Raymond Hunter

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EDUCATION

Bren School of Environmental Science & Management – University of California, Santa Barbara (UCSB)
Master of Environmental Science and Management, 4.0 GPA (Expected June 2024)
Specialization: Business and Sustainability |Emphasis: Data Science

University of California, Santa Cruz (UCSC), *cum laude* 3.84 GPA (December 2020)
Bachelor of Science in Ecology and Evolutionary Biology, *Highest Honors* 4.0 GPA
*Bachelor of Arts in Environmental Studies***,** *Honors* 4.0 GPA

Leadership/Involvement:
Co-Leader: Bren Energy Club 2022-23
Member: UCSC Surf Team 2017-20; SB Soaring Association (2022-pres.)

WORK EXPERIENCE

Data Manager - Masters Group Project (3/23-pres.)
- Spearheaded a multifaceted economic analysis using heterogeneous data sets and cost modeling to inform NOAA management on priority conservation sites and estimated project costs
- Performed extensive spatial analyses in tandem with interactive nested function models to extract cost estimates from large data sets while overseeing a GitHub repository management

Biosecurity Intern – The Nature Conservancy, Santa Barbara, CA (6/23-9-23)
- Led a comprehensive study encompassing fieldwork, report writing, and statistical analysis to address weaknesses in current biosecurity protocols for TNC management while mentoring an undergraduate
- Coded an invasive species occupancy model in R (logit-link function) testing causal effects of treatments on potential invasive species behavior responses using primary, field collected data
- Presented research at the California Islands Symposium and am publishing a first-authored scientific paper

Data Analyst – Yoga Soup, Santa Barbara, CA (9/23-pres.)
- Analyzed and relocated 1,000's of video files in R to reduce company subscription overhead fees

Lab Technician – Sierra Nevada Aquatic Research laboratory, Mammoth Lakes, CA (1/21–6/22)
- Quantified 20+ years of long term acid mining drainage impacts on alpine stream biodiversity to inform US Forest Service on remediation success
- Identified and recorded 100,000's of stream organisms in excel to manage over 20 years of project data

Biologist – Mountain View Biological Consulting, Mammoth Lakes, CA (2/21–10/21)
- Mapped dozens of field sites in GIS, located access points and project perimeters, and communicated project logistics to senior biologists, project managers, and contractors
- Drafted environmental compliance reports for contractors, consultants, and land owners summarizing project description and biological activity within the region of interest (ROI)

Environmental Consultant Assistant – Laguna Geosciences, Laguna Beach, CA (remote seasonal 1/18-6/20)
- Organized and documented project data sets for senior management to ensure clients' needs are met

Education Intern – Santa Cruz Coastal Watershed Council, Santa Cruz, CA (1/20-4/20)
- Taught freshwater science and climate change concepts to 100+ disadvantaged elementary school kids

ACADEMIC EXPERIENCE

Teaching Assistant UCSB (9/22-present)
- *Applied Ecology (*9/23 - 12/23*)* | *Environmental Chemistry* (3/23-6/23) | *Environmental Ethics* (1/23-3/23) | *Infectious Disease Ecology* (9/22-12/22)
- Lecture 4 hour long sections/week, designed lesson plans and held office hours weekly

Carbon Accounting – student (9/22-12/22)

- Managed a group project calculating the total scope 1-3 emissions of McGrath power plant (Oxnard, CA) according to the Greenhouse Gas Protocol and authored a final report
- Collected emissions data across multiple data bases, calculated relevant scope emissions in excel, and presented our findings for a panel of professors, researchers, and industry experts

Research Assistant – Palkovacs Lab UCSC, Santa Cruz, CA (9/2019-12-20)
- Secured $10,000's in research grants to study the link between steelhead trout genotypes and prey selectivity on benthic macroinvertebrate (BMI) communities
- Designed a study measuring the ecological consequences of wildfires across 3 different watersheds in coastal California to inform land management of potential trophic cascades

REU Researcher – University of Puerto Rico, Rio Piedras, PR (6/19-9/19)
- Designed a research project measuring disturbance impacts on diversity of 25+ freshwater meiofauna taxa in proximity to highly developed areas in low income communities
- Collected hundreds of field samples, analyzed samples under the microscope, and reported findings to a committee of freshwater ecologists and Puerto Rican citizens in a research paper

Field Technician – Lyon Lab UCSC, Santa Cruz, CA (9/19-12/20)
- Documented hundreds of sparrow social interactions to provide data on the link between phenotypic hierarchal traits and social dominance within migrating flocks

Intern – Small Mammal Undergraduate Research in the Forest UCSC, Santa Cruz, CA (9/18-12/18)
- Trapped, tagged, and recorded hundreds of coastal California rodents and contributed results to long term metadata on mammal populations
- Worked intensive field days setting up transects, laying traps, and collecting field data in Monterey Bay

Lab Assistant – Kay Lab UCSC , Santa Cruz, CA (9/17-4/18)
- Measured fitness variation of various flowering plants in different toxic soil environments

DATA SKILLS/CERTIFICATES
- **Google Data Analytics** by Coursera (9/2023)
- **Statistical Analysis and Data Management** (R/R-Studio, Git/GitHub, SQL, Excel)
- **Spatial Analysis and Cartography** (R, QGIS)
    - Remote sensing, spatial kriging, mapping
- **Data Visualization** (Tableau, R/shiny app)
- **Machine Learning, Multiple Linear/Logistic Regression Modeling**
- **Carbon Accounting:** Scope emissions calculations, GHG protocol, ISO standards
- **Cost Benefit Analysis (CBA)**

DATA SCIENCE PROJECTS
A Spatial Analysis of Houston Blackouts and the Communities it Affected (9/23–12/15)
Master's Geospatial Analysis and Remote Sensing Project | Skills: R, Git | GitHub repository | Blog
- Utilized remote sensing and spatial data analysis tools to locate communities in Houston that experience blackouts from the February 2021 storms
- Queried large data sets to streamline workflow, performed raster calculations to find blackout regions, and joined tabular census data to spatial objects
- Removed potentially misleading data (lights from roads) to ensure results were unbiased

Applying Supervised Classification Approaches to Landuse Cover (9/23–12/15)
Masters Geospatial and Remote Sensing Project | Skills: R, Git, Machine Learning | Github repository| Blog
- Employed a supervised classification approach (decision tree classifier) of machine learning (ML), leveraging a small training data set, to predict landuse cover in Santa Barbara, CA
- Created a robust model by applying remote sensing imagery from Landsat 5, utilizing 6 spectral resolution bands as inputs, and performed spatial analyses of raster and vector data

Identifying Potential Marine Aquaculture Habitat Along the West Coast (9/23–12/15)
Masters Geospatial and Remote Sensing Project | Skills: R, Git | Github repository | Blog
- Isolated total area of suitable marine aquaculture habitat for oysters along the west coast

- Leveraged spatial subsetting and joins, zonal statistic, and transformation raster and vector data to map exclusive economic zones ranked by suitable habitat
- Created an applicable function that accepts species names, temperature range, and depth range, which creates two maps of total and percent species habitat by EEZ

Drivers of Zooplankton Community Dynamics in Sierra Nevada Lakes (9/23–12/15)
Masters Statistics for Environmental Data Science Project | Skills: R, Git | [Github repository](#) | [Blog](#)

- Exercised multiple linear regression models to identify explanatory variables of community dynamics in over 600+ lakes after checking underlying data for normality and collinearity in independent variables
- Cleaned, joined, and statistically analyzed thousands of observations (6 year's worth of data) through exploratory data analysis and ordinary least squares modeling approaches

HONORS/AWARDS

Bren Academic Excellence Recruitment Fellowship 2022 -24 ($20,000)

Honors Program UCSC

UCSC Deans Honor Roll (All quarters 2017-2020)

NRS Field Science Fellowship 2020 ($6,000)

Future Leaders in Coastal Science Award 2019 ($12,500)

Kathryn D. Sullivan Impact Award 2019 ($7,500)

Norris Center Student Natural History Award 2019 ($1,000)

Richard A. Cooley Award 2019 ($1,000)

Golden Key International Honors Society 2018

The National Society of Collegiate Scholars 2017

HOBBIES

surfing, rock climbing, paragliding, spear fishing, skiing, mountain biking, running, and reading