

# Junhao Zhang

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## Education

### University of Illinois at Urbana-Champaign

*Bachelor of Science in Mathematics & Computer Science*

Champaign, IL

*Expected Graduation: 2029*

### Mayo High School

*Weighted GPA: 4.75/4.00, SAT Score: 1580*

Rochester, MN

*Class of 2025*

### University of Minnesota Talented Youth in Mathematics Program (UMTYMP)

*Accelerated college mathematics: Math Analysis, Calculus I, II, & III*

Rochester, MN

*2018-2023*

## Skills & Coursework

### Related Coursework

**CS 225** (Data Structures & Algorithms in C++)

**CS 128** (Intro to C++)

**CS 128 Honors** (Intro to Rust)

### Computer programming

Experience in Python, PyTorch, Rust, C/C++, HTML/CSS/JS, Node.js, Unity, and Blender.

**Languages:** Chinese (Native), Spanish (ACTFL Advanced Low), English (Native)

## Research

**James, Jose K., M.D., Ph.D., Mayo Clinic AI & Informatics – Department of Cardiovascular Medicine**

*2024-2025*

*Research Mentorship*

- Collaborated alongside mentor to research capabilities of the EchoCLIP model, based on OpenAI's CLIP model for determining the ejection fraction (EF) from echocardiograms
- Worked with Mayo Clinic's Google Cloud Console, deploying EchoCLIP onto the Mayo cloud
- Used the Stanford EchoNet-Dynamic Cardiac Ultrasound Dataset to analyze trends in the model

## Experience

### Teacher's Assistant in Mayo High School AP Computer Science A

Rochester, MN

*2023-2024*

- Designed a grading tool to help grade students' tests and homework more efficiently
- Helped students understand CS concepts, Java programming, and homework
- Created interactive assignments to help students visualize data structures

### Violinist in Southeast Musician Youth Orchestra (SEMYO)

Rochester, MN

*2015-2025*

- Led the advanced orchestra as concertmaster in the region
- Performed in the SEMYO quartet, performed at community music events and senior centers

### Greater Twin Cities Youth Symphony (GTCYS)

Minneapolis, MN

*2024-2025*

- Played 2nd Violinist in the most advanced orchestra, conducted by Mark Russel Smith

### Volunteering

- Volunteered as a violinist and pianist at the Madonna Towers Senior Center
- Mayo Honor Society, 20 hours of volunteering per school semester

*2022-2025*

*2023-2025*

## Projects

### RusTX ([github.com/pranavpopuri/raytracing-in-rust](https://github.com/pranavpopuri/raytracing-in-rust))

*2025-present*

- Led a team of 3 to design and implement a ray tracer in Rust as a CS128 Honors final project
- Applied Rust's safety and concurrency features to create a multi-threaded renderer
- Used the Rust ecosystem to import STL files to create complex renders

### Europa Language ([github.com/cursorweb/europa-lang](https://github.com/cursorweb/europa-lang))

*2021-present*

- Implemented a dynamic programming language in Rust
- Built and led a small community of maintainers as the project scaled

## Honors and Awards

- MadeWithReplit Hackathon, 2nd place *2022*
- Minnesota Winter Coding Competition, group 1st place *2021, 2022*
- Music Guild Scholarship Competition: strings Division, 2nd place *2022*
- Minnesota Music Teachers Association (MMTA) piano contest winner *2022, 2024*