Claire T. Chen

Berkeley, CA

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Undergraduate Astrophysics and Physics student at UC Berkeley. I'm passionate about arts, science, and engineering, and my dream is to apply all three to explore and understand the universe.

Education

University of California Berkeley — *Berkeley, CA, USA*

B.A. in **Astrophysics, Physics** — *Aug 2021 - May 2025*

- GPA: 3.6
- Instructor for **Python for Astronomers DeCal**, Jan 2022 - Dec 2022

Skills

Electronics	Altium Designer, KiCad, LTSpice, PCB Design, PCB Assembly, Electronics Testing
Programming	Python (NumPy, Matplotlib, TensorFlow, Keras, Pandas, SciPy, astropy, ffmpeg, PyGame), Java, C, C++, HTML, CSS
Media	Graphic Design, Digital Illustration, UX Design, DaVinci Resolve, Autodesk Sketchbook, GIMP, Figma, Inkscape, Blender
Languages	English, Mandarin Chinese, French

Experience

Commonwealth Fusion Systems — *Devens, MA*

Technical Intern, Tokamak Operations Team — *May 2023 - Aug 2023*

- Developing in-loop CAD optimization and generative design tools for heat flux reduction
- Analyzing operational scenarios for the SPARC tokamak using the Heat flux Engineering Analysis Toolkit

Space Enterprise at Berkeley — *UC Berkeley*

Avionics Hardware Project Manager — *Aug 2021 - present*

- Designed and built PCBs for the flight computer, which was used in static fires and will fly on our first liquid bipropellant rocket
- Worked on avionics integration, including developing ground support PCBs, radio testing, and analyzing engine test data
- Created graphics (apparel design, mission patches, stickers, posters) for the club and for wider outreach

Space Sciences Laboratory — *UC Berkeley*

Researcher, Physics and Electrical Engineering — *Jan 2022 - present*

- Designed readout electronics and wrote firmware for an instrument on the Compton Spectrometer and Imager spacecraft
- Characterized board and detector performance with beamline data and lab testing
- Collaborated with international team to ensure instrument will support gamma-ray science objectives

GNOME @ Berkeley — *UC Berkeley*

Researcher, Physics — *Aug 2021 - Jan 2022*

- Maintained atomic magnetometers as part of a global network searching for dark matter candidates
- Developed and tested setup for controlling laser frequency

UF Astronomy (Prof. Jian Ge) — *University of Florida*

Researcher — *2020 - 2021*

- Developed methods to search for small exoplanets with neural networks, resulting in discovery of 2 new exoplanet candidates
- Developed procedure for utilizing GPU processing to rapidly normalize, fold, and analyze Kepler Space Telescope lightcurve data
- Presented results at Regeneron Science Talent Search and was recognized by SETI at Synopsys Science Fair

Homestead Robotics (FRC Team 670) — *Cupertino, CA*

Tech Lead & VP of Development — *2017 - 2021*

- Led design of high level software, control and electrical systems, organized team of 40 students in creating competitive robots
- Developed curriculum for programming, controls, and electronics workshops for team and Western Region Robotics Forum events
- Collaborated with leadership across FUHSD (Fremont Union High School District) FRC teams to develop an initiative to build a district robotics facility. Helped create proposal for designs and budget, and presented to district representatives.

Freelance Digital Illustration *UC Berkeley*

Digital Illustrator & Graphics Designer *2020 - PRESENT*

- Branding for Homestead Robotics, Athena (online tutoring platform)
- Fantasy scenery and landscape illustration, character design, VFX development, tattoo design. Earned $900 from online commissions and print sales