# Ved Wadmark

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Seeking a mechanical engineering internship or co-op for the summer and fall of 2024.

## EDUCATION

Rose-Hulman Institute of Technology *May 2025*
**Master of Engineering, Mechanical Engineering** *GPA: 3.8*
**Bachelor of Science, Mechanical Engineering** *GPA: 3.6*
  Concentration in CAD, Minor in Robotics

**Relevant Courses:** Advanced Design of Mechanisms, Machine Component Design, Design for Manufacturing, Advanced CAD, Mobile Robotics, Mechanics of Materials, Statics, User Experience, Materials Engineering, Mechatronics, Robotics Engineering

## WORK EXPERIENCE

**United Airlines** | *Powerplant Engineering Intern* *May 2023 – Aug 2023*
- Supported the safe, reliable, and efficient operation of 400+ V2500s installed on 170+ Airbus 319/320s
- Conducted VSVA reliability analyses to reduce operational impacts and save $465,000+ on maintenance charges
- Created maintenance BOMs, drafted investigation reports, and developed mitigations for decommissioned engines
- Managed 32 suspect EDAs and collaborated with manufacturers to examine low failure times and create solutions

**Georgia Tech Research Institute** | *Mechanical Research Intern* *Jun 2022 – Aug 2022*
- Contracted aircraft and EW projects for the Air Force and Air National Guard while maintaining a secret clearance
- Constructed cart, rack, and loading apparatus using SolidWorks to store 32 ECM Pods and withstand 20,000+ lbs
- Developed spec sheets and solid models for 500+ hardware fasteners to create a centralized Excel component library
- Designed QRIP support systems using SolidWorks for A-10C and F-16 cockpits to withstand up to 40 Gs
- Drafted 2D engineering drawings for 125+ part assemblies and electrical interconnects following GD&T standards

**Boson Motors** | *Testing and Validation Intern* *May 2022 – Jun 2022*
- Performed QA testing and conducted code reviews of an electric truck's autonomous driving using Python
- Integrated mechanical and data collection components, including wheels, steering, GPS, LoRa, antennae, and camera

## PROJECTS

**Assistive Walking Device** | *Project Lead* *Dec 2023 – Present*
- Redesigned a low-cost walking rehabilitation device to meet safety standards and design specifications
- Modeled and validated 6 support mechanisms through FEA analysis using SolidWorks and ANSYS to support 150+ lbs

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

**Automatic Wire Stripper and Cutter** | *Designer – Personal Project* *Dec 2022 – Feb 2023*
- Automated a machine using Arduino to cut and strip electrical wires based on gauge, length, size, and quantity
- Utilized rapid prototyping to 3D print 30+ parts in SolidWorks for a mechanical linkage to maximize torque

## AWARDS & CERTIFICATIONS

Rose-Hulman Department Award – Best Senior Project *Feb 2024*
Certified SolidWorks Professional – Advanced Sheet Metal *Nov 2023*
Certified SolidWorks Professional – Mechanical Design *Aug 2022*

## LEADERSHIP

Make It Happen | *Student Researcher* *Aug 2023 – Present*
Student Government Association | *Class President, Senator* *Sep 2021 – Present*
Pi Kappa Alpha | *Vice President, Service Chairman* *Apr 2021 – Present*
Rose-Hulman Efficient Vehicles | *Secretary, Communications* *Feb 2021 – Jan 2023*
Design-Build-Fly | *Quartermaster* *Aug 2020 – Nov 2021*

## SKILLS

**CAD Software:** SolidWorks, ANSYS, Fusion 360, Autodesk Inventor, Autodesk Revit, CATIA, SolidWorks Simulation, AutoCAD
**Programming:** MATLAB, Java, Python, C/C++, PicoSoft, SCEPTRE, Palantir, Excel, LabVIEW, Simulink, VS Code, R
**Proficiencies:** FEA, GD&T, 3D Printing, Sheet Metal Design, CNC Machining, Rapid Prototyping, UX, Bond Graphs, DFM