

PROFESSIONAL EXPERIENCE

Rivian Automotive

Irvine, CA

Mechanical Engineer II, Seat Structures

December 2023 – February 2024

- Saved \$20K+ in costs by designing modular seat fixture and bringing testing in-house across multiple programs
- Designed 2nd row adjustable cushion mechanism concept for Rivian's mid-sized platform, using kinematic linkage models
- Developed prototype seat structure for Rivian's midsized platform using custom sheet metal components

Mechanical Engineer, Seat Complete

July 2022 – December 2023

- Designed blow molded HVAC seat floor ducts for Amazon van from early design stages to tool kick off, prototyping, validation testing, trial builds, and production start
- Used fundamental formulas to drive plastic living hinge and snap designs, validating with CAE and physical testing
- Robust GD&T locating strategies driven by full-vehicle stack-up analysis
- Led design from early stages to production start for multiple injection molded parts in short timeline
- Early concept design for R1S 2nd row safety feature with EPP Foam, including rapid CAE iteration, and crash testing validation
- Solved critical seat airflow issue in production using anemometer testing and data analysis

Northrop Grumman (Top Secret/SCI)

Redondo Beach, CA

Mechanical Ground Systems Engineering Intern

Summer of 2020 & 2021

- Designed easy to manufacture solution to protect sensitive flight hardware from damage during testing
- Led design through multiple high visibility design reviews with customer and cross-functional departments
- Improved department efficiency by creating CATIA assemblies for commonly used hoisting hardware

Saratech

Mission Viejo, CA

Mechanical Engineering Intern

June 2019 – September 2019

- Automated creation of extensive standard parts database using **Visual Basic** code in **Siemens NX**
- Developed user friendly algorithms to generate Excel sheets for driving model dimensions

UNIVERSITY PROJECTS

UC Irvine Rocket Project

Irvine, CA

Chief Engineer

September 2020 – April 2022

- Led team to multiple static fires of cryogenic liquid oxygen and liquid methane engine, resulting in successful launch
- Fully overhauled/redesigned propellant system to reduce weight and packaging space by over 50%
- Oversaw launch vehicle design resulting in 80% reduction in cost, 25% reduction in weight, and simplified assembly methods
- Directed test stand design with automatic winch to raise/lower rocket for repeated in-lab liquid nitrogen testing
- Conceptual design of capacitive liquid level sensor for cryogenic fuels

UC Irvine Bike Frame Building Project

Irvine, CA

Founder and Chief Engineer

September 2019 – April 2022

- Led team to develop a weldless bike frame using additively manufactured metal (DMLS), carbon tubes, and adhesive
- Designed/machined modular welding fixture for custom gravel bicycle frame using SolidWorks design tables
- Developed steel gravel bike from ground up including geometry design, tube selection, and fabrication using oxy-acetylene

SKILLS

Plastics Design | **Catia V6** | **Siemens NX** | GD&T | Stack-up analysis | Prototyping | **Visual Basic**

Additive manufacturing | Fixture Design | Design for Manufacturing | Root Causing | Rocket Propellant Systems

EDUCATION

University of California, Los Angeles | M.S. Electrical Engineering

Sept 2023 – Current

- **Coursework:** Digital Signal Processing, Digital Speech Processing

University of California, Irvine | B.S. Mechanical Engineering, 3.4 GPA

Sept 2018 – April 2022

- **Coursework:** Vibrations, Dynamics, Circuits, Controls, Thermodynamics, Heat/Mass Transfer, Fluid Mechanics, Astronautics, Viscous and Compressible Flows