

# SATHIYANARAYANAN M

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## EDUCATION

<b>Bachelor of Mechanical Engineering</b> , Vellore Institute of Technology, Chennai, 9.0 CGPA (untill fourth semester)	2023- 2027
<b>Higher secondary CBSE</b> , Kamala Niketan, Tiruchirapalli , 73%	2021- 2023

## SKILLS

**CAD & Simulation Tools:** Solidworks (CSWA and CSWP Certified), Ansys Spaceclaim, AVEVA E3D, CAESAR II, AutoCAD, SimScale, Ansys, Carla, Matlab

**Additive Manufacturing:** FDM, SLA, SLS, Print Optimization, Post-Processing & Troubleshooting

**Programming & Development:** Python, Java, HTML, CSS, JavaScript, Github (Version Control)

**Multimedia & Design:** Adobe After Effects, Adobe Premiere Pro, Canva

**Soft Skills:** Leadership, Time Management, Team Spirit, Effective Communication, Flexibility, Problem Solving.

## WORK EXPERIENCE

<b>Design Intern   ClimbMonkey</b>	Sep 2025 – Present, Remote
<ul style="list-style-type: none"><li>Modeled various types of climbing holds, volumes, and other bouldering equipment using CAD software, ensuring functional and aesthetic accuracy.</li><li>Contributed to optimizing manufacturing methods to improve efficiency while maintaining high quality standards.</li></ul>	
<b>Powertrain Engineer   Team Blitz Racing</b>	Mar 2024 – Aug 2025, Chennai, India
<ul style="list-style-type: none"><li>Developed the skeleton CAD model of the go-kart, performed basic simulations, and assisted with electrical system integrations to support overall vehicle design.</li><li>Managed documentation, competition logistics, and technical records, ensuring smooth team operations and effective knowledge transfer.</li></ul>	
<b>Design Intern   Bharat Heavy Electricals Limited</b>	May 2024 – Jun 2025, Tiruchirapalli, India
<ul style="list-style-type: none"><li>Designed and optimized piping support structures for high-pressure header systems using AutoCAD and AVEVA E3D, while performing preliminary pipe stress analysis with CAESAR II to ensure flexibility, load distribution, and adherence to industry standards.</li><li>Prepared, organized, and maintained technical documentation for ongoing industrial projects, streamlining workflow and ensuring compliance with BHEL standards and best practices.</li></ul>	
<b>3D Printing Engineer   3D ModelNex</b>	Apr 2024 – May 2025, Remote
<ul style="list-style-type: none"><li>Created complex, print-ready STL models using SolidWorks, optimizing tolerances, orientations, and support structures for FDM/SLA printing and ensuring smooth design-to-production transitions.</li><li>Collaborated with senior engineers and clients to deliver accurate, manufacturable designs under tight deadlines, rapidly adapting to workflow changes and client-driven modifications.</li></ul>	
<b>Additive Manufacturing Intern   SEDAXIS Advanced Materials Pvt Ltd.</b>	Jan 2025 – Apr 2025, Chennai, India
<ul style="list-style-type: none"><li>Gained hands-on expertise in industrial 3D printing (FDM, SLA, SLS) — including calibration, material selection, and machine operation — while optimizing support structures and print settings for accuracy and minimal waste.</li><li>Validated print quality using benchmark models (3D Benchy, torture tests) and troubleshot defects (warping, layer adhesion) to refine rapid prototyping workflows.</li></ul>	

## PERSONAL PROJECTS AND PROJECTS

<b>Oblique Wing Aircraft (OWA): A Comprehensive Review of Design and Performance, Aerodynamic Innovations and Prospects for the Future</b> (October 2024 - Present) <a href="#">Link</a>
<ul style="list-style-type: none"><li>Explored oblique wing aircraft, dissecting their unique design, aerodynamic innovations, and evolution in aviation history.</li><li>Analyzed cutting-edge performance enhancements and future applications, highlighting breakthroughs in efficiency, stability, and operational advantage.</li></ul>

## ACHIEVEMENTS, VOLUNTEERING & EXTRACURRICULARS

- Current Program Representative**, Mechanical Department – Actively represent student interests, coordinate with faculty, and facilitate departmental initiatives.
- Technical Head**, CAD Club – Lead and mentor 100+ students, guiding juniors, managing activities, and adding technical value through workshops and projects.
- Was one of the active leads of **Diseno**, a technical team, which conducts various technical and non-technical events during **TechnoVIT25'** (VIT's Tech fest) and led the team to several awards. [Link](#)
- Participated in and won several competitions related to core mechanical engineering.
  - CIVMECHCON (CAD Modelling) – 3<sup>rd</sup> Place [Link](#)
  - DeepDrive Auto Challenge - Runner-Up [Link](#)
  - Havoltz 25' Hackathon (Mechanical Engineering Track) - Winner [Link](#)
  - Reimagine 25' (CAD Modeling) – Winner
  - Design Master CAD – Winner [Link](#)