Ella Ho

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PROFESSIONAL SUMMARY

Dual-degree atmospheric scientist and astronomer with expertise in climate research, radar meteorology, and large-scale data analysis. Experienced in modeling and satellite/radar data processing, with a strong programming background in Python, R, and geospatial tools. Skilled at forecasting, severe weather communication, and translating advanced scientific concepts into clear, actionable insights for both technical teams and public audiences.

SKILLS & CERTIFICATIONS

Forecasting & Modeling: MAX Studio, ArcGIS, GFS, HRRR, ECMWF, Jupyter, Spyder
Programming: Python (NumPy, pandas, Matplotlib), R, SQL, HTML/CSS, JavaScript, C++
Software: Adobe CC, AutoCAD, SolidWorks, Microsoft Office, G Suite, Procreate
Certifications: Radiation Safety (BioRAFT), Applied Leadership (CU Boulder Gold Program), Responsible Conduct of Research (CITI),

EDUCATION

B.A. Astrophysical & Planetary Sciences   **Minor:** Space - *University of Colorado at Boulder*   **Spring 2023**
B.A. Atmospheric & Oceanic Sciences - *University of Colorado at Boulder*   **Expected Spring 2026**

PROFESSIONAL EXPERIENCE

Student Assistant - *Cooperative Institute for Research in Environmental Sciences (Boulder, CO)* **Aug 2025 - Present**
- Develops and facilitates community-facing outreach programming on Earth science and climate resilience.
- Supports public engagement strategies, translating complex environmental issues into accessible messaging.
- Contributes to interdisciplinary team efforts aimed at promoting environmental programs across the country.

Broadcast Meteorology Intern - *Nexstar's FOX2/ KPLR11 (St. Louis, MO)*   **Jun 2025 - Aug 2025**
- Produced daily forecasts using radar, satellite imagery, and multi-model guidance (GFS, HRRR, ECMWF).
- Cohosted streaming Weather Extra Show and delivered three on-air weather packages, receiving feedback from AMS-certified meteorologists in a top 25 market newsroom and boosting on-camera performance.
- Supported live severe weather coverage, contributing to real-time storm tracking and public safety updates.

Student Researcher - *CU Boulder College of Arts & Sciences (Boulder, CO)*   **Aug 2022 - Nov 2023**
- Built data visualizations and interactive tutorials in R and ArcGIS to teach mapping and data analysis, supporting data-driven learning for students in a developing course in the African Studies Department.
- Designed a capstone curriculum for data science in the humanities, adopted in the Arts & Sciences college.

Assistant Climate Researcher - *Ecology & Evolutionary Biology Department (Boulder, CO)*   **Aug 2022 - June 2023**
- Modeled climate impacts on South American tropical flora using real-world weather data.
- Analyzed precipitation/temperature shifts to assess ecosystem vulnerability under future climate scenarios.

PROJECTS

Analysis of Natural vs Anthropogenic Aerosol Emissions on Cloud Formation   **Fall 2025**
- Conducting quantitative analysis of natural vs. anthropogenic aerosol emissions from Sub-Saharan Africa, integrating MODIS satellite observations with emissions inventories to evaluate spatial patterns, temporal variability, and climate impacts on cloud formation.

Parker Space Probe Parker Spiral (Astrophysical Research Methods Final Project)   **Spring 2025**
- Processed and modeled more than a million data points of solar wind and magnetic field measurements (2018–2025) from the Parker Solar Probe to quantify angular deviations between theoretical and observational data.

Lunar Surface Impact Visualizer (Planetary Dynamics Final Project)   **Fall 2023**
- Developed a Python simulation of 1000 lunar surface impacts, visualizing ejecta patterns and crater evolution.
- Applied physical modeling to predict energy transfer and impact morphology across multiple lunar scenarios.

EXTRACURRICULARS

American Meteorological Society (Boulder Chapter) - *Executive Board Member*   **Spring 2025 - Present**
- Organized student-led events on forecasting, storm safety, climate literacy, and campus outreach sessions.
- Fostered connections between students and professionals via speaker panels and networking sessions.