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

Skills: **Python, C, Go, 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

Carnegie Mellon University School of Computer Science *Expected Aug 2021- May 2025*
B.S. in Computer Science + additional major in Human-Computer Interaction - QPA 3.65
Relevant Courses: Distributed Systems, AI Representation & Problem Solving, Parallel and Sequential Data Structures and Algorithms, Programming Usable Interfaces, Computer Systems, Design of AI Products and Services, Human-AI Interaction

Vice President - *Society of Asian Scientists and Engineers* **-** Managed marketing, club operations and budget, event planning.
UI/UX Designer - *Design for America* - Provided website design services to multiple local non-profit organizations.

Professional Experience

Software Engineering Intern (Incoming) - *Visa* *May 2024 - August 2024*
Technology Planning & Business Operations Team

Software Developer - *AERDF + Center for Transformational Play* *June 2023 - Sept 2023*
- Built a web-based platform empowering emotional well-being for K-12 students 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*
- Improved 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 app, collaborated closely with the UI team to build new designs in Unity.
- Developed a generative AI platform specifically for STEAM resources using Microsoft Azure Cognitive Search and OpenAI.
- Led web team in redesigning company website, moved the site from WordPress to a static web app hosted on Microsoft Azure.

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

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

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 encourage users to talk more constructively over the internet by physically demonstrating the impact of a user's language on the recipient of their messages.

First-Year Orientation Tasking - *Programmer*
- Designed and implemented a Google Apps Script program to organize staffing for the large-scale, week-long, First-Year Orientation program at CMU. Used program to assign 160 staff members to ~300 events and tasks, accounting for event and staffing requirements. Ensured randomized staff assignments and fair distribution of labor with minimal scheduling conflicts.

Publications

- Solyst, J., **Yang, E.**, Xie, S., Eslami, M., Hammer, J., & Ogan, A. (2023). *The Potential of Diverse Youth in Identifying and Mitigating Algorithmic Bias for a Future of Fair AI.* **(CSCW 2023 Recognition for Contribution to Diversity and Inclusion)**
- Solyst, J., Xie, S., **Yang, E.**, Stewart, A.E.B., Eslami, M., Hammer, J., & Ogan, A. (2023). *"I Would Like to Design": Black Girls Analyzing and Ideating Fair and Accountable AI.* **(CHI 2023 Best Paper Honorable Mention)**