

# Siddharth Patel

Santa Clara, CA | (818)423-8016 | [siddharthpatel9032@gmail.com](mailto:siddharthpatel9032@gmail.com) | <https://www.linkedin.com/in/siddharthpatel9032/>

## SUMMARY

- Experienced Mechanical Engineer in Design, analysis, optimization, manufacturing processes with hands-on experience
- Worked with suppliers and vendors to help supply teams to source the alternative components and materials
- Experienced in product development lifecycle from concept generation, detail design, prototyping, testing, and production
- Leadership and mentorship experience for small teams during on-campus club activities and projects
- A team player, quick learner with great work ethics and can-do attitude to work in collaborative and independent environment

## EDUCATION

Master of Science in Mechanical Engineering, San Jose State University, San Jose, CA May 2020  
Bachelor of Science in Mechanical Engineering, Pacific University, Udaipur, India May 2016

## CORE STRENGTHS & TECHNICAL SKILLS

- **CAD:** SolidWorks, Pro-E/Creo, AutoCAD, CATIA V5, Siemens NX
- **Simulation:** ANSYS, CFD, MATLAB, Simulink
- **Lean Manufacturing:** 5S, DMAIC, 8D, DFM, VSM, Kaizen, Kanban, Root Cause Analysis, JIT, SPC, GMP
- **PDM & PLM:** Agile, Confluence, JIRA, ENOVIA,
- **Statistical Analysis:** JMP, Minitab
- **Hands on:** Lathe, CNC, Milling, Welding, Scanning Electron Microscope (SEM), Automated Optical Inspection (AOI)
- **Others:** GD&T, GR&R, Sheet Metal, FMEA, DFM, DFMEA, Cp, CpK, Tolerance Stack-up Analysis, Vibration Analysis, Product Development, Additive Manufacturing, Injection Molding, PCB Design (Altium), Rapid Prototyping

## WORK EXPERIENCE

**San Jose State University Research Foundation** San Jose, CA  
*Research Assistant* Sep 2020- Present

- Working on the EV design and research project related to battery density and capacity to determine the range

**Tesla, Inc.** Sunnyvale, CA  
*Mechanical Engineer Intern* Jan 2020- May 2020

- Designed scissor lift table fixture for transmission assembly and saved \$400K by procuring the alternative heavy equipment
- Developed test plans and SOPs for disinfectant products approval to avoid customer test drive disruptions due to COVID-19
- Procured and saved \$100K by conducting product reviews, assessments and testing for alternative components
- Worked with multi-functional teams for sourcing, ECO, BOM, support and release of equipment and part numbers

**FormFactor, Inc.** Livermore, CA  
*Mechanical Engineer Intern* June 2019-Aug 2019

- Collaborated to develop MEMS probe spring designs by conducting finite element analysis on probe springs
- Performed etch experiments and DOEs using SEM and EDX to conduct root cause analysis on the customer issue
- Increased the measurement capture rate to 87% for the defect inspection process for Automated Optical Inspection
- Documented and analyzed the collected data using JMP to create catalogs and reports for the internal use

**Gujarat Clutch** Ahmedabad, IN  
*Mechanical Engineer* June 2016-July 2017

- Created 2D & 3D CAD models of clutch assembly components using SolidWorks using ASME Y14.5 standards
- Resolved the problem of "Early Fade" of clutch plate material by successfully selecting 20% more efficient material
- Managed product database and documentation for Bill of materials (BOMs) of components using SolidWorks ePDM
- Reduced 7% breakdown time by implementing 5S principals for machine shop equipment and metal casting process

## PROJECTS & CLUB ACTIVITIES

**Spartan Hyperloop SJSU** San Jose, CA  
*Suspension Team Lead* Aug 2019-May 2020

- Designed magnetic levitation based suspension system for Spartan Hyperloop pod to compete at SpaceX
- Conducted simulations and theoretical calculations to develop the test plan to fabricate the full scale model of pod

**Solar Hybrid E-Trike** San Jose, CA  
*Mentor and Team Member* July 2018-May 2019

- Redesigned and fabricated the prototype of a solar powered pedal hybrid E-trike using SolidWorks CAD package
- Reduced dimensions by 33% in Width and 21% in Length for the compact prototype resulting in 30% cost reduction

**Smart Luggage** San Jose, CA  
*Product Design & Development* Jan 2019-May 2019

- Lead team tasks of POGs, mission Statement, house of Quality (HOQ), function structure and pugh chart
- Implemented market surveys to identify the consumer desirable features and competitive pricing for the product
- Performed idea generation and fabricated a proof of concept prototype with advanced features and upgrades