

# Drew Deffenbaugh

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## Education

### University of Pittsburgh

2020 – 2024

- Swanson School of Engineering, Bachelor of Mechanical Engineering
- GPA: 3.75
- SSOE Dean's Honor and Term Honor Lists
- Relevant Coursework:
  - Mechatronics, Mechanical Vibrations, Automatic Controls, Engineering Simulation in Design

## Work Experience

### Robotics Engineering Co-Op

Aug – Dec '22; May – Aug '23

*Sherwin Williams*

- Worked closely with a team of 12 engineers developing advanced automation control systems.
- Established network communication between hundreds of devices including photo eyes, VFDs, point clouds, conveyor controllers, KUKA Robots, and more.
- Aided in RFQ, Install, Startup, IO-check, and FAT for multimillion-dollar order picking robotic systems.
- Modified KUKA Robot and PLC manufacturing system on site. Facilitated training plant personnel to operate and troubleshoot the system.

### Pitt Makerspace

Jan '22 – Current

*Program Committee*

- Plan, run, and execute weekly public events developing skills in design, entrepreneurship, and fabrication.
- Advanced Soldering Techniques, Keyboard from Scratch, Industry Speaker Series, Molding and Casting

*Mentor*

- Train and guide hundreds of students on utilization of equipment (3D Printer, Laser Cutter, CNC, etc.).
- Mentored and inspired makers of all levels in an engineering-focused makerspace, fostering skill development, collaboration, and innovation.

### Undergraduate Teaching Assistant

Aug '23 – Dec '23

*Statics and Mechanics of Materials*

- Attend lectures and assist with in-class assignments. Hold office hours to work one-on-one with students.

### Undergraduate Research Assistant

Jan '23 – Apr '23

*Human Movement and Balance Laboratory*

## Project Experience

### Binder Jet 3D Printer Educational Curriculum

Aug '23 – Dec '23

- Work with a team of 6 on the development of a binder jet 3D printer and educational materials targeted as a tool for educators working with high school students.
- Create a functional binder jet printer, interface software, build videos, and process documentation.

### Solar Powered Rover/Balsa Wood Bridge

2021

- SolidWorks, Rapid Prototyping, Leadership, Iterative Design, Laser Engraver
- Research & Design, MATLAB Optimization, SolidWorks, LaTeX, Teamwork, Communication

### Bluetooth Speaker Design Workshop

Current

### Custom Split-flap Display

Current

### Edge-lit LED Frosted Acrylic Infinity Mirror

2023

## Skills

- 3D Printing, Laser Cutting/Engraving, CNC Router/Plasma Cutter, Soldering, PCB Design/Manufacture
- SolidWorks, Fusion 360, ANSYS, Rhino (Grasshopper), AutoCAD, Rockwell PLC, KUKA Robots, WorkVisual, MATLAB, C, Python, Office 365, LaTeX, Leadership, Teamwork, Communication