# SUNNY SHROFF

surajshroff23@gmail.com
www.sunnyshroff.com
sunny-shroff

## EDUCATION

**Olin College of Engineering** May 2018
B.S. Mechanical Engineering
GPA: 3.81
Recipient of half tuition scholarship

## SKILLS

**DRAWING/FABRICATION:** GD&T, CNC/Manual Mill, Lathe, Laser Cutting, Sheet Metal, 3D Printing, ShopBot, TIG Welding, Water Jet
**PRODUCTION PROCESSES:** Forging, Aluminum Welding, Extrusion, Injection Molding, Die Casting
**SOFTWARE/TOOLS:** MATLAB, Arena PLM, Arduino, Jira, Confluence, Microsoft Office
**CAD/CAE:** CATIA V6, SolidWorks, SolidWorks PDM, SolidWorks Simulation, ANSYS, SimSolid, HSMWorks, Comsol

## EXPERIENCE

**RIVIAN** Palo Alto, CA
*Battery Design Engineer II* September 2021 to Present

- Managed a design responsible vendor to ensure the development of a robust battery pack electromechanical design
- Dug into vendor CAD to identify potential electromechanical design issues and reviewed each with relevant SMEs to determine level of severity and generate design solutions
- Created concept CAD of proposed design solutions in order to accelerate communication of changes with vendor
- Developed battery structural designs to counteract crash CAE failures and ran a subcomponent level simulation study to compare effectiveness of proposed solutions, reducing the number of full vehicle simulation iterations needed

**LIME** San Francisco, CA
*Senior Mechanical Engineer* June 2020 to August 2021

- Designed and developed a novel segmented handlebar design for the G4.0 scooter that reduces complexity of implementing a swept handlebar design while increasing handlebar component serviceability
- Created a simple and cost-effective helmet lock solution with a flexible and scalable implementation, delivering fully tested and qualified parts to market on a tight timeline

Project Lead, Citra:

- Project and technical lead for a new vehicle platform dubbed Citra, spearheading regulatory exploration, system architecture, and engineering implementation of product requirements.
- Managed a team of ten people as well as three overseas vendors to design and produce full vehicle prototypes. Used these prototypes to validate and refine product requirements, iterate on industrial and mechanical design, evaluate suppliers, and serve as a base for system integration.

**BOOSTED, INC.** Mountain View, CA
*Mechanical Design Engineer* November 2018 to March 2020

Boosted Rev:

- Brought several forged, extruded, welded metal, and injection molded components from prototype through production
- Worked closely with the reliability team to conduct static and fatigue tests on the Boosted Rev frame, using the results to validate finite element models and improve on the design
- Evaluated FAI and CpK data to drive process and design improvements to match supplier capabilities
- Managed relationships with China-based suppliers to execute on rapid implementation of design changes
- Assisted manufacturing team in developing processes for final assembly, test and pack (FATP), as well as diagnosing and solving issues on the line in real time

Seated Scooter Prototype:

- Designed and managed the fabrication and assembly of an easily tunable prototype platform to be used in engineering, reliability, user, and ergonomic studies

**OLIN ELECTRIC MOTORSPORTS**
*Formula SAE electric team* Fall 2014 to May 2018

- Project Manager and Senior Mechanical Engineer 2016-18, Chassis and Suspension Lead 2017-18, Financial Manager 2015-17
- Led large, interdisciplinary team of 40 undergraduate engineering students to design and build their first functional and rules compliant FSAE electric car, managing system integration, project scope, timelines, fundraising, and team morale
- Performed FEA with ANSYS to increase chassis torsional stiffness by 12% while reducing weight by 15%
- Utilized tire force and moment data to calculate steady-state suspension load conditions, created finite element model of uprights with these loads to inform and validate design
- Managed individual component weights and system architecture to reduce vehicle weight by 120 lbs over two years
- Developed several novel manufacturing methods to increase welding accuracy

**TE CONNECTIVITY**
*Senior capstone project* September 2017 to May 2018

- Designed innovative, patented actuator for use in aerospace applications, reducing weight by 80% while maintaining major requirements
- Utilized design of experiments to test and compare nine potential solutions
- Developed robust testing protocols and rigs to verify designs and inform areas of improvement
- Delivered highly validated 'breadboard' prototype along with complete documentation package