

# Cynthia Lu

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## EDUCATION

### Carleton College

BA in Computer Science and Studio Art (3.83 GPA)

Northfield, MN

*Expected June 2026*

**Relevant Coursework:** Data Structures, Algorithms, Software Design, Programming Lang. Design and Implementation, Math of Computer Science, Intro. to Computer Systems, Art Interactivity and Microcontrollers, Multivariable Calculus

## PROJECTS

### Scheme Interpreter | C, Scheme

*September 2023 – November 2023*

- Developed core features with C including lexical analysis, parsing, and evaluation for Scheme expressions.
- Utilized data structures and garbage collection techniques to handle dynamic memory allocation and recursion calls effectively.
- Implemented error checking and validation mechanisms to manage unexpected inputs and edge cases, ensuring robust program execution.

### Water Lily Dance | C++

*October 2023 – November 2023*

- Integrated studio sculptural methodologies with Arduino microcontroller programming to achieve a finite state machine inspired by swaying flowers.
- Experimented and troubleshooted with power inputs to create compatibility between conflicting microprocessors.
- Wrote efficient and organized code in C++ to control hardware components and ensure seamless interaction between sensors and an exhibition audience.

## EXPERIENCE AND RESEARCH

### Virtual Viking Longship Project | Student Researcher, Software Developer, and 3D artist

Northfield, Minnesota

*November 2024 – Present*

- Enhanced Viking ship rowing minigame experience by utilizing Unity XR Interaction Toolkit and C# scripting for intuitive object manipulation and locomotion in VR.
- Created fully rendered 3D models of ancient artifacts in Blender to use as elevated assets in Unity.
- Collaborated with subject matter teams and experts to ensure accurate historical depictions of objects and diagrams from the Viking age.

### Computer Science Department | Course Lab Assistant

Northfield, Minnesota

*September 2024 – Present*

- Assist students with understanding course concepts, assignment navigation, and code debugging during lab hours.
- Provide positive and constructive feedback on student assignments in a timely and consistent manner.
- Observe and relay common errors in student work to teaching faculty to help clarify concepts in classes.

### Presentation, Events, and Production | Media Technology Assistant

Northfield, Minnesota

*August 2022 – June 2024*

- Maintained, troubleshoot, and inspected presentation hardware and software operation to facilitate a successful learning experience for students.
- Assisted with audio and visual equipment set up for faculty and student events.
- Created and edited academic videos for faculty members using Adobe Premiere Pro and Photoshop.

## AWARDS AND SKILLS

### Intercollegiate Women's Golf | NCAA Student Athlete

*August 2022 – Present*

- Two-time **WGCA All-American Scholar**
- **CSC Academic All-District At-Large Team**

**Languages:** Java, C, C++, C#, Python, HTML/CSS, Assembly, Scheme

**Technical Tools:** Git/GitHub, VS Code, Microsoft Office, GDB, Docker, Unity XR interaction toolkit, Oculus SDK, Arduino IDE

**Design Tools:** Adobe Creative Suite, Procreate, Blender, Fusion 360, ArcGIS