ROHIT REDDY AMIDI

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SUMMARY

Mechanical engineer with 3+ years of end-to-end hardware product development experience, from concept to production. Skilled at designing precision mechanical systems, with a strong record delivering production-ready solutions for consumer and aerospace applications. Proven ability to lead teams and optimize workflows for efficiency and manufacturability.

EDUCATION

M.S. in Mechanical Engineering | University of Florida | Gainesville, FL   **May 2025**
B.S. in Mechanical Engineering | Vidya Jyothi Institute of Technology | India   **May 2021**

SKILLS

CAD & Simulation Tools: SolidWorks, PTC Creo, CATIA, NX CAD, AutoCAD, Fusion 360, ANSYS, ABAQUS.
Programming & Software: C, MATLAB, Python, Microsoft Projects, PTC Windchill, SAP.
Functional Knowledge: GD&T, Tolerance Analysis, DFMEA, Injection molding, PLM, DFM, DFA, Sheet Metal, 3D printing.

PROFESSIONAL EXPERIENCE

Mechanical Engineer | University of Florida (UFIFAS)   July 2024– Present

- Developed an automated fruit quality device for consumer use, to analyze key attributes, increasing efficiency by 40%.
- Prototyped automated growth chamber ecosystem with **HVAC**, sensors, and RGB lighting to accelerate plant breeding.
- Responsible for mechanical design, **FEA**, and fabrication for the Autonomous Rover project for yield estimation.
- Assisted in translating research needs into initial mechanical designs, collaborating with peers from different backgrounds
- Translated user and research needs into functional prototypes with focus on usability, scalability, and manufacturability.
- Supported system integration team for data acquisition and real-time yield estimation to meet functional requirements.

Mechanical Engineer (R&D) | Research Centre Imarat (RCI) | Hyderabad, India   August 2021 – July 2023

- Led full product design cycle for flight vehicle mechanical and electro-mechanical systems using **PTC Creo** and **SolidWorks**.
- Involved in all phases of **Product design**, including 3D modeling, 2D drafting, prototyping, testing, and manufacturing.
- Applied **ASME Y14.5 – 2009 GD&T** standards to create precise part and assembly **2D drawings.**
- Optimized design of integration jigs and fixtures using **DFM/DFA**, which improved assembly accuracy and reduced cost.
- Conducted structural and thermal analysis of mechanical systems under inertial, thermal, and vibration loads using **Ansys.**
- Used **Model-Based Definition** (MBD) in CAD, reducing design errors by 30% and cutting production costs.
- Engineered a toroidal pressure vessel and validated its performance through static, burst, and vibrational testing.
- Collaborated with the electrical teams to integrate electronic boards, **PCB's** and sensors into the electronic enclosure.
- Adopted a **top-down design** approach for electronic enclosures, ensuring precision and seamless integration into vehicle.
- Built and tested prototypes to improve **product quality**, reducing iteration time by 25% through optimized workflows.
- Collaborated with integration teams on the shop floor to conduct structural, vibrational, and environmental **testing.**
- Compiled and presented technical reports, design schematics, and project updates to stakeholders and vendors.

Chassis Engineer | SAE-INDIA-VJIT Club (Team V1 Racing) | India   April 2019 – May 2020

- Contributed to Design, Fabrication and Assembly of mechanical components for **SAEINDIA SUPRA Vehicle**.
- Led a team in the design, analysis, and fabrication of chassis and custom CNC machined Uprights and Wheel Hubs.

PROJECTS

Semiconductor Device Fabrication   December 2024

- Fabricated PN junction diodes and **MEMS Devices** using processes such as photolithography, **CVD**, and **PVD.**
- Performed quality assessment and **electrical characterization** of fabricated devices, analyzing performance metrics.

Development of Test-rig to Measure Inertia Parameters   December 2022

- Designed a Cost-effective test rig for measuring all 10 inertia parameters of rigid bodies with an accuracy of +1%.
- Achieved 67% reduction in measurement time by Collaborating with interdisciplinary teams for **data analysis** of signals.

Crush Tube for near-ideal vehicular crash energy absorption   May 2021

- Developed Innovative crush tube using tube inversion to improve vehicular crash energy absorption by 8% in automobiles
- Conducted quasi-static loading tests on a crush tube using a Universal Testing Machine (UTM).

Achievements

- **Duke Energy Scholarship:** Awarded the Duke Energy Scholarship from MAE Department at UF, sponsored by Duke Energy.
- **EPM Certification:** Achieved a Certification in Engineering Project Management from the University of Florida.