

Ayla Weitz

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EDUCATION

University of California, Berkeley

BA in Astrophysics, major GPA: 3.82/4.0

Expected May 2022

RESEARCH EXPERIENCE

Improved Coordinates for Historical Type Ia Supernovae

Lawrence Berkeley National Laboratory

September 2019 – Present

Berkeley, CA

- Developing custom Python software for determining Type Ia supernovae coordinates from historical images
- Using astrometric calibration meta-data from Astrometry.net, data from Gaia DR2, and custom clicking software
- Checking and refining celestial coordinates for over 700 supernovae and creating a general method for processing supernova images

Characterizing the Time Evolution of Solar Free-Energy Proxies

University of Alabama in Huntsville

June – August 2021

Huntsville, AL

- Participant in the Solar and Heliospheric Physics REU Program jointly organized by UAH/CSPAR and NASA/MSFC
- Found and corrected the radial distance dependence of gradient and shear weighted neutral line measures in JSOC deprojected cylindrical magnetograms
- Tested various prediction models where the degree of the prediction function and the time before central meridian approach considered were varied

TEACHING

Python DeCal Instructor

University of California, Berkeley

January 2021 – Present

Berkeley, CA

- Teaching a course geared towards giving physics and astrophysics majors an introduction to Python and helping them develop skills necessary for research
- Our team of 5 undergraduate instructors develop the curriculum, give the lectures, hold office hours, and grade and create the homework assignments

Astro C12 Reader

University of California, Berkeley

January – May 2021

Berkeley, CA

- Graded problem sets and exams for an introductory astronomy course
- Collaborated with professors, graduate student instructors, and fellow readers on rubrics

Instructor

Camp EDMO

June – August 2020

San Jose, CA

- Introduced elementary students to programming using the visual programming language Scratch
- Independently taught classes of 6-8 students utilizing the video conferencing program Zoom

AWARDS

- 1st place in the 2021 UAH/CSPAR REU Poster Competition
- Undergraduate Research Apprenticeship Program (URAP) Summer 2020 Award

EXTRACURRICULARS

- Officer, UC Berkeley Undergraduate Astronomy Society, August 2020 - Present
- Volunteer and Service Dog Puppy Raiser, Canine Companions for Independence, 2010 - Present

TECHNICAL SKILLS

Languages: Python, Unix, SQL, IDL, JavaScript, HTML, CSS

Tools: GitHub, Jupyter Notebook, DS9, LaTeX, Microsoft Office