

# Harry (Guizhong) Luo

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## Education

### University of Wisconsin- Madison

2022 - 2026

- Bachelor of Science - APPLIED MATHEMATICS, ENGINEERING, AND PHYSICS
- Certificate (Minor): Integrated Liberal Studies
- Awards: Dean's List (3/3)
- GPA:3.96/4.0

## Work Experience

### Center of Academic Excellence | College of Letters and Science | UW-Madison

Dec. 2023 - Present

#### Academic Mentor

- One-on-one tutoring with students in introductory physics classes
- Prepare weekly study sessions with selected problems and weekly check-ins
- Personalize explanations on physics problems and topics based on individual study profiles

### The Leonard R. Ingersoll Physics Museum| Chamberlain Hall | UW-Madison

Sept 2023 - Present

#### Museum Docent

- Conducting regular presentations on topics spanning mechanics, electromagnetism, cosmology, and modern physics to diverse audiences from the Greater Madison Community
- Actively participating in the planning and execution of physics outreach programs
- Collaborating with physics outreach staff to ensure the functionality and effectiveness of museum demonstrations

### Nanjing Medical University | Nanjing, China

#### System Developer

May 2023 - present

- Leading a multidisciplinary team of accredited clinicians and professors to develop a Case-Based Retrieval Clinical Decision Support System (CDSS); academic paper in progress
- Conducting comprehensive analyses of international commercial products and scholarly articles on existing Clinical Decision Support Systems (CDSS)
- Designing and deploying an active-recurrent retrieval model specifically tailored for case-based diagnostics

### Union South Kiosk | Union South, Madison, WI

#### Student Hourly Assistant

Jan 2023 - Apr 2023

- Collaborating and assisting with meal delivery, food preparation, dishwashing, and logistic arrangements in a cafeteria setting

## Projects

### Lampreys: The Bachelorettes of Lake Michigan

Feb 2024

#### Group project for [COMAP's Mathematical Contest in Modeling](#)

- Collaborated on a team to model the food web of Lake Michigan with a focus on the population dynamics of invasive sea lampreys
- Innovated beyond traditional models by developing a demographic projection matrix to simulate lamprey population cycles and food-dependent sex ratios, enhancing the Lotka-Volterra Model.
- Honed skills in teamwork, scientific communication, and simulation development, applying dynamics systems, matrix algebra and numerical analysis concepts to real-world ecological problems.

## Leadership& Involvement

### Badger Solar Racing | Madison, WI

#### Race Strategy and Simulation Analyst

Jan 2024 - present

- Collaborated within a dedicated team to enhance the performance of a solar racing car in [American Solar Challenge 2024](#)
- Utilized Matlab and Simulink for dynamic simulation and optimization of the car's dynamics, focusing on efficiency and reliability.
- Employed Python for data integration and analysis

### Wisconsin International Student Association| UW-Madison

#### Board Member and Event Coordinator

Sept 2023 - Present

- Engaging in the recruiting, decision-making and brainstorming process of student organization management
- Planning and facilitating series of events focused on community-building and culture exchanging for international students
- Served as the club photographer

## Skills

- Technical: Matlab, Simulink, L<sup>A</sup>T<sub>E</sub>X, Python, Mathematica
- Software: ChatGPT, Rhino, Photoshop, Lightroom
- Languages: English (Proficient), Chinese (Native)