Patrick Wargo

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Education

Purdue University

West Lafayette, IN

Bachelor of Science in Mechanical Engineering

May 2026

- GPA: 3.56/4.0, Dean's List
- Relevant Coursework: Statics, Dynamics, Mechanical Design, Thermodynamics, Ordinary and Partial Differential Equations

Engineering Design Project Experience

West Lafayette, IN

Purdue Solar Racing Club- Suspension and Steering Systems

August 2023 – Present

- Establish basis for the design from work of previous teams, and come to a list of optimal measurements
- Used organizational methods such as house of quality and decision matrices to come to conclusion
- Researched and learned vehicle dynamics to optimize on-track efficiency for the car and reduce friction
- Designed components via Fusion 360 and tested their viability with Ansys to reduce weight where possible
- Manufactured components with 5 axis machining, lathe, manual mill, laser cutter, water jet and 3D printer

West Lafayette, IN

Purdue University -Final Projects

September 2021 – August 2023

- <u>Project 1:</u> Used Python to program an algorithm to have a robot autonomously follow a line whilst overcoming obstacles and delivering cargo.
- <u>Project 2:</u> Built the body of the robot using Lego Mindstorm parts and programmed the algorithm to navigate a maze autonomously while avoiding hazards. Dealt with sensors and handling messy data to use for navigation.

Leadership and Work Experience

West Lafayette, IN

Purdue University Residences – Residential Assistant

August 2023 - Present

- Mediate conversations between 10 different residents when conflicts emerge to encourage compromise
- Administrate floor gatherings once a week to enable 50+ residents to come together and build a community
- Act as a mentor for 50+ residents by providing resources for academics, social life, and mental health

West Lafayette, IN

Purdue University – Teaching Assistant

May 2023 - Present

May 2021 – May 2023

- Reinforced student learning via assisting in the understanding of physics and python coding in office hours
- Troubleshooted technological errors in the classroom such as faulty code or Raspberry Pi issues

Fort Wayne, IN

Science Central—Education Specialist

- Researched and designed a new exhibit for the museum 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
- Lead camps of 20+ for children ages 5-9 to teach science in a particular field for a week, developing relations

West Lafayette, IN

Repower Purdue – Founder/President

November 2017 – January 2021

- Cooperate with Sierra Club and student organizations for events, while managing subcommittees
- Grew membership from 3 to 20 people over the course of 3 weeks

Skills

- **Software Experience**: Ansys, Siemens NX, Autodesk Inventor, Autodesk Fusion 360, Microsoft Office, Google Drive, Monday
- Computer Programming Languages: MATLAB, Python, Java, and C