Haylee Oyler

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EDUCATION

Master of Environmental Data Science, 4.00 GPA (Expected 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

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

Programming: Python, R, SQL, React, TypeScript & JavaScript, Git & GitHub, CSS & Sass, HTML
Computer: WordPress, Canva, Affinity Designer, Microsoft Office, Google Suite

WORK EXPERIENCE

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-present)
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-present)
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

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.
- Cleaning, wrangling, and visualizing large data sets of bird observations.
- 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

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

- 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-present)

- 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

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).*

AWARDS

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

ADDITIONAL EXPERIENCE

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

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