

# Aditya Pimplikar

apimplik@purdue.edu | 630-596-3082 | linkedin.com/in/aditya-pimplikar | Chicago, IL

## EDUCATION

### Purdue University

Bachelor of Science in Mechanical Engineering | Minor in Political Science

May 2025

West Lafayette, IN

- Dean's List and Semester Honors

## EXPERIENCE

### Tesla

Mechanical Design Engineering Intern

May 2024 – Aug 2024

Grand Rapids, MI

- Transformed product designs into manufacturable die surfaces in CATIA v5 through mechanical design modifications for exterior trims, underbody armors, and Class-A sheet metal components
- Applied FEA/FEM & AutoForm simulation methodologies to evaluate component formability and deflection achieving over 80% part accuracy and component validation
- Researched & applied advanced design techniques such as shape & surface morphing, reducing design time by 60%
- Delivered multiple DFM studies on parts, working closely with product engineers to achieve manufacturable designs
- Conducted thorough technical reviews of die designs with cross-functional teams, verifying manufacturing feasibility and optimizing processes

### Rivian

Manufacturing Engineering Intern

May 2023 – Dec 2023

Normal, IL

- Led five process equipment projects, valuing over \$250k, by managing all phases from RFQ, design, buy-off, installation, commissioning, & ramp to launch R1 series refresh
- Implemented a cutting-edge vision-based AI system to prevent unsecured door carriers from entering vertical lifter to prevent collisions, part damages, & downtime OEE issues
- Managed the procurement of parts & vehicle built-ups to validate more than 40 new pieces of equipment at vendor site
- Implemented Lean Manufacturing strategies, integrating error-proofing concepts and simulations to improve ergonomics, load paths, tool access, & enhance assembly efficiency
- Drafted detailed RFQs and SOWs for multiple projects valuing over \$5 million by coordinating with SMEs and business leads to aid in the ramp up of production and launch of new vehicle platforms

### American Axle & Manufacturing

Mechanical Engineering Intern

May 2022 – Aug 2022

North Vernon, IN

- Designed an optimized unload chute for R242 grinder in SolidWorks to increase efficiency of ejector mechanism by 50%
- Developed and fabricated GD&T-compliant adjustable mount for Q4X sensor to enhance shot peen OEE by 3-5%
- Collaborated with quality engineers to sketch and machine customized go/no-go gauges to be used for QA/QC
- Assisted controls engineers in FANUC robot integration to reduce inking process time by over 60%

## SKILLS

**Design:** Siemens NX, SolidWorks, CATIA, ENOVIA, AutoCAD, Autodesk Inventor, Fusion 360

**Simulation:** AutoForm, Altair Inspire, STAR-CCM+, Ansys

**Programming:** MATLAB, Simulink, C, Python, PLC (LD/RLL), SQL

## PROJECTS

### NASA Centennial Challenge: Waterless Clothing Recycling System

Apr 2025

- Developed an Arduino-controlled UV-C-based sterilization system, enabling astronauts to recycle clothing, reducing payload by 80% and saving up to \$4 million per astronaut in launch costs
- Prototyped a sheet metal housing with a plexiglass door, dual-fan air circulation, and a user-controlled UI

### Advanced CAE Optimization: 1933 Hot Rod RC Vehicle Redesign

Dec 2024

- Designed multi-directional morphable body shell utilizing Siemens NX NURBS and parametric surfaces
- Led chassis topology & aerodynamic CFD optimization using Altair & STAR-CCM+ to enhance vehicle dynamics

## LEADERSHIP

### The American Society of Mechanical Engineers

Director of Marketing & Board of Directors

Nov 2021 – May 2024

West Lafayette, IN

- Led Purdue ASME's marketing strategies and membership growth to over 500 members through branding and events
- Provided governance and mentorship to executive members while serving on the Board of Directors