

ROSE MCCARVER

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EDUCATION

California Polytechnic State University of San Luis Obispo

Undergrad GPA: 3.64, Master's GPA: 3.71

Mechanical Engineering B.S.

Mechanical Engineering M.S., Aerospace Focus

U.S. Secret Security Clearance

Honors Program, Dean's List, President's List

Graduates with M.S. December 2022

SolidWorks CAD & FEA, Catia, GD&T, Siemens NX/Teamcenter, Fusion, 3D Printing, HSM Works G-Code, MATLAB, Simulink, Patran & Nastran FEA, Vibration Analysis, ABAQUS, Fluent, MathCAD, Adobe, MS Office

EMPLOYMENT

SpaceX

2021

Associate Build Engineer, Propulsion Engineering

Boca Chica, TX

- Integrated to the production environment to develop build plans of propulsion sub-assemblies, modify designs to ease manufacturability, and then see them fully executed for Starship and Booster.
- Acted as a lead test engineer to perform subsystem-level checkouts and developed a flushed-out materials testing campaign to educate future design work; developed final TPS design remediations.
- Performed component-level mechanical design support to propulsion flight assemblies.

Cal Poly Machine Shop

2018 – 2022

Lead Student Shop Technician

San Luis Obispo, CA

- Conducting machine shop hiring process, on-boarding, and managing all other student supervisor roles to coordinate machine shop functionality. Overseeing 50 student technician employees.
- Working capably with lathes, mills, welding, laser cutters, automatic saws/routers, and hand tools to create maintenance parts for machines and assist students at all skill levels in their own machine shop projects.

Northrop Grumman

2020 – 2021

Quality Engineering Intern, Marine Systems (06/21 – 09/21)

Sunnyvale, CA

- Developed tooling independently for laser projector to improve manufacturing pro remediation of supplier issues in manufacture flow.

Mechanical Engineering Analysis Intern, Mission Systems (06/20 – 09/20)

San Diego, CA

- Set up, ran, and post-processed Patran & Nastran Finite Element Modal Analysis for stresses and displacements; creating MathCAD files and running fastener load cases.
- Performed Catia drawing redlines and model modifications with very little supervision or guidance for existing electro-mechanical hardware within the F-35 Aircraft.

General Atomics

2019

Manufacturing Engineering Intern, Motors & Drives

San Diego, CA

- Documented As-Built Redlines for WIP on the Manufacturing Floor and coordinating with Motors & Drives Design Engineering to implement changes.
- Reviewed design drawings and developed MBOM's to support procurement for future builds.
- Provided manufacturing floor support and tooling modifications for IRAD.

PROJECTS

Cal Poly CubeSat Laboratory (PolySat)

2020 - 2022

Mechanical Systems Design, Analysis, and Manufacture

San Luis Obispo, CA

- Developed G-code and manufacturing the hardware, fixtures, and CubeSat housings using CNC Mills and CNC Lathes for a variety of PolySat's contracted research or communications satellites.
- Lead mechanical bolt analysis, verifying bolt tensile and shear failure points, for X-Cube payload carrier contracted for on NASA's GR2 Research Aircraft.