Santosh Dasari

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Education

San Jose State University — Graduating in May 2025
B.S. Bio-medical Engineering — *San Jose, CA*

Relevant Courses (*in progress): Statics & Biomechanics of Solids and Visco-elastic Materials, CAD Design, Mechanics of Materials, Engineering Probability & Statistics, Fluid Dynamics, Mass Transport, Med Device Product Development, FDA Regulation, Python for Hardware, Med Device Manufacturing, Biomedical Polymers, Design of Society

Relevant Experience

Stealth Factory Automation Start-up — Oct 2023 – Dec 2023
System Design Contractor — *Fremont, CA*

- Developed product requirements and system design to tailor the MVP to customer needs and demonstrate its value to investors
- Created job descriptions and recruitment guidelines to enable non-technical founder to hire high value engineering staff

Silk Road Medical — May 2022 – Aug 2022
R&D Intern — *Sunnyvale, CA*

- Drafted detailed & repeatable cleaning process for laser-cut Nitinol implants, meeting assembly and sterilization particulate spec
- CAD designed and manufactured a fixture for securing implants during cleaning, with press-fit tolerances and mill/lathe DFM
- Devised a process experiment as well as particulate quantification standard to reduce process time by 15%
- Aligned efforts among vendors, suppliers, and contract manufacturers to ensure compatibility within final assembly line

SJSU Robotics — March 2021 – May 2023
President and Mechanical Subsystem Lead — *San Jose, CA*

- Directed cross-functional teams to develop a Mars rover, overseeing Mechanical, Controls, Electrical, Biology, and Autonomy
- Oversaw mechanical design reviews for clearance, electrical/controls compatibility, mechanical performance, and user needs
- Supported overall robot development by performing soldering, wiring, mechanical assembly, system testing, and validation
- Managed fundraising initiatives and controlled budget allocation, ensuring efficient resource distribution within in cost cap

Carl Zeiss Meditec — May 2021 – Aug 2021
Mechanical Engineering Intern — *Dublin, CA*

- Assessed cantilever part failure in an optometry device under 25G freight loads and implemented design and material changes
- Conducted a two-stage assembly level FEA to identify and redesign structural elements of the device, doubled load capacity
- Designed a custom test fixture and performed load testing on the medical device; confirmed FEA results and finalized redesign
- Supported dust ingress and shipping G-force testing to assess product reliability across diverse commercial environments

Projects

In-Vitro Pulsatile Blood Flow Thrombogenicity Tester — Aug 2024 – Present
Capstone Project (Team Lead) — *San Jose, CA*

- Redesigning an electromechanical and biocompatible testing rig to replicate human heart flow patterns in a closed blood loop
- Engaging stakeholders to identify shortcomings in previous design, aiming to reduce setup time by 50% via DFA optimization
- Python and C++ to develop a precise motor control algorithm and user interface for accurate flow patterns and ease of use
- Collecting and analyzing flow rate data against physiological data using statistical tests to validate tester efficacy

Injections Mold DFM Study — Nov 2024 – Dec 2024
Class Project — *San Jose, CA*

- Reverse engineered components of a surgical robot drapes utilizing SolidWorks surface modeling techniques
- Performed DFM analysis to verify manufacturability (draft angle, wall thickness, corner radii, parting line, undercut, etc.)
- Leveraged SW plastic simulation to analyze mold fill performance and final part quality, resulting in material and design changes

Skills

SOLIDWORKS (CSWA), PDM, On-shape, COMSOL, GD&T, Machine Shop Training, Lathe, Mill, 3D Printing, Laser Cutting, Water Jet, Soldering, Wiring, 2D Drawings, Microcontrollers, Finite Element Analysis (FEA), Design for Manufacturing and Assembly (DFMA), Rapid Prototyping, Project Management, Process Development Injection Molding Design, Cross-Functional Leadership, GitHub, Excel, Minitab, Python, MATLAB, Arduino, LabVIEW, HTML, JavaScript