Emily Xie

Pittsburgh, PA | (925) 817-9917 | elx@andrew.cmu.edu | http://emily.xie.fm

Education

Carnegie Mellon University - Bachelor of Science in Information Systems and Computer Science   MAY 2025
GPA: 4.0/4.0 | Selected Coursework: Introduction to Machine Learning, Computer Graphics, Introduction to Computer Systems, Database Design and Development

Las Lomas High School - High School Diploma   MAY 2021
GPA: 4.0/4.0 | Selected AP Exams: Computer Science A
Awards: National Merit Scholarship Finalist

Skills

Programming: Python, Javascript, React, HTML/CSS, Java, SQL, Postgres, Matlab, R, Swift, Firebase, C/C#/C++
Creative: Unity, Blender, Three.js, Photoshop, Procreate

Experience

Software Engineer Intern - NASA Jet Propulsion Laboratory   JUNE 2023 - PRESENT
- Worked on Europa Clipper – NASA mission launching in 2024 to explore Jupiter's icy moon, Europa.
- Involved in the Planning and Execution Software team to develop software for mission planning and sequencing.
- Completed a variety of programming tasks in Java involving a simulatable software model of Europa Clipper.
- Implemented scripts in Python and GraphQL to improve operations workflow, used by over 30 members.
- Contributed over 10,000 lines of code to codebase and presented 4 technical reports.

Research Assistant - CMU Augmented Perception Lab   SEPTEMBER 2022 - JUNE 2023
- Conducted research on sound spatialization in AR/VR environments and UI layout optimization.
- Designed algorithm in Python to optimize auditory layout of UI elements in AR/VR environments.
- Collaborated with lab members to create 3 experimental setups in Unity to gather data.
- Facilitated weekly team meetings to discuss experimental design and summarize findings.
- Conducted over 20 studies with participants.

Visiting Scholar/Research Intern - UCSF Department of Radiology   JUNE 2021 - APRIL 2022
- Used computational techniques on a large clinical dataset to find trends in knee meniscus shape and osteoarthritis.
- Programmed MATLAB and R scripts to extract medical data and analyze statistical correlations.
- First-authored accepted poster presentation for OARSI 2022 World Congress Conference.
- Cooperated closely with two supervisors during daily and weekly meetings to ask questions, discuss research methods, and work through obstacles.

Projects/Activities

TEDxCMU - Innovation Team Lead   AUGUST 2021 - PRESENT
- Collaborated with Innovation Team to set up technological experiences for TEDx events, including an interactive projection mapping installation and StoryMap, a location-based web application for sharing stories around campus.
- Experimented with Three.js and Next.js to create a dynamic 3D homepage for the 2023 Main Event.
- Reached out to over 20 organizations to send invitations for presenting at Innovation Expo.

CMU Game Creation Society - Programmer   SEPTEMBER 2021 - DECEMBER 2021
- Teamed up with programmers, designers, artists, and musicians to create Empyrean, a mass-multiplayer online game.
- Utilized Unity and cloud networking library to add features such as server-side damage logic and object pick-up.
- Coordinated directly with head musician to incorporate responsive sound effects and soundtracks.