Nithin Yeruva

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Education

Michigan State University   *Expected Graduation 04/2027*
Bachelor of Science in Mechanical Engineering & Data Science Minor   *East Lansing, MI*
- American Society of Mechanical Engineers
- Michigan State Solar Racing Team

Skills

Technical Skills: Catia V5, Autodesk Inventor & Fusion, PTC Creo & OnShape, NX, SolidWorks, Ansys, GD&T, Root Cause Analysis, Subtractive Manufacturing, Additive Manufacturing, Machining, Rapid Prototyping
Interpersonal Skills: Attention to Detail, Positive leadership in team-based environments, Ability to Adapt Quickly
Programming Languages: Python, Java, HTML & CSS, Jupyter Notebook & Git

Experience

Brose Automotive Group   *04/2024-08/2024*
Mechanical & Design Engineering Intern   *Auburn Hills, MI*
- Led a project utilizing Catia V5 and Ansys skills to effectively scale down Cooling Fan Modules to decrease research and development time and cost while still providing valuable results in the air-flow chamber that correlate to full-scale testing
- Created a company-wide norm that defined and standardized the process of testing plastic samples, which resulted in the team not having to rely on inaccurate supplier data and improved the workflow of selecting polymers regardless of supplier data
- Created analysis reports of competitor products and designs that highlighted critical design decisions and measurements to eventually allow for entry into various component markets
- Utilized rapid prototyping skills to design airflow guides using Catia V5 and manufactured using SLS printing methods to direct turbulent air away from key stator arms to improve the overall efficiency of the cooling fan module
- Constructed FEA reports on specific fans, which detailed mesh quality, boundary conditions, location & force of loads imputed, Poisson's ratio, and Young's modulus; these reports allowed for a quick understanding of potential problem areas for fans under development during team meetings
- Developed a thorough understanding of designing products for the injection molding process to optimize structural integrity, assisted in advanced mold flow analysis to ensure a smooth manufacturing process and high-quality plastic components

Douglas Innovation & Polar Filament   *08/2022-03/2023*
Mechanical Engineering Intern   *Troy, MI*
- Utilized Autodesk Inventor to design a system that would program and test PCB boards at a high rate in a factory setting for automotive purposes, applying rapid prototyping skills during the design process, which produced eight variations of the design, then using both additive and subtractive manufacturing methods to create the product ensuring consistent quality for each unit
- Created a universal system to assemble 1.5 kg plastic spools for the subsidiary company, Polar Filament; this increased the efficiency of winding spools for large projects and allowed for reusability, which decreased costs for the company
- Developed a system to cut plastic filament in 0.5–1 mm increments at a high rate of speed; this allowed to decrease the amount of time it took to R&D new colors/finishes and ensured a safer working environment for the operator

Michigan State Solar Racing Team   *09/2023-08/2024*
Suspension Team Member   *East Lansing, MI*
- Collaborated with team members to complete fabrication of the car under tight deadlines, utilizing a mill, lathe, etc. ensuring we worked well within tolerances
- The team previously underestimated the total weight of the car, which prompted a redesign that I co-led with another member; we utilized Siemens NX to resign portions of the suspension to make sure the new system could handle the weight, stress, and provide reasonable feedback to the driver while in operation

Relevant Coursework

- MTH 234, ME 280, CMSE 201, CMSE202, CSE 231, BE 481