

# Allen Zhao

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## EDUCATION

### Purdue University

May 2026

Bachelor of Science, Mechanical Engineering

Minor: Business Economics

## SKILLS

**Affiliations:** Engineering in the World of Data LC, Society of Asian Scientists and Engineers

**Relevant Coursework:** Parametric Modeling, Programming in Java, Statics, Thermodynamics, Circuits

**Technical Skills:** Fusion, NX, Solidworks, Python, Java, Excel, CAM

## EXPERIENCE

### Purdue Electric Racing

September 2022 – Present

*Drivetrain Engineer*

- Created cooling loop, BOM, and mounts for portable dynamometer using Solidworks
- Constructed aluminum mount for two pumps and electronics, and optimized it for minimal weight and manufacturing ease
- Designed welding jig to create a stable and accessible welding process
- Researched shear force of flywheel and created a calculator to ensure a safety factor >5 for 10000 RPM steel flywheel

### Rutgers University – Khare Lab

June – September 2021

*Research Assistant*

- Developed a filtering program using python to create a database of proteases from over 600,000 initial protein sequences, resulting in increased accuracy of machine learning protein synthesis algorithm
- Collaborated with a PyRosetta team to optimize filtering for protein design

### Kung Fu Summer Camp

June– August 2022

*Instructor*

- Individually taught two kung fu classes for 35 hours a week to kids aged 4-12

## LEADERSHIP

### NJIT Chemistry Olympics Team

January – May 2021

*Founder*

- Established Ridge High School's first ever Chemistry Olympics team, with 10+ students
- Organized 6 sub teams in different events, ultimately winning 1 gold and 2 silver awards
- Composed an informational website about CRISPR history, development, and ethics

### Ridge High School Cultural Bridge Club

September 2020 – June 2022

*Copresident and Cofounder*

- Directed three fundraisers, raising full two high school scholarships for native girls in Mexico
- Wrote the curriculum for 50 students ages 7-9 to teach English in foreign countries
- Lead 30 members in weekly club meetings to develop understanding of international cultures

### Ridge Research Club

September 2021 – June 2022

*Treasurer*

- Managed club logistics, budget, and organization for 20 members

## AWARDS

- USACO Silver Division, National Merit Finalist