills

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GD&T Tolerances

C++

Microsoft Office

MATLAB

Solidworks

Autodesk Inventor

FEMAP

ANSYS

Manufacturing Processes

Bilingual (English, Spanish)

Community Involvement

Member of American Society of Mechanical Engineers (ASME)

Volunteer Representative, The Church of Jesus Christ of Latter-Day Saints, Guatemala

Eagle Scout, The Boy Scouts of America

Feb 2020-Present

Oct 2009 – Nov 2011