

# Helena Yang

📍 Boyds, MD • ✉ hfy@andrew.cmu.edu • 📞 (240) 556-8654 • 🌿 heleaf • 🌐 helenafyang • 🌐 heleaf.me

## Education

**School of Computer Science,  
Carnegie Mellon University**  
*Bachelor of Science - BS*  
Computer Science, May 2024  
GPA: 4.0

### *Relevant Coursework:*

- Fundamentals of Programming & Computer Science
- Mathematical Foundations of Computer Science
- Matrices & Linear Transformations
- Writing about Data
- Writing about Public Problems

### *Upcoming Coursework:*

- Principles of Imperative Computation (C)
- Principle of Functional Programming (SML)
- Multidimensional Calculus
- Intro to Human-Computer Interaction
- Quantitative Cell and Molecular Biology Laboratory

## Skills

### *Languages:*

Python (1.5 yrs) • Java • C# • Javascript • Julia • HTML • CSS

### *Tools:*

Unix • Unity • Paint Tool Sai

## Activities

**Fundamentals of Programming  
& Computer Science (Class)**  
*Teaching Assistant*

**Game Creation Society**  
*Game Designer, Programmer*

**Women at SCS**  
**Artist Alley Club**  
**Rewriting the Code**

## Work Experience

**National Institute of Standards & Technology** • Intern

Jun 2019 - Aug 2019

- Co-created program that automated transition of 100+ scripts from Python 2 to 3.
- Updated a.b. initio computational chemistry script functions using NumPy & SciPy libraries.
- Rigorously tested outputs from old and new scripts against experimental data.

## Selected Projects

**2.5D Room Planner & Perspective Viewer** • Fundamentals of Programming & CS, Dec 2020

- Programmed app that allows users to customize, rotate and view rooms from isometric and first-person perspectives in Python (TkInter).
- Leveraged NumPy, rotation matrices, and perspective rendering matrix theory.
- Selected among 10 term projects out of ~300 to present during course lecture.

**Automated Study Schedule Builder** • HackMIT, Sep 2020

- Created Python algorithm that takes in calendar events & user tasks entered in real time on client frontend and calculates a personalized study block schedule.
- Integrated Python algorithm with Flask, SQL, and Google Calendar API in collaboration with two other teammates.

**Weather Tracker Game** • Google Computer Science Summer Institute, Jul 2020

- Co-designed Javascript browser game with location and weather-based graphics.
- Integrated OpenWeatherMap API with p5.js geolocation libraries.

**Narrative Game Anthology** • CMU Game Creation Society, Sep - Dec 2020

- Programmed and co-created writing/art assets for an interactive horror narrative game using Twine, HTML/CSS, Javascript, and Paint Tool Sai.
- Awarded the Schell Games Award at CMU Game Creation Society's fall 2020 showcase.

**Electric Truck Infrastructure Paper** • MathWorks Math Modeling Challenge, Mar 2020

- Developed model to calculate number and distribution of electric truck chargers needed along five US freight corridors given current levels of long haul traffic.
- Co-authored paper modeling development/deployment of electric trucks & needed charging infrastructure with four other teammates in 14 hours.
- Awarded scholarship distinction among 37 top papers out of 760 by The Society for Industrial & Applied Mathematics.

## Selected Honors

- *CMU Game Creation Society - Schell Games Award, 2020*
- *MathWorks Math Modeling Challenge Finalist - Honorable Mention, 2020*
- *4X Science Olympiad Regionals Event Finalist, 2020, 2019*
- *2X Scholastic Art & Writing Awards - Digital Art Honorable Mention, 2020, 2019*