Raymond Hunter

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EDUCATION

Master of Environmental Science and Management, Emphasis: *Data Science*, 3.9 GPA (June 2024)
Bren School of Environmental Science & Management – University of California, Santa Barbara (UCSB)

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

DATA SKILLS & CERTIFICATES

Data Science and Management: R/R-Studio, Python, Git/GitHub, SQL/BigQuery, Bash, Excel, Google Drive
Remote Sensing & Geospatial Analysis: R (excellent), QGIS (strong), Python and Google Earth Engine (familiar)
Machine Learning: Supervised/unsupervised, regularization, feature engineering, model evaluation, validation
Data Visualization: R/R-Studio, Shiny app/dashboard, Quarto, RMarkown, CSS, HTML, Javascript, Tableau
Carbon Accounting: GHG protocol emissions calculator, ISO standards
Certificate*: Google Data Analytics* by Coursera (9/2023)

EXPERIENCE

Data Manager, Master's Group Project, Santa Barbara, CA (3/23–6/24)
Client: NOAA National Marine Fisheries Service (NMFS)

- Designed and spearheaded extensive geospatial analyses with 180k+ hectares of remotely sensed spatial and tabular data sets to model riparian habitat restoration requirements and generate cost estimates
- Leveraged zonal statistics, spatial subsets/joins, and raster/vector transformations with overlayed indigenous demographics to identify keys ecologically unique areas for recommended restoration
- Developed a user friendly and interactive Shiny dashboard (HTML and CSS) to visually present results and facilitate clear communication of key findings to NOAA restoration management and other stakeholders

Biosecurity Data Scientist Intern – The Nature Conservancy (TNC), Santa Barbara, CA (6/23-9/23)

- Led a comprehensive study including statistical analysis/modeling, GIS, report writing, fieldwork, and publication to address biosecurity weaknesses in the Channel Islands while mentoring an undergraduate
- Coded logistic regression models with environmental covariates measured using GIS to predict behavioral responses; performed model evaluations and feature engineering to optimize model performance
- Presented findings at the California Islands Symposium (publishing a first-authored scientific paper)

Data Analyst – Yoga Soup, Santa Barbara, CA (9/23-pres.)

- Programmed and executed a data management plan to distribute and archive terabytes of company data
- Coded automated reproducible pipelines in R to perform identification and relocation of sensitive data

Carbon Accounting – graduate coursework (9/22-12/22)

- 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
- Calculated carbon footprint (scope 1-3 emissions) of McGrath power plant (Oxnard, CA) in accordance with the GHG protocol and utilizing its emissions calculator tool

Biologist – Mountain View Biological Consulting, Mammoth Lakes, CA (2/21–6/22)

- Drafted environmental compliance reports for contractors, consultants, and project managers summarizing project description and biological activity within the region of interest
- Mapped dozens of field sites in QGIS, located access points and project perimeters

ADDITIONAL DATA SCIENCE PROJECT EXPERIENCE

Applying Supervised ML Classification Approaches to Landuse Cover (9/23–12/23)
Master's Geospatial and Remote Sensing Project | Skills: R, Git, Machine Learning | GitHub repository| Blog

- Trained a robust supervised ML decision tree classification model utilizing 6 spectral resolution bands of LandSat5 imagery to predict 100,000s of acres of landuse cover in Santa Barbara, CA

A Spatial Analysis of Houston Blackouts and the Communities it Affected (9/23–12/23)
Master's Geospatial Analysis and Remote Sensing Project | Skills: R, Git, Spatial | GitHub repository | Blog

- Utilized remote sensing and spatial data analysis techniques to seamlessly identify 1,000's of homes and their demographic information in Houston that experience blackouts from the February 2021 storms
- Queried large data sets using SQL to streamline workflow and minimize computational expenses

Identifying Potential Marine Aquaculture Habitat Along the West Coast (9/23–12/23)
Master's Geospatial and Remote Sensing Project | Skills: R, Git, Spatial | GitHub repository | Blog

- Leveraged spatial joins/subsetting, zonal statistics, and transformation of raster/vector data to map exclusive economic zones ranked by suitable habitat of varying marine organisms
- Programmed an automated pipeline that produces maps of species habitat with minimal function inputs

ADDITIONAL ENVIRONMENTAL EXPERIENCE

Teaching Assistant UCSB (9/22-6/24)
Taught 350+ students | *Environmental Chemistry* | *Ecology* | *Environmental Ethics* | *Infectious Disease Ecology*
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
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

RELEVANT COURSEWORK

Data Science I, II, & III, – GIS – Spatial Analysis & Remote Sensing – Machine Learning – Advanced Data Visualization – Carbon Accounting – Earth System Science

HONORS/AWARDS/GRANTS

Bren Academic Excellence Recruitment Fellowship (2022-24) | NRS Field Science Fellowship (2020) | Future Leaders in Coastal Science Award (2019) | Kathryn D. Sullivan Impact Award (2019) | Norris Center Student Natural History Award (2019) | Richard A. Cooley Award (2019) | The National Society of Collegiate Scholars 2017

SYMPOSIUMS

Presenter - California Islands Symposium (11/23)
Panelist - Point Conception Institute Symposium (3/24)