

# Haylee Oyler

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[haylee360.github.io](https://github.com/haylee360) | [GitHub](#) | [LinkedIn](#)

## EDUCATION

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**Master of Environmental Data Science**, 4.00 GPA (June 2025)

**Bren School of Environmental Science & Management – University of California, Santa Barbara**

Highlighted Coursework: Geospatial Analysis and Remote Sensing, Machine Learning, Data Visualization, Environmental Modeling, Ethics and Bias in Environmental Data Science

Leadership/Involvement: Capstone Committee Member, Bren Environmental Science Fellows Mentor

**Bachelor of Science in Environmental Science with Honors**, 3.84 GPA (May 2021)

**College of Natural Resources – University of California, Berkeley**

Senior Thesis: *It's not just for the Birds: Citizen Science Participation during COVID-19.*

Highlighted Coursework: Quantitative Aspects of Global Environmental Problems, Environmental Economics, Culture and Resource Management, Climate and Resource Policy, Energy and Society

## MASTER'S CAPSTONE PROJECT

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**Identifying Disadvantaged Communities Using Cumulative Environmental Burden** (January 2025-present)

**Role: Lead Data Analyst and Developer** | **Client: Dr. Jayajit Chakraborty, UCSB Bren School**

- Conducted spatial statistical analysis to identify areas of high environmental burden using 30+ indicators.
- Improved existing geospatial mapping web application to visualize new results, including back-end data pipeline modification in python and front-end client navigation in TypeScript with React.

## SKILLS

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**Programming**: Python, R, SQL, Java, JavaScript & TypeScript, React, Git & GitHub, CSS & Sass, HTML

**Computer**: WordPress, Canva, Affinity Designer, Microsoft Office, Google Suite

## WORK EXPERIENCE

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**Ocean Health Index Global Fellow – National Center for Ecological Analysis and Synthesis**, Santa Barbara, CA (May 2025-present)

Supervisor: Melanie Frazier, Ph.D.

- Collaborate with a diverse team of data scientists using open science methods to synthesize 40+ data sources into an overall metric of ocean health evaluated over 10 goals.
- Develop visualizations, blog posts, and interactive reports to communicate results to a variety of audiences.

**Graduate Student Assistant – UCSB Blum Center Central Coast Regional Equity Initiative**, Santa Barbara, CA (September 2024-June 2025)

Supervisor: Kashia Arnold, Ph.D.

- Managed and developed content for the Central Coast Regional Equity Initiative's WordPress site.
- Created data visualizations for equity indicators of demographics, basic needs, and civic connectedness.

**Teaching Assistant – UCSB Department of Probability and Statistics**, Santa Barbara, CA (September 2024-June 2025)

Supervisor: Jack Miller, Ph.D.

- Led sections and coding-based labs for introductory statistics for life sciences students (PSTAT 5LS).
- Content included normal distributions, hypothesis testing, and linear regression in R.

**Research Technician – Ecology & Evolutionary Biology, University of California, Los Angeles** (October 2021-June 2024)

Supervisor: Nathan Kraft, Ph.D.

- Examined higher-order interactions through a series of field experiments with California annual plants.
- Cleaned, analyzed, and modeled the data in R with generalized linear models.
- Maintained laboratory space and oversaw training and mentoring undergraduate students. Worked with students over multiple years to create and refine individual research questions.

**Research Technician – Center for Stable Isotope Biogeochemistry, University of California, Berkeley**  
(September 2018- June 2021)

Supervisor: Todd Dawson, Ph.D.

- Assisted with graduate student projects examining plant water relations in coast live oaks and species distribution. Also studied the influence of temperature on the proliferation of fine roots and mycorrhizae.
- Prepared solid and liquid samples for various types of isotope analysis via mass spectroscopy and cryogenic water and leaf sugar extraction.

**RESEARCH EXPERIENCE**

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**Undergraduate Research Assistantship – Brashares Wildlife Ecology Lab, University of California, Berkeley** (2020-2023)

Advisor: Kendall Calhoun, Ph.D.

- Examined the effects of fire on wildlife across a UC Reserve using camera traps and audio monitors.
- Data collection and analysis including using the deep neural network, BirdNet, to auto-detect species based on audio monitor observations.
- Created an occupancy model to map species presence before and after the fire.

**Senior Thesis – Environmental Science, Policy, and Management, University of California, Berkeley** (2020-2021)

Advisor: Patina Mendez, Ph.D.

- Title: *It's not just for the Birds: Citizen Science Participation during COVID-19*
- Year-long senior thesis project that examined trends in citizen science participation during the COVID-19 pandemic using the open data source, eBird.
- Presented at ESPM research symposium with honors.

**Directed Research – Monteverde Institute, Costa Rica** (2019)

Advisor: Frank Joyce, Ph.D.

- Title: *"Microplastic in Mangroves with Varying Levels of Human Impact"*
- Independent research project examining levels of aquatic microplastic pollution across a gradient of human influence near a marine protected area.
- Presented in a forum for community members. Led discussions for strategies to help reduce plastic pollution load in the community's mangrove estuary system.

**SERVICE AND INVOLVEMENT**

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**Queer Ecologies Guest Speaker: Data and Power in the Academy – University of California, Santa Cruz**  
(May 2025)

- Guest speaker invited to discuss the influence of power in academia in the context of graduate education for the class Queer Ecologies - BIOE 189F.
- Presented on Master's capstone project regarding the loss of access to federal data, and the influence of political machinations on academic research.

**Master's Capstone Committee Member – Bren School for Environmental Science and Management, University of California, Santa Barbara** (September 2024 – May 2025)

- Served as a committee member to evaluate capstone projects for the Master of Environmental Data Science.
- Reviewed and submitted scores for all submitted proposals, participated in the faculty and staff discussion around project fit, and voted for final selections.
- Facilitated review of the current Request for Proposals to promote projects with broad impacts and to encourage clients from historically underrepresented groups to submit.

**Environmental Studies Fellows Program Mentor – University of California, Santa Barbara** (September 2024- June 2025)

- Meet quarterly with 2-3 undergraduate environmental science students from marginalized communities, low-income families, or are first-generation college students to provide career mentorship.
- One-on-one time to discuss research interests, give career advice, and answer questions.

**CALPIRG Organizer – Plastic-Free Seas Campaign, University of California Berkeley** (Spring 2019)

- Assisted with outreach and lobbying to eliminate single-use plastics from the campus and the state. Helped coordinate meetings, arrange outreach events, and recruit new members.

#### **Peer Mentor – Environmental Science, University of California Berkeley (2018-2019)**

- Served as a peer advisor for other environmental science majors in my department. Attended monthly meetings to discuss courses, and work-life balance.

#### **Naturalist – Student Organic Garden Association, University of California Berkeley (Spring 2018)**

- Maintained organic garden plots at the university's student-run garden. Gave tours to visitors and assisted in teaching student-run elective courses taught in the garden.

### **PUBLICATIONS**

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Kendall Calhoun, Phoebe Parker-Shames, Zachary L. Steel, **Haylee Oyler**, Justin Brashares, 2024. Severity and pyrodiversity shape avian and bat species distributions following an Oak Woodland Megafire. *Ecosphere (In Production)*.

Theo L. Gibbs, Zachary J. Gold, **Haylee Oyler**, Jonathan M. Levine, and Nathan J.B. Kraft, 2025. Spatial clustering reveals the impact of higher-order interactions in a diverse annual plant community. *Proceedings of the National Academy of Sciences (submitted)*.

### **AWARDS**

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2025 **Academic Achievement Award** – Master of Environmental Data Science, Bren School of Environmental Science and Management.

2024 National Science Foundation Graduate Research Fellowship Program: **Honorable Mention**. Submitted under ecology and science policy.

### **ADDITIONAL EXPERIENCE**

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**Study Abroad – Tropical Biology and Conservation Costa Rica**, University of California Education Abroad Program (Fall 2020)

- Fieldwork and lectures taught in multiple national parks of the Guanacaste region of Costa Rica. Lectures on tropical community ecology, biodiversity, and agroecology.
- Interactions with local farmers of teak, coffee, and rice. Homestay in a fishing village with opportunities to explore the intersection of economic livelihood and marine conservation policy.

### **ADDITIONAL SKILLS**

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- **Language:** Intermediate French, Basic Spanish, Basic Korean
- **Training:** Wilderness First Responder, CPR, and Epinephrine Injection