

Zixuan (Albert) Zeng

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EDUCATION

Worcester Academy

Worcester, MA

2024: AP Biology (4); AP Microeconomics (3)
2025: Calculus BC (5); Calculus AB subscore (4); Chemistry (4)

Sep. 2022 – Present (Exp.
Graduation May, 2026)

AWARDS, HONORS, CERTIFICATES

John Locke Global Essay Competition: Shortlisted (History Category Question 1)

Aug. 2025

UK Chemistry Olympiad (UKChO): Global Bronze (10)

May 2025

Canadian Chemistry Competition (CCC): Regional Honors (12) & Qualify for CCO

May 2025

Worcester Academy: "Best in Latin I" (awarded to students excelling in Latin),

May 2024

Worcester Polytechnic Institute (WPI) Savage Soccer Tournament (Regional): 2nd Place (Team 27) of 28 regional competitors,

Nov. 2022

ACADEMIC ENRICHMENT PROGRAMS

Environmental Engineering Project: Lithium Battery Extension (Patent 2025217375963)

Shanghai, China & Online

Engineer

Jun. 2025 - Sep. 2025

- Inspired by Fudan University's research on lithium solutions to lithium batteries' electrolyte component to extend battery life and reduce pollution, I used Autodesk Fusion, Arduino IDE, and Java to engineer a practical battery container that could theoretically extend a battery's life.
- 5 hr(s)/wk, 6 wk(s)/yr

Johns Hopkins University (JHU): Sustainable Energy Engineering

Baltimore, MD

Engineering Student (w/ Prof. Chad)

Jun. 2025 - Jul. 2025

- Studied various sustainable energies (e.g., wind power, hydroelectric power) via lectures, labs, and case studies.
- 30 hr(s)/wk, 4 wk(s)/yr

St. John's College Summer Reading Program

Online

Student (w/ with Prof. Wells & Prof. Lasell)

Jun. 2025

- Read Homer's 'Odyssey' and Shakespeare's 'Julius Caesar' and 'Antony & Cleopatra'.
- Contributed to Socratic discussions about betrayal, corruption of ambition, and Fate versus free will.
- Applied prior lessons from Worcester's 9th-grade World Literature course and Latin to enhance Seminar discussions.
- 12 hr(s)/wk, 2 wk(s)/yr

Cambridge Centre for International Research (CCIR)

Online

Chemistry Student (with Cambridge Professor Connor Taylor)

Nov. 2024 - May 2025

- Wrote a 2000-word research paper about flow chemistry and kinetic analysis after building a literature review on these topics.
- 40 hr(s)/wk, 18 wk(s)/yr

EXTRACURRICULAR SCHOOL ACTIVITIES

Independent Photography

Photographer

Sep. 2022 - Present

- Developed series of original photos focused on pastoral scenes (e.g. flowers, trees, squirrels, birds) and urban artworks near Worcester Common Park.
- Inspired by works in various museums, especially Shanghai Natural History Museum.
- 3 hr(s)/wk, 45 wk(s)/yr

Tech Week Stage Crew

Worcester Academy

Carpenter & Mechanic

Sep. 2022 - Present

- Constructed original scenes and props for 8+ staged musicals and plays (e.g. “Airness”, “Mamma Mia”, “Sound of Music”, “The Crucible”, and “Always Plenty Of Light At The Starlight All Night Diner”).
- 9 hr(s)/wk, 8 wk(s)/yr

E-Sports Club

Worcester Academy

Logistics Coordinator

Sep. 2022 - Present

- Collaborated with team of 15+ players to coordinate consistent practice schedules for “Valerant” and “CS-Go”.
- 3 hr(s)/wk, 35 wk(s)/yr

Robotics Club

Worcester Academy

Mechanic & Design Support

Oct. 2022 - Jun. 2024

- Used glue gun, pliers, and screws to assemble mecanum wheels, base plate, engine, and parts into a cohesive machine; Supported engineering and Arduino programming team’s designs.
- 8 hr(s)/wk, 35 wk(s)/yr

WORK/INTERNSHIP EXPERIENCE

Shanghai Yaxin Biotechnology Co., Ltd.

Shanghai, China

Intern

Aug. 2024 - Present

- Practiced protein electrophoreses by introducing Mercaptoethanol/Dithiothreitol (DTT) to the reducing agent, so that separation by molecular weight facilities electrophoresis.
- Added Bromophenol blue (BPB) to track to protein molecule to track progress.
- 40 hr(s)/wk, 2 wk(s)/yr

Shanghai Institute of Applied Physics

Shanghai, China

Inorganic Chemistry & Polymer Materials Student (with Shanghai Institute of Applied Physics & Chinese Academy of Sciences Professor Li)

Dec. 2024

- Studied how polymer hydrogels increase evaporation speed due to light, which is used as a method to address water scarcity; developed soft-pack batteries from polymer hydrogels.
- 40 hr(s)/wk, 2 wk(s)/yr

COMMUNITY SERVICE

Sonne International

Kutupalong, Cox’s Bazar District, Bangladesh

Bangladeshi Rural Poverty Student Volunteer

Aug. 2023 - Present

- Supported 2 local schools in Bangladesh of 60+ students by sharing personal anecdotes, computer knowledges; assist in English teaching on writing and spoken English practice; distributed aid.
- 24 hr(s)/wk, 1 wk(s)/yr