

Patrick Wargo

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Mission Statement

I am a driven Mechanical Engineering student looking for a summer internship where I can work on projects and apply my experience in CAD software, leadership skills, and communication skills gained through my previous employment and extracurriculars.

Education

Purdue University

2022 - 2026

Bachelor of Science in Mechanical Engineering

- GPA: 3.43/4.0
- Relevant Coursework: Statics, Dynamics, Mechanical Design, Thermodynamics, Ordinary and Partial Differential Equations, Circuit Analysis, Fluid Dynamics, Controls, Material Science, Mechanics of Materials

Engineering Project Design Experience

Suspension and Steering Systems

West Lafayette, IN
August 2023 – Present

- Designed components via Fusion 360 and tested viability with Ansys to minimize weight
- Manufactured components with 5-axis machining, lathe, manual mill, laser cutter, water jet, and 3D printer
- Utilized organizational methods such as a house of quality and decision matrices to come to a conclusion
- Researched and learned vehicle dynamics to optimize on-track efficiency for cars and reduced friction
- Led the steering and suspension systems, taught new members, distributed responsibilities, met timeline dates

Foldable Bike Ramp

West Lafayette, IN
August 2023 – December 2023

- Performed market research to analyze a need of consumers and compared to pre-existing products
- Utilized tolerance stack-ups and static analysis calculations to plan and prepare design
- Designed product in Fusion 360 using the least amount of manufacturing process steps

Leadership and Work Experience

IMMI - *Engineering Research and Design Intern*

Westfield, IN
May 2024 - July 2024

- Redesigned pre-existing automotive safety systems to fit new design requirements following guidelines
- Deployed practical material science and mechanical design through drop tests and design iterations
- Collaborated on projects with others, helping organize large brainstorming sessions
- Projects: Seatbelt retraction length tracking system, and Dual spool retractable ratchet strap

Purdue University - *Cary Quadrangle Resident Assistant*

West Lafayette, IN
August 2023 - Present

- Mediated conversations between 10 different residents when conflicts emerge to encourage compromise
- Coordinated floor gatherings once a week to allow 30+ residents to come together and form a community
- Acted as a mentor for 30+ residents by providing resources for academics, social life, and mental health
- Led a team with a budget of \$2,500 to organize events with an emphasis on diversity, inclusion, and belonging

Science Central - *Education Specialist*

Fort Wayne, IN
June 2022 - August 2023

- Researched and created a new exhibit and wrote itemized price estimates and purchase orders
- Presented to groups of up to 35 people twice a week, explaining complex topics in an understandable manner
- Led camps of 20+ for children ages 5-9 to teach science in a particular field for a week, developing relations

Research

Purdue University - *Undergraduate Research Assistant*

West Lafayette, IN
January 2024 - Present

- Optimized data handling in Python for datasets of Lithium-ion batteries in anomalous conditions
- Integrated my part of the project with those on other teams to create a uniform delivery

Skills

Software Experience: Ansys, Siemens NX, Catia, SolidWorks, Fusion 360, Microsoft Office, Google Drive

Programming Experience: MATLAB, Python, Java, and C