

# Zarni Win

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## EDUCATION

### Purdue University, College of Engineering

*Bachelor of Engineering, Mechanical Engineering*

- Dean's List and Semester Honors

West Lafayette, IN

May 2027

GPA: 3.98

## PROFESSIONAL EXPERIENCE

### Undergraduate Research Assistant

January 2025 – Present

- Prototyped various designs using Onshape to evaluate functionality and user efficiency in a cloud-based CAD environment
- Assessed the capabilities of Onshape for design tasks, focusing on its potential to save time and improve workflow for users to improve efficiency in CAD through collaboration reducing modeling time by 25% in multiple instances
- Showcased and delivered feedback and insights to determine the practicality and advantages of adopting a cloud-based CAD system in engineering applications

### Mathnasium / Math Tutor

August 2023

- Tutored students in one-on-one sessions, tailoring instruction to individual learning styles and reinforcing math concepts ranging from basic arithmetic to pre-algebra, resulting in improved grades and increased confidence
- Coached kids to solve problems and solidified math concepts for kids to strengthen foundation in math
- Learned to problem solve from different angles, and communicate concepts thoroughly to adapt to different learning styles

## LEADERSHIP AND INVOLVEMENT

### Mechanical Engineering Tutor

- Delivered personalized one-on-one tutoring in Thermodynamics and Statics, breaking down complex engineering concepts and guiding students through problem-solving strategies to enhance comprehension and academic success
- Assisted students in understanding complex concepts, solving problems, and improving academic performance
- Developed customized study strategies and resources to support diverse learning needs

### Modular Shelf Design Project

- Engineered a modular shelving system with interlocking components, allowing for vertical and horizontal expansion to adapt to various spatial needs
- Modeled components in Onshape and performed analysis to ensure structural integrity under loads up to 80 lbs per module
- Led a team of 4 to iterate through 3 design versions and prototypes, improving manufacture time by 30% from initial prototype to final design as well as decreasing part count by 25% and improving assembly time by 40%

### Crosswalk Safety Project

- Designed, built, and tested a pedestrian safety device for campus crosswalks using ultrasonic sensors and LED indicators, achieving a 99% detection accuracy to alert drivers of approaching pedestrians
- Programmed microcontroller logic to process sensor data and trigger LED signals in real time, ensuring responsive pedestrian detection and alert timing
- Presented design, functionality, and test results to peers and professors, highlighting technical approach and real-world impact

### Purdue Grand Prix

- Researched and built a cart for Grand Prix, racing against 70 other carts in multiple heats and a final race
- Tested multiple designs and collected data to optimize speed, control, and steering of the cart
- Competed as a mechanic and pit crew for Shrevehart, moving up from 17<sup>th</sup> place to 7<sup>th</sup> place

## CERTIFICATIONS

- Introduction to Computer Science and Programming Using Python (Massachusetts Institute of Technology)
- Autodesk Certified Professional in Design for Manufacturing

## RELEVANT SKILLS

- Computer Programming (Python, Java, HTML, C)
- Trilingual (English, Burmese, Spanish)
- Experience in MATLAB, NX, Fusion 360

## AWARDS / ACHIEVEMENTS

- Shah Family Global Innovation Lab Challenge Award
- National Merit Finalist
- AIME qualifier
- President's Volunteer Service Award