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

Skills: **Python, C, SML, HTML, CSS, JavaScript, Java, LaTeX, Linux/UNIX,** Fluent in English and Mandarin Chinese
Tools: Figma, Unity, Bootstrap, Microsoft Azure, Node.js, Autodesk Inventor

Education and Involvement

Carnegie Mellon University School of Computer Science *Aug 2021 - May 2025*
B.S. in Computer Science + Human-Computer Interaction - QPA 3.56
Courses: 15-440 Distributed Systems
15-210 Parallel and Sequential Data Structures and Algorithms
05-430 Programming Usable Interfaces
15-281 AI Representation & Problem Solving
15-213 Introduction to Computer Systems
05-317 Design of AI Products & Services

Society of Asian Scientists and Engineers - *Marketing Director* - Overseed marketing and communications for all events.
Design for America - *Designer* - Provided website design services to local non-profit organizations, currently working with student mental-health organization to design club operations and initiatives through a marketing lens.

Professional Experience

Software Developer - *AERDF + Center for Transformational Play* *June 2023 - Present*
- Built an innovative K-12 student web-based platform empowering emotional wellbeing for learners through self-monitoring, memory-boosting, and engaging exploration. Provides educators and caregivers with insightful profiles for responsive interventions.
- Designed tech stack from client product requirements and worked on full stack development of the project.

Software Engineering Intern - *Toyz Electronics* *May 2023 - August 2023*
- Worked on an app aimed at empowering diverse students in tech fields through gamification of STEAM education. Users access interactive learning experiences, mentorship, and representation for underrepresented students in career fields.
- Implemented vast UI/UX changes to the game built using Unity and worked closely with the UI team to implement new designs.
- Created generative AI platform specifically for STEAM resources using Microsoft Azure Cognitive Search and OpenAI.
- Led web team in redesigning company website, moving site from Wordpress to a static web app hosted on Microsoft Azure.

Research Assistant - *Human-Computer Interaction Institute - OH!Lab* *May 2022 - Present*
- Collaborated on a NSF-funded project led by Professors Amy Ogan, Jessica Hammer, and Motahhare Eslami.
- Developed and conducted multiple rounds of interactive workshops that include 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.

Teaching Assistant - *CMU Summer Academy for Math and Science* *June 2023 - August 2023*
- Instructed a cohort of high school students on basics of Unity game development and guided them to completing personal programming projects that were presented at an annual symposium.

Publications

- Solyst, J., **Yang, E.**, Xie, S., Eslami, M., Hammer, J., & Ogan, A. **(Accepted)**. The Potential of Diverse Youth in Identifying and Mitigating Algorithmic Bias for a Future of Fair AI. (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. (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.

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.

Honors and Awards

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