Claire T. Chen

Berkeley, CA

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Astrophysics and physics undergraduate at UC Berkeley. Passionate about arts, science, and engineering, and my dream is to apply all three to explore and understand the universe. Research interests in fusion energy, plasma physics, and cosmology.

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, tf, keras, pandas, scipy, astropy, ffmpeg, pymoo, multiprocessing), 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*

- Developed a code for autonomous generation of plasma facing component designs for heat flux minimization
- Analyzed operational scenarios for SPARC using the Heat flux Engineering Analysis Toolkit (HEAT)
- Presented research at PPPL - Graduate Summer School 2023

Space Enterprise at Berkeley — *UC Berkeley*

Avionics Lead — *Aug 2021 - present*

- Designed and built PCBs for the flight computer, which was used in static fires and flew on our first liquid bipropellant rocket
- Developed ground support equipment, radio telemetry for liquid bipropellant rockets

Space Sciences Laboratory — *UC Berkeley*

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

- Designed and characterized readout electronics for the Background and Transient Observer instrument for the COSI mission
- Collaborated with international team to design system electronics to meet 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, calibrated, 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, 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 Fremont Union High School District to develop an initiative to build a robotics facility

Freelance Digital Illustration — *UC Berkeley*

Digital Illustrator & Graphics Designer — *2020 - PRESENT*

- Created graphics (apparel design, mission patches, stickers, posters) for Space Enterprise at Berkeley, Berkeley Astronomy
- Fantasy scenery and landscape illustration, character design, VFX development, tattoo design. Featured on Critical Role