

Zachary Wolter

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Skills: Onshape, MATLAB, Manual + CNC Fabrication, SolidWorks, FEA (ANYSYS), 3D printing, CAM (Fusion 360)

EDUCATION

Olin College of Engineering

Bachelor of Science - Mechanical Engineering

Needham, MA

May 2028

Relevant Coursework:

- Mechanics of Solids & Structures (Stress Analysis & Material Behavior)
- Introduction to Thermal-Fluid Systems (Thermodynamics and Fluid Mechanics)
- Principles of Integrated Engineering (Integration of Mechanical, Electrical, & Software Systems)

Edgewood High School

High School Diploma - GPA: 4.33/4.00

Madison, WI

May 2024

University of Wisconsin-Madison

COMPSCI 200 (Java)

Madison, WI

Summer 2022

EXPERIENCE

Baja SAE (*Suspension + Drivetrain Subteam*)

August 2025 - Present

- Designing lightweight, high-strength wheel hubs by defining load cases, performing FEA, and optimizing geometry for manufacturability and durability in off-road conditions.
- Designed and manufactured various drivetrain components through iterative Onshape CAD and Fusion 360 CAM.

Olin Aero | VTOL Aircraft (*Mechanical Subteam*)

August 2025 - Present

- Designing and manufacturing wing spar-motor boom junction for rigidity, weight, and proper alignment.
- Validating performance through Ansys Fluent CFD to ensure flow behavior & drag reduction.

RoboLabs | International Farm Robotics Challenge

Aerial Competition - AerialBot (*Mechanical Subteam*)

January 2025 - May 2025

- In partnership with the Navigation Subteam, designed a minimally sized landing platform with motorized opening and closing lid.
- Designed and 3D printed downward camera mount with emphasis on rigidity & easy access.

Land Competition - PhoenixBot (*Mechanical Subteam*)

August 2024 - December 2024

- Worked to integrate a single-axis gantry that translates a delta arm to mechanically pluck weeds as the bot autonomously drives through crop rows.

Custom-Built Snowboard | Passionate Pursuit

September 2025 - December 2025

- Designing and manufacturing a snowboard tailored to personal specifications using industrial processes adapted to the budget and tools available.

Accessible Handheld Pool Cue Launcher | Mech Proto

April 2025 - May 2025

- Collaborated on a 4-person team to design and fabricate an assistive, motor-driven pool cue launcher for users with limited mobility.
- Integrated chain drive, rack-and-pinion, and trigger mechanisms within a compact assembly and iterated through multiple design cycles to optimize precision and reliability.

Original 3D-Printed Lamp | Independent Project

September 2025

- Designed and 3D-printed an original lamp inspired by mid-century modern architecture.

TEACHING & LEADERSHIP EXPERIENCE

Course Assistant | Design Nature (*Biomimicry & Design*)

August 2025 - December 2025

- Supported students in ideation, prototyping, and iteration for biomimicry-inspired engineering projects.
- Conduct 1-on-1 check-ins and assist instructors in maintaining a productive studio environment.

Feller School | Volunteer Teaching Assistant

Madison, WI

- Supported small-group and individual instruction for students (ages 7-12) with ADHD, dyslexia, and other learning differences.

Summer 2023

ADDITIONAL EXPERIENCE

Stoughton Country Club

Pro-Shop Assistant & Busser

Stoughton, WI

Summers 2022 - 2025

- Delivered customer service and managed POS transactions in a fast-paced environment.
- Coordinated with staff during tournaments and events to ensure smooth operations.