Claire Yuan claireyuan6@gmail.com | San Jose, CA 95132

EDUCATION

University of Southern California, Los Angeles Aug 2021–May 2025
B.S., Electrical and Computer Engineering

- Presidential Scholar, 4.0 GPA
- *Courses:* Linear Circuits, Differential Equations, Python, C++, Embedded Systems, Linear Algebra, E&M Physics, Calculus III

SKILLS

- **Programming**: C/C++, Java, MATLAB, Arduino IDE, Python
- **Electrical:** KiCad, LTSpice, lab equipment (oscilloscopes, multimeters, function generators)

EXPERIENCE

Hardware Team, USC Makers Jan 2022–present

- Collaborated on noise-cancelling headphones project using a Teensy 4.0 audio board
- Build Independent Dual Extrusion system for 3D printer (currently)

Research Fellow, Computational Methods for Design and Discovery Lab Sep 2021–present

- Programmed a graph-based approach in C++ for simulating MOS cells
- Wrote code to generate all memristor-MOS logic cells and the logic function they implement up to any given number of devices
- Added filtering features to remove undesirable cells based on their properties and quality metrics
- Short-circuited and open-circuited devices to analyze transformations between cells

Electrical Team, USC Solar Car Aug 2021–present

- Soldered solar cells, spot welded battery pack and completed wiring with other members
- Created schematic and designed PCB for current sensors on KiCad

PROJECTS

Guitar Collaborative Project EE202 Linear Circuits

- Built an amplifier circuit that suppresses one string of a guitar and amplifies the others
- Designed with a noninverting amplifier, passive twin-T bandstop filter, and unity-gain buffers

Thermometer Display EE109 Embedded Systems

- Programmed serial interface to transmit and receive remote temperature data between sensor and Arduino

LEADERSHIP

EE155 Course Producer Aug 2022–Dec 2022

- Taught 40+ students in programming labs and office hours
- Improved auto-grading UNIX scripts for assignments

Academic Ambassador Sep 2021–May 2022
USC IEEE (Institute of Electrical and Electronics Engineers)

- Brainstormed, planned, and executed academic-related events for EE students