Ved Wadmark

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Education

Master of Engineering, Mechanical Engineering | Concentration in CAD *May 2025*
   Rose-Hulman Institute of Technology *GPA: 3.7*
Bachelor of Science, Mechanical Engineering | Minor in Robotics *May 2024*
   Rose-Hulman Institute of Technology *GPA: 3.6*
CAD Certifications
   SolidWorks Professional – Advanced Sheet Metal *Nov 2023*
   SolidWorks Professional – Mechanical Design *Aug 2022*
Relevant Courses: Advanced Design of Mechanisms, Machine Component Design, Design for Manufacturing, Advanced CAD, Mechanics of Materials, Robotics Engineering, Mechatronics, Engineering Statics, Robot Dynamics & Control, Advanced FEA

Work Experience

Teradyne | Mechanical Engineering Co-Op (Los Angeles, CA) *Jun 2024 – Present*
- Coordinated and implemented 160+ DV tests to transition a multi-million-dollar system to a new, more sustainable coolant
- Manufactured a modular electro-mechanical assembly with 150+ parts to allow for bench-top testing and prototyping
- Systematized 40,000+ production fasteners through UX analysis, saving time looking for parts and $105,000+ a year
- Assembled a coolant distribution simulator to analyze 1000+ different flow rates in a safe, controlled environment
- Modified a SolidWorks PDM library to automate assigning 2000+ fasteners to assemblies and eliminate human error
- Automated leak and cycling DV tests on a test bench fixture using Arduino and CNC machined parts, saving $50,000+

United Airlines | Powerplant Engineering Intern (Chicago, IL) *May 2023 – Aug 2023*
- Supported the safe, reliable, and efficient operation of 400+ V2500 engines installed on 170+ Airbus 319/320 planes
- Conducted component reliability analyses using Excel and Palantir to save $465,000+ and reduce operational impacts
- Created maintenance BOMs, drafted investigation reports, and developed mitigating actions for decommissioned engines
- Modeled a poka-yoke instrument for engine mechanics to correctly position engine alternators experiencing low failure times

Georgia Tech Research Institute | Mechanical Research Intern (Tucson, AZ) *Jun 2022 – Aug 2022*
- Fabricated a cart, rack, and loading apparatus using SolidWorks to store 32 ECM pods weighing 20,000+ lbs
- Designed sheet metal support systems to withstand up to 40 Gs for data collection instruments in A-10C and F16-C cockpits
- Performed FEA analysis using SolidWorks Simulation to identify component weaknesses and meet safety guidelines
- Drafted 2D engineering drawings for 125+ part assemblies and electrical interconnects, following GD&T standards
- Developed spec sheets and solid models for 500+ hardware fasteners to create a centralized Excel component library

Boson Motors | Testing & Validation Intern (San Francisco, CA) *May 2022 – Jun 2022*
- Performed QA testing and conducted code reviews for an electric truck's autonomous driving using Python
- Integrated mechanical and data collection components, including wheels, steering, GPS, actuators, lidar, antennae, and cameras

Relevant Projects

Da Vinci Robot GUI Simulation *Feb 2024 – May 2024*
- Modeled a million-dollar surgical robot with multiple 7-DoF robotic arms using Fusion 360 and DH parameters
- Programmed a MATLAB Gui to control 10 joints on each arm, allowing for precise translational and rotational movement
- Communicated between MATLAB and Raspberry Pi to provide visual feedback for robot motion and failure methods

Tire Stiffness and Damping Experiment *Nov 2023 – Feb 2024*
- Designed a dynamic apparatus to research radial characteristics for a bicycle tire using SolidWorks and MATLAB
- Calibrated test equipment, calculated uncertainty analyses, and set up vibration testing to achieve <10% uncertainty

Automatic Wire Stripper and Cutter *Dec 2022 – Feb 2023*
- Automated a machine using Arduino to cut and strip electrical wires based on gauge, length, size, and quantity
- Utilized 3D printing to prototype 30+ parts in SolidWorks to maximize torque for a motorized mechanical system

SKILLS

CAD Software: SolidWorks, ANSYS, Fusion 360, Autodesk Inventor, Autodesk Revit, SolidWorks Simulation, CATIA
Programming: MATLAB, Java, Python, C, Palantir, Excel, Simulink, HTML, CSS, SolidWorks PDM
Proficiencies: FEA, GD&T, 3D Printing, DFM, Sheet Metal Design, CNC Machining, UX, Rapid Prototyping, DV Testing