SANJITH SADAN

DESIGN ENGINEER

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SKILLS

SolidWorks and Fusion 360
ANSYS and MATLAB
3D modeling and 2D drafting
GD&T compliance
Finite element analysis
Conceptualization and prototyping
Reverse engineering
Design for manufacturability
Problem-solving
Team collaboration and leadership
Bill of materials management
New product development
Process optimization

EDUCATION

B.TECH MECHANICAL ENGINEERING

School of engineering CUSAT

2017-2021

Led aerodynamic optimization of a passenger car using ANSYS CFD simulations to reduce drag.

Contributed to SAE F1 student car suspension design (Yeti Racing) and coordinated external partnerships as an event organizer for DHISHNA 2020.

LANGUAGES

ENGLISH ◆◆◆◆◆
MALAYALAM ◆◆◆◇◇
HINDI ◆◆◇◇◇

PROFILE

Bachelor of Engineering in Mechanical Engineering with 3+ years of hands-on design experience in electromechanical products, including high-precision robotic systems and components. Skilled in fixture and mechanism design, clamping devices, and alignment solutions aligned with real-world project requirements. Proficient in 3D modeling and 2D drafting using CAD tools such as SolidWorks and Fusion 360, with exposure to Siemens NX. Strong understanding of manufacturing processes including molding, sheet metal fabrication, and mechanical assemblies. Demonstrated ability to work independently, manage multiple tasks, and communicate technical concepts clearly with cross-functional teams. Adept at applying GD&T principles and delivering manufacturable solutions on deadline.

WORK EXPERIENCE

DESIGN ENGINEER R&D

SEPTEMBER,2023- PRESENT

MORPHLE LABS (MEDICAL DEVICES)

- Designed electromechanical assemblies for **robotic microtome** systems, integrating clamping and alignment mechanisms to ensure precise cutting and repeatable motion.
- Developed and **prototyped** multi-axis gantry systems incorporating guides, locators, and alignment features for automated slide handling.
- Applied **GD&T** principles to ensure tight tolerances in complex robotic assemblies with **sub-5 micron** repeatability.
- Collaborated with cross-functional teams to validate designs for **manufacturability** using fabrication processes such as CNC machining, sheet metal forming, and component assembly.

DESIGN ENGINEER R&D

OCTOBER ,2021-JUNE,2023

KINEMACH ENGINEERING AND MACHINES (SPM)

- Created fixture designs and tooling concepts based on project requirements, optimizing clamping and guiding features for ease of assembly and repeatability.
- Led design efforts on **SPM**s (Special Purpose Machines) involving linear and rotary actuation, achieving **cost-efficient component sourcing**.
- Utilized solid modeling tools to design 3D parts and assemblies, and generated detailed 2D technical drawings incorporating GD&T, while applying **DFM** and **DFA** techniques to ensure manufacturability, ease of assembly, and cost efficiency.
- Coordinated independently with suppliers and internal stakeholders to meet tight deadlines, reducing project delivery timelines by 15%.