Claudia Holland

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EDUCATION

University of California, Berkeley **Berkeley, CA**
Bachelor of Arts in Applied Mathematics and Astrophysics (Double Major) August 2026
Relevant Coursework: Optical and Infrared Astronomy Laboratory, Numerical Analysis, LinAlg & DiffEq

EXPERIENCE

Rocket Lab **Toronto, ON**
Optical Engineering Intern September 2025 - April 2026

- Executed and documented optical systems testing of the High-Performance Star Tracker (ST-HP) ensuring timely hand-off to mechanical qualification testing phase, and aligned with press release announcing the ST-HP
- Successfully completed focusing, calibration, staking, centroid stability, detector cosmetics, and dynamic performance testing as part of ST-HP's early optical prototype and optical qualification testing of the first four Qualification Models
- Adapted and expanded MATLAB qualification software for the ST-HP platform, streamlining optical testing
- Conducted dynamic performance testing, data visualization, and analysis of the ST-HP using the Star Tracker Optical Simulator, demonstrating 100% availability at 3°/s, outperforming the previous-generation star trackers
- Collaborated on adapting a Python-based image-processing pipeline to process ST-HP imagery, enabling starlight-in-quaternion-out algorithms, fundamental to spacecraft attitude determination
- Designed optomechanical ground support equipment in Solid Edge and produced manufacturing drawings, improving production and R&D testing efficiency; trained technicians and engineers on proper use
- Supported production testing of engineering-model and flight-model star trackers while simultaneously contributing to R&D and qualification activities across multiple engineering teams in a fast paced environment

UC Berkeley Space Sciences Laboratory **Berkeley, CA**
Student Engagement Lead, NASA COFFIES HelioHub June 2025 - October 2026

- Founded and lead HelioHub, a Discord-based heliophysics community; grew membership from 0 to 400+
- Teach and lead monthly webinars plus technical workshops on Python, Git/GitHub, VS Code, and LaTeX
- Supported a virtual solar-physics research and education program (ButterflAI), providing guidance to 40+ participants, leading to 2 publications and posters at scientific conferences

ESCAPADE Mission Student Assistant June 2024 - December 2025

- Authored a 26-page press release by interviewing scientists and engineers and translating complex mission objectives into accessible technical communications within a two-month deadline
- Maintained the ESCAPADE mission website, publishing updates to communicate mission progress

UC Berkeley Undergraduate Astronomy Society **Berkeley, CA**
Telescope Crew Operator August 2023 - May 2025

- Operated Dall-Kirkham, Newtonian Reflector, and Schmidt-Cassegrain telescopes for UC Berkeley Astrophysics

SKILLS

Technical Skills: Python, MATLAB, C, Git, SOLIDWORKS, Solid Edge, Onshape, Simulink, Zemax OpticStudio, SVN, VS Code, LaTeX, Microsoft 365
Communication Skills: Data Visualization & Analysis, Peer-Reviewed Research, Technical Writing, Industry Outreach
Languages: English (Fluent), French (Professional Working Proficiency)