Emily Xie

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Education

Carnegie Mellon University - Bachelor of Science in Information Systems   MAY 2025
GPA: 4.0/4.0 | Selected Coursework: Principles of Imperative Computation

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: HTML, SASS, Javascript, React.js, Python, Conda, Matlab, R, Swift, Firebase, Java, C

Experience

Visiting Scholar/Research Intern - UCSF Department of Radiology   JUNE 2021 - PRESENT
- Used computational techniques on large clinical dataset to find trends in knee meniscus shape and osteoarthritis.
- Programmed and documented MATLAB and R scripts to extract medical data and analyze statistical correlations.
- First-authored submission for OARSI 2022 World Congress; presented at 2021 UCSF Summer Intern Symposium.
- Collaborated closely with two supervisors during daily and weekly meetings to ask questions, discuss research methods, and work through obstacles.

Research Intern - UCSF Department of Radiology   JUNE 2020 - AUGUST 2020
- Designed and programmed a data processing and machine learning pipeline to filter artifacts in magnetic resonance spectroscopic imaging (MRSI) of the brain.
- Learned visualization and machine learning libraries such as NumPy, Matplotlib, and Tensorflow in Python.
- Converted MATLAB scripts for reading medical files into Python scripts to aid lab's transition into Python.
- Showcased results at 2021 International Society for Magnetic Resonance in Medicine Exhibition and 2020 UCSF Summer Intern Symposium.

Projects/Activities

CMU Game Creation Society   AUGUST 2021 - DECEMBER 2021
- Collaborated with a team of 10 composed of programmers, designers, artists, and musicians to create Empyrean, a mass-multiplayer online game.
- Utilized Unity and a cloud networking library to implement features like server-side damage logic and object pick-up.
- Teamed up with head musician to incorporate responsive sound effects and soundtracks in game.

Music Day   OCTOBER 2021
- Developed a generative music web app that changes moods based on the weather and time of day.
- Taught myself React.js, Javascript audio libraries, and API handling to achieve my final vision.
- Submitted project for TEDxCMU Club application and was later accepted as part of the Innovation Team.

Jazzcats!   MAY 2020 - AUGUST 2020
- Created a jazz music game using iOS frameworks and Firebase.
- Structured, drew, and published app as sole developer.
- Obtained app downloaded across 10 countries.

Music Mentors Club   SEPTEMBER 2018 - MAY 2021
- Founded club to connect high school music mentors to elementary/middle school students.
- Communicated with principals and district superintendent to advertise across five school districts in Bay Area.
- Connected over 40 students together in mentor-mentee relationship.
- Organized two online recitals to motivate music playing during COVID-19 pandemic.