**KATE A. BECKER**

katebecker06@gmail.com | (+61) 400 627 856 | [Portfolio](https://kateebeckerr.github.io) | [GitHub](https://github.com/kateebeckerr) | [LinkedIn](https://www.linkedin.com/in/kate-becker-b3163a193/) | \*Temporarily located in Brisbane, Australia

**EDUCATION**

**Master of Environmental Data Science** (June 2024)

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

Highlighted Coursework: Machine Learning, Data Visualization, Geospatial Analysis and Remote Sensing, Scientific Programming, Analytical Workflows, and Scientific Reproducibility, Statistical Modelling, Sentiment Analysis, Environmental Policy Evaluation

**Bachelor of Science in Environmental Studies** (June 2023)

**University of California, Santa Barbara** (UCSB)

Concentrations: Environmental Policy, Sustainability, Climate Change, and Conservation

International Academic Field Studies Program: Wildlands Studies Hawaii,Big Island, Hawaii (3/21–5/21); Focus on marine and terrestrial field research as well as indigenous marine management and food systems

**MASTER’S CAPSTONE PROJECT**

**Improving Access to Consumption Advisories and Maintaining Confidence in California’s Seafood Products** (1/24–6/24)

**Role**: Product Leader | **Clients**: Scripps Institute of Oceanography, California Cooperative Oceanic Fisheries Investigations (CalCOFI) | **Deliverables**: Interactive Web Application, Shiny Dashboard Github Repository, User Manual, and Technical Guide | [**Repository**](https://github.com/SaferSeafood) | [**Blog**](https://bren.ucsb.edu/projects/improving-access-fish-consumption-advisories-and-maintaining-confidence-californias)

* Executed the development and deployment of [SaferSeafood](https://shiny.calcofi.io/SaferSeafood/), an interactive, data-driven, public-facing web application that estimates DDT levels in seafood catches and provides consumption advisories based on species and location of capture
* Developed a spatiotemporal statistical model to predict DDT concentrations in fishes across Southern California
* Invited to attend the Southern California Oceanic Observing Systems Conference (SCOOS) in San Diego

**RESEARCH EXPERIENCE**

**Senior Research Assistant**

**Centre for Biodiversity and Conservation Science, University of Queensland,** Brisbane, Australia (1/13–Present)

* **Designing** a global endangered species database using **policy evaluation, R, SQL**, and **web scraping** for both academic and non-academic applications
* **Implementing** advanced **statistical modeling, data cleaning, machine learning, version control,** and**data visualization**toanalyze**fisheries bycatch patterns**inlarge-scaleglobaldatasets for the Ocean Conservation Team
* **Collaborating** with industry partners to **interpret results** and **identify strategies** for promoting **environmentally efficient** fishing practices unique to each fishery
* **Co-authoring** research publications and **resolving** computer science challenges alongside a multidisciplinary team
* **Presenting** on current research and future development plans at the **International Congress for Conservation Biology**
* Securing a small grant to host a workshop, bringing together intergovernmental, governmental, academic, and non-academic research stakeholders to improve database accessibility, usability, and data validation

**Undergraduate Researcher**

**Eliason Lab** **– UCSB,** Santa Barbara**,** CA(3/22–6/23)

* Investigated thermal tolerance of fishes under fluctuating temperatures and varying diet quality using cardiovascular performance as a metric
* Performed fish husbandry for approximately 130 *Fundulus parvipinnis and Girella nigricans* in a wet lab over six months
* Aided in data collection for copper toxicity tolerance research in *Mytilus galloprovincialis*

**Summer Intern**

**Eliason Lab** - **UCSB**, Santa Barbara, CA(5/22–8/22)

* Designed the investigation of parasite load, *Euhaplorchis californiensis*, in the brain regions of California killifish, *Fundulus parvipinnis*, as it pertains to thermal tolerance
* Awarded UCSB Coastal Fund ($5,000)

**ADDITIONAL EXPERIENCE**

**Fine Dining Waitress, The Kitchen American Bistro,** Boulder, CO (7/24–11/24)

* Upheld the restaurant’s mission, established by Kimbal Musk, to provide an exceptional and personalized dining experience
* Served elevated international dishes and cocktails with knowledge of menu items, flavor profiles, pairing options, and allergens
* Provided attentive service across brunch, lunch, and dinner shifts while taking on additional responsibilities such as food running, restocking, bussing, hostessing, and ensuring sanitation standards

**Fine Dining Waitress, The Ritz-Carlton Bacara,** Santa Barbara, CA(6/21–1/22)

* Served food and beverages to a variety of high-profile guests for an average of 40 hours a week while receiving bachelor’s degree
* Memorized hotel guest profiles, daily specials, seasonal cocktail list, and regular menu, including possible allergens
* Performed extra work as needed such as food running, barista, restocking, cleaning, and private event staff

**Boutique Sales Associate, Stella E Luna Boutique,** Point Pleasant, NJ(5/19–10/19)

Strengthened upscale boutique by managing and processing sales, social media marketing, and customer satisfaction

**Food Service,** **Shore Fresh Seafood Restaurant & Market**, Point Pleasant, NJ (6/18–10/18)

Provided food and beverage service to an average of seven tables at once while coordinating seafood market

**SKILLS, CERTIFICATION, & ADDITIONAL EDUCATION**

**Technical:** Spatial Mapping in ArcGIS, Statistical Analysis and Data Visualization in R Studio, UX Design, Python, Machine Learning, Google Workspace, Scientific Writing, R, Python, SQL, Git, (Basic) Command Line, Microsoft Office (Word, Excel, PowerPoint), Java, HTML, and CSS

**Research Qualifications:** IACUC Training (Fish), CITI Wildlife Research, CITI Working with Fish in Research Settings

**Certification:** PADI Open Water Diver

**Additional Education: University of Queensland,** **Australia** **UCEAP Study Abroad Program** (Winter 2021 and Spring 2021); Accepted twice into competitive academic program but canceled due to COVID-19; Marine Biology and Terrestrial Ecology courses while working in conjunction with the Heron Island Research Station

**Writing, Research, and Presentation:** Report writing, literature review, policy memos, and public presentations

**PROJECTS**

Phenology Investigation

**Master’s Geospatial Analysis and Remote Sensing Course Project**

Employed Landsat satellite imagery to analyze vegetation indices

Created a custom NDVI (Normalized Difference Vegetation Index) function

Manipulated raster data to ensure spatial alignment and consistency

**Link to repository**:<https://github.com/kateebeckerr/Phenology_Investigation.git>

Remote Sensing Land Cover

**Master’s Geospatial Analysis and Remote Sensing Course Project**

Converted Landsat values to reflectance values

Utilized the terra package in R for spatial data processing and wrangling

Implemented true color imagery

Developed and applied a decision tree classifier

**Link to repository**: <https://github.com/kateebeckerr/RemoteSensing_Landcover.git>

Redlining Injustices

**Master’s Geospatial Analysis and Remote Sensing Course Project**

Employed EJSCREEN data to assess environmental justice indicators

Mapped and visualized spatial data using geospatial tools

Wrangled geometries and integrated EPA data with Landsat 8 satellite imagery

**Link to repository**: <https://github.com/kateebeckerr/Redlining_Injustices.git>

Santa Barbara Thomas Fire

**Master’s Geospatial Working with Environmental Datasets Course Project**

Processed raster datasets for analysis and classification

Utilized NumPy in Python for data manipulation and numerical operations

Constructed true and false color imagery

` **Link to repository:** [**https://github.com/kateebeckerr/ThomasFire\_Analysis**](https://github.com/kateebeckerr/ThomasFire_Analysis)

Flexible, depending on role