

Siddharth Patel

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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