Ellia Yang

elliay@andrew.cmu.edu | (716) 235-6868 | Pittsburgh, PA

Technical Skills

Languages: Proficient in **Python, C, Go, SML, HTML, CSS, JavaScript, TypeScript, Java, LaTeX, Linux/UNIX**
Tools: Angular, Figma, Unity, Bootstrap, Microsoft Azure, Node.js, Autodesk Inventor

Education

Carnegie Mellon University School of Computer Science *Aug 2021- May 2025*
B.S. in Computer Science + additional major in Human-Computer Interaction - *GPA 3.66*

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

Involvement:

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

Professional Experience

Software Engineering Intern *May 2024 - August 2024*
Visa - Platform and Product Management - Agility Practices and Performance Data Team

- Developed full-stack GenAI application to transform large volumes of data using Python FastAPI, Angular Typescript.
- Wrote unit tests and assisted lead software engineer in containerizing code base for deployment on internal cloud.

Software Developer *June 2023 - Sept 2023*
AERDF + Center for Transformational Play

- Built full-stack web-based platform supporting emotional well-being for K-12 students using Nginx, Flask, HTML/CSS/JS.

Software Engineering Intern M*ay 2023 - August 2023*
Toyz Electronics

- Improved on a mobile app aimed at empowering diverse students in tech fields through gamification of STEAM education.
- 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 for STEAM resources using Microsoft Azure Cognitive Search and OpenAI.

Research Assistant *May 2022 - Present*
Human-Computer Interaction Institute - OH!Lab

- Taught and created interactive workshops for middle school students on AI concepts and ethics, collected qualitative data.
- Performed extensive background research and literature review on Fairness, Accountability, Transparency, and Ethics (FATE) in AI, as well as moral development theories and perspectives on algorithmic fairness to support thematic analysis results.

Projects

Meta Best Community Hack, DFA Best Hack for Social Good, Impact CMU 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.

CMU First-Year Orientation Tasking

- Designed and implemented a Google Apps Script program to organize staffing for First-Year Orientation program
- 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 & 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)**