# Ellia Yang | elliay@andrew.cmu.edu | elyang1221@gmail.com | (716) 235-6868

**Skills: Python, C, SML, HTML/CSS/JS, Java, LaTeX, Linux/UNIX, Figma, Unity,** Microsoft Office, Autodesk Inventor, Revit, Fluent in English and Mandarin Chinese

## Education and Involvement

**Carnegie Mellon University School of Computer Science** *Aug 2021 - May 2025*

*B.S. in Computer Science + Human-Computer Interaction*

- **Courses:** 15-112 Fundamentals of Programming & CS, 15-150 Principles of Functional Programming, 15-122 Principles of Imperative Computation, 15-281 AI Representation & Problem Solving, 05-410 User Centered Research & Evaluation, 85-213 Human Information Processing in AI, 15-251 Great Ideas in Theoretical CS, 05-317 Design of AI Products & Services, 15-213 Computer Systems, 05-430 Programming Usable Interfaces
- **Society of Asian Scientists and Engineers** - *Marketing Director* - Oversees marketing for all events (social media, email, etc.)
- **Design for America** - *Designer* - Provided website design services to a local non-profit organizations, currently working with student mental-health organization to design club operations and initiatives through a marketing lens.

## Experience

**Research Assistant** *May 2022 – Present*

*Human-Computer Interaction Institute - OH!Lab*

- Collaborating on a NSF-funded project led by Professors Amy Ogan, Jessica Hammer, and Motahhare Eslami *(Collaborative Research: A Social Programmable Robot Fostering Rapport to Improve Computer Science Skills and Attitudes)*.
- Developed and conducted multiple rounds of an interactive workshop that included robotics, basic AI concepts, and programming instruction, and collected qualitative data for thematic analysis using inductive open coding.
- Performed extensive background research and literature review on Fairness, Accountability, Transparency, and Ethics (FATE) in AI, as well as moral development theories and currently researched perspectives on algorithmic fairness.
- Designed and tested iterations of a tabletop game designed to teach concepts of training data and bias in artificial intelligence.

## Publications

- Solyst, J., **Yang, E.**, Xie, S., Eslami, M., Hammer, J., & Ogan, A. **(Conditionally Accepted with Minor Revisions)**. The Potential of Diverse Youth in Identifying and Mitigating Algorithmic Bias for a Future of Fair AI. The Annual ACM Conference on Computer-Supported Cooperative Work And Social Computing (CSCW).
- Solyst, J., Xie, S., **Yang, E.**, Stewart, A.E.B., Eslami, M., Hammer, J., & Ogan, A. **(Accepted + Honorable Mention Award)**. "I Would Like to Design": Black Girls Analyzing and Ideating Fair and Accountable AI. The Annual ACM Conference on Human Factors in Computing Systems (CHI).

## Projects

**Kindness First Penguin -** *UI Designer and Programmer*

- Awarded Meta Best Community Hack, DFA Best Hack for Social Good, and Impact CMU Faculty Judge Winner.
- Created a chrome extension called Kindness First Penguin that takes in users' texts and changes the emotional state of a virtual pet based on the sentiment polarity of the texts. This project aims to reduce the online disinhibition effect and encourage users to talk more constructively over the internet.

**Citadel, Citadel Securities, and Correlation One 2022 Summer Invitational Datathon -** *Programmer/Researcher*

- Selected to compete in global-scale datathon. Developed multi-class classification machine learning model to predict loan grading and subgrading using data from a peer-to-peer lending platform. Utilized Google Colab, Tensorflow, and Keras.

**EveryWay -** *UX Researcher & Designer*

- Conducted contextual interviews, speed dating sessions with storyboards, usability tests, and surveys to gather data about how college-aged users typically planned their trips. Analyzed the user data through interpretation notes and affinity clustering to design a low-fidelity travel-planning tool prototype, which was then tested using tools such as the System Usability Scale.

**CapyAlert - HackCMU 2022 -** *UI Designer & Programmer*

- Created an app to provide support for people to call for help in dangerous situations without arousing suspicion from those around them. The user appears to be playing a typical mobile game, but are actually calling 911, emergency contacts, etc.

**112 Term Project -** *Programmer*

- Wrote 1000+ line Python game with a focus on UX. Implemented random maze generation and search algorithms from scratch.

## Honors and Awards

Undergraduate Research Presentation Award; Coca-Cola Scholars Program Semi-Finalist; National Merit Finalist