SAMANTHA R CSIK

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OVERVIEW --

As Data Training Coordinator at the National Center for Ecological Analysis & Synthesis, located at UC Santa Barbara, I work to develop and teach data science workshops and lectures for students and researchers of all experience levels. I have six years of teaching experience, and I am always looking for new ways to create a more exciting, inclusive and supportive learning environment -- whether that be in the classroom, or as acting co-organizer of R-Ladies Santa Barbara. I am a passionate supporter of open data science learning opportunities. I do so by publishing all of my educational materials on GitHub and by sharing them with data science communities beyond UCSB, through invited talks and on social media platforms.

EDUCATION --

2020   **M.S. in Ecology, Evolution & Marine Biology (EEMB)**
                University of California, Santa Barbara (UCSB)

2016   **B.S. in Marine Biology, *magna cum laude***
                Northeastern University (NEU) & Three Seas Program (2013-2014)

PROFESSIONAL DATA SCIENCE EXPERIENCE ---------------------

Aug 2021 - present   **Data Training Coordinator**
                     National Center for Ecological Analysis & Synthesis (NCEAS)

                     > Developing & teaching data science and professional development workshops for the Master of Environmental Data Science (MEDS) program and data science initiatives across NCEAS and UCSB.
                     > Support curriculum cohesion across MEDS courses by observing and contributing to course materials, as well as acting as a liaison between students and instructors
                     > Coordinating with MEDS program staff to support recruitment, career development, and student needs

| Jan - Aug 2021 | **Data Science Fellow (extension of previous role)**
National Center for Ecological Analysis & Synthesis (NCEAS)

> Engineered a knowledge model of salmon-related ideas & concepts to improve salmon data discoverability within the [KNB data repository](#) |

| Aug 2020
- Jan 2021 | **Data Science Fellow**
National Center for Ecological Analysis & Synthesis (NCEAS)

> Improved the number and quality of semantically-described datasets within the [Arctic Data Center (ADC) data repository](#) by (a) expanding and developing ontologies to accurately describe ADC data and (b) semantically annotating 1100+ datasets

> Wrote scripts & developed pipelines in R to facilitate batch updates of ADC metadata records with semantic annotations |

TALKS, WORKSHOPS & DATA SCIENCE EDUCATION CONTRIBUTIONS ---

All workshops & talks were developed and led by Samantha Csik, unless otherwise noted

| Jan 2023 | **EDS 430 - Intro to Shiny** ([course description](#) & [slides](#))
Master of Environmental Data Science program

A 1-unit, 2-day live-coding workshop on the fundamentals of building Shiny applications and dashboards |

| Oct 2022 | **Data Analysis & Visualization in R (for Ecologists)** ([materials](#)) [helper]
DREAM Lab/Carpentries

A two-day live-coding workshop on data analysis & visualization for new R users |

| Oct 2022 | **Adding a blog to your existing Quarto website** ([blog post](#))
Master of Environmental Data Science program

A discussion about the values of data science blogging and technical instruction on how to create one |

| Oct 2022 | **Customizing Quarto Websites** ([slides](#)) |

Master of Environmental Data Science program

An intro to Sass & CSS for customizing Quarto websites.

Sep 2022 **Scalable and Computational Reproducible Approaches to Arctic Research** ([book](#)) [co-developed & co-taught]
NSF Arctic Data Center

A 5-day workshop providing researchers with an intro to advanced topics in computationally reproducible research in python, including software techniques for working with very large datasets.

Aug 2022 **Creating your personal website using Quarto** ([materials](#))
Master of Environmental Data Science program

Step-by-step instructions for building, deploying, and customizing a Quarto website

Jun 2022 **Hello Quarto!** ([recording](#) & [blog post](#)) [moderator]
R-Ladies Santa Barbara & Openscapes

A discussion with NASA Openscapes and Posit (formally known as RStudio) developers about using Quarto to enable collaborative, data-intensive, open science in the cloud

Jun 2022 **Filling a training gap in environmental workplaces - The emergence of environmental science degree programs & lessons learned from running one** ([slides](#)) [co-presented with Dr. Allison Horst]
The Statistical Society of Canada

An invited talk for the "Environmental Data Science Growth & Opportunities" session

May 2022 **Demystifying the Technical Interview** ([slides](#))
Master of Environmental Data Science program

A discussion about the different types of technical interviews environmental data scientists may encounter, followed by some fun practice with peers

Apr 2022 **An Intro to Cloud Computing** ([slides](#))
Master of Environmental Data Science program

CV last updated February 9, 2023

An interactive workshop on how to launch an Amazon EC2 instance

Feb 2022   **An Intro to Shiny** ([slides](#))
Master of Environmental Data Science program

A hands-on coding workshop on how to build and customize an R shiny application

Feb 2022   **Relational Databases & SQL** ([materials](#)) [assistant instructor]
Master of Environmental Data Science program, led by the Carpentries

An introduction to the basics of SQL for data management and accessing databases from R

Jan 2022   **Programming with Python & an Intro to Web Scraping** ([materials](#)) [assistant instructor]
Master of Environmental Data Science program, led by the Carpentries

An introduction to programming with Python that covers data wrangling with Pandas, writing loops and functions, data visualization with plotnine, and web scraping with Pandas

Dec 2021   **Data Science with R & Python** ([materials](#)) [co-developed & co-led]
R-Ladies Santa Barbara x Central Coast Python

An R to Python (and vice versa) translation workshop in collaboration with Central Coast Python

Dec 2021   **Data Science Learning Communities - R-Ladies Santa Barbara** ([recording](#))
UC Santa Barbara Data Science Summit

The [Data Science Summit at UCSB](#) was the first gathering of data scientist practitioners, researchers, and educators from all departments across campus, with an overarching goal of creating a more cohesive, collaborative, and inclusive data science community. Here, I presented an invited flash talk to introduce the Santa Barbara chapter of R-Ladies to this broader UCSB data science community.

Nov 2021   **Reproducible Research Techniques for Synthesis** ([materials](#)) [assistant

instructor]
Learning Hub @ the National Center for Ecological Analysis & Synthesis

A 5-day long workshop on fundamental data science skills to improve reproducible research techniques, particularly for the purposes of synthesis science. This course is taught primarily in R and is open to researchers across career stages and sectors.

2021, 2022   **RStudio Tips & Tricks** ([slides](#))
Master of Environmental Data Science program

A talk on the RStudio IDE tips & tricks and other keyboard shortcuts

2021, 2022   **Teach Me How to Google** ([slides](#))
Master of Environmental Data Science program*

A talk on how to troubleshoot code and Google for helpful answers

*Invited talks given to the following groups (tailored slides [here](#)):
> Environmental Studies Program, UCSB | Nov 2022
> StatLab @ the Brown School, Washington University in St Louis |
    Mar 2022 ([recording](#))
> R-Ladies, Saint Louis | Feb 2022
> Master of Technology Management, UCSB | Jan 2022

Oct 2021   **Using Semantic Tools to Improve Data Discoverability** ([slides](#))
Master of Environmental Data Science program

Guest lecture for the Metadata Standards, Data Modeling & Data Semantics course (EDS 213) on applied examples of using semantic tools, like ontologies, to improve data discoverability and reusability

Sept 2021   **Writing Data Science-related Blog Posts** ([slides](#) & [blog post](#))
Master of Environmental Data Science program

A workshop on the value of blogging and how to create & customize posts using the {[distill](#)} package in R

Aug 2021   **Customizing Your Personal Website with CSS** ([slides](#))
Master of Environmental Data Science program

A brief intro to using CSS to customize {distill} websites

Mar 2021	**Data Viz with {ggplot2}** ([materials](#)) [co-developed & co-taught] R-Ladies Santa Barbara *A live-coding workshop on making data visualizations with the {ggplot2} package in R*
Mar 2021	**It's ~~just~~ ALL about semantics** ([slides](#)) Santa Barbara Women in STEM *A lightning talk on how semantic tools can make finding data easier and impactful synthesis science faster*
May 2019	**An Intro to the {tidyverse}** ([materials](#)) [co-developed & co-taught] R-Ladies Santa Barbara *A code-along workshop to learn data wrangling & visualization techniques using {tidyverse} functions in R*

Professional Committees --

Sep 2022 - present	**PLO Assessment Development Committee** Bren School of Environmental Science & Management *A committee tasked with developing and administering the first of five Program Learning Outcome Assessments for the MEDS program during the 2023-2025 academic years, as required of all degree-granting programs at UCSB*
Aug 2021 - present	**MEDS Curriculum Cohesion Committee** Bren School of Environmental Science & Management *A committee comprising MEDS faculty & lecturers, the MEDS Program Coordinator, and Data Training Coordinator, which meets monthly to discuss, plan for, and ensure cohesion among core MEDS courses*
Aug 2021 - present	**NCEAS / MEDS Integration Committee** NCEAS & Master of Environmental Data Science program *A committee comprising MEDS coordinators & NCEAS leadership to brainstorm and implement ways to integrate both communities*

Projects --

Feb 2023   **Refactoring & Maintaining the Bren Student Data Explorer** ([dashboard](#)
                & [code](#))
                Bren School of Environmental Science & Management

                Refactored the code base and updated data for Bren's interactive data
                explorer, which was built to visualize admissions and career outcome
                data of current students and recent graduates

Dec 2022   **Sam's Strava Stats** ([dashboard](#) & [code](#))
 (ongoing)   A personal side project

                A shiny dashboard for visualizing my personal Strava data

SERVICE & COMMUNITY CONTRIBUTIONS -------------------------

Communities ....

Feb 2022   **The Carpentries**
 - present   Certified Instructor

                The Carpentries teaches foundational coding and data science skills to
                researchers worldwide.

Oct 2021   **NCEAS Diversity Team**
 - present   Member

                I sit on a subcommittee that is working specifically to find ways that we
                can provide training opportunities to individuals from under-represented
                groups in ecology and data science.

Apr 2020   **R-Ladies Santa Barbara**
 - present   Co-Organizer (member since 2018)

                R-Ladies is a global organization working to promote gender diversity in
                the R community. As co-organizer of the Santa Barbara chapter, I
                facilitate meetup events by inviting speakers, moderating discussions,
                and developing and teaching workshops

Events ....

Jun 6-10 2022   **Curator for [@WeAreRLadies](#) Twitter account** ([see list of tweets here](#))
R-Ladies Global

Nominated by [Shannon Pileggi](#) to act as rotating curator for the official Twitter account for [R-Ladies Global](#). Tweeted original content about R packages, resources, and projects, as well as amplified the voices of those in both my immediate and broader R communities.

Apr 12 2022   **STEM Career Panelist**
Partners in Education

One of four panelists speaking about STEM careers to 200+ 7th-12th grade students across Santa Barbara County's public school system

Jan 2022,   **Hack$_2$O Organizer**
Nov 2022   Master of Environmental Data Science program & Environmental Studies Department, UC Santa Barbara

Co-organized a half-day collaborative hackathon, pairing Master of Environmental Data Science (MEDS) students with undergraduate Environmental Science students to wrangle and visualize FAO Aquastat and USGS Water Resource data. The event also includes a panel discussion with MEDS students, and MEDS capstone project lightning talks.

ADDITIONAL TEACHING & MENTORSHIP EXPERIENCE ------------

Mentorship ....

Summer 2022   **Halina Do-Linh,** R Shiny Developer Fellow ([Bren Student Data Explorer](#))
The Bren School, UC Santa Barbara

Summer 2019   **Kylie Van De Wyngaerd,** Santa Barbara Coastal LTER REU Fellow
Department of Ecology, Evolution & Marine Biology, UC Santa Barbara

| Summer 2019 | **Maggie Slein,** Ocean Global Change Biology REU Fellow |
| | Department of Ecology, Evolution & Marine Biology, UC Santa Barbara |

| Winter 2019 | **Vincent Han Lee,** Undergraduate Volunteer |
| | Department of Ecology, Evolution & Marine Biology, UC Santa Barbara |

| Summer 2018 | **Gabbie Baillargeon,** Ocean Global Change Biology REU Fellow |
| | Department of Ecology, Evolution & Marine Biology, UC Santa Barbara |

| 2017 - 2018 | **Anna Zhou,** Undergraduate Mentee |
| | Women in Science & Engineering (WiSE), UC Santa Barbara |

Teaching ....

| 2017 - 2020 | **Teaching Assistant** |
| | UC Santa Barbara |

Developed curricula and taught lab sections for the following undergraduate courses:
> Biology of Fishes
> Conservation, Management, & Food Production in Aquatic Systems
> Behavioral Ecology
> Intro to Ecology
> Intro to Biology

| Spring 2016 | **Teaching Assistant** |
| | Northeastern University |

Taught lab sections for the General Biology undergraduate course

| Spring 2015 | **Lab & Diving Operations Organizer** |
| | Northeastern University's Three Seas Program |

Facilitated diving and lab activities for Three Seas courses based in Bocas del Toro, Panama and Friday Harbor, Washington for 25 undergraduate and master's students

PUBLICATIONS --

Peer Reviewed ....

Csik SR, DiFiore, BP, Kraskura K, Hardison EA, Curtis JS, Eliason EJ, Stier AC. (2023) The metabolic underpinnings of temperature-dependent predation in a key marine predator. *Frontiers in Marine Science.* https://doi.org/10.3389/fmars.2023.1072807

Gaynor K, Azevedo T, Boyajian C, Brun J, Budden A, **Csik S**, Decesaro J, Do-Linh H, Dudney J, Galaz Garcia, C, Leonard S, Lyon N, Marks A, Parish J, Vargas Poulsen C, Ranganathan J, Scarborough C, Smith J, Thomson M, Fong, CR. (2022) Ten simple rules to cultivate belonging in collaborative data science research teams. *PLOS Computational Biology.* https://doi.org/10.1371/journal.pcbi.1010567

Ingeman KE, Zhao LZ, Wolf C, Williams DR, Ritger AL, Ripple WJ, Kopecky KL, Dillon EM, DiFiore BP, Curtis JS, **Csik SR**, Bui A, Stier AC (2022). Glimmers of hope in large carnivore recovery. *Scientific Reports.* https://doi.org/10.1038/s41598-022-13671-7

Jerde CL, Kraskura K, Eliason EJ, **Csik SR**, Stier AC, Taper ML (2019). Strong evidence for an intraspecific metabolic scaling coefficient near 0.89 in fish. *Frontiers in Physiology.* 10, https://doi.org/10.3389/fphys.2019.01166

Thesis ....

Csik SR (2020) The effects of temperature on the metabolism and foraging ecology of the California spiny lobster (*Panulirus interruptus*). M.A. Thesis. The University of California, Santa Barbara. Santa Barbara, California, U.S.A. Available at https://escholarship.org/uc/item/3425x51f

Ontologies ....

Csik SR & Schildhauer MP (2020). The Arctic Report Card Ontology (ARCRC). BioPortal. https://bioportal.bioontology.org/ontologies/ARCRC/?p=summary

PROFESSIONAL ORGANIZATIONS ----------------------------------

> **R-Ladies Global** - a world-wide organization whose mission is to promote gender diversity in the R community

> [Santa Barbara Women in STEM](#) - a local network of professionals with a common goal to promote and encourage women in fields related to science, technology, engineering, and math

PROFESSIONAL DEVELOPMENT --------------------------------------

Nov 2019 - present	**NCEAS Data Science Chats** Participant *Weekly meetings with early career data scientists at NCEAS to learn & practice new tools and workflows* [[Github repo](#)]
Nov 2019	**SoCal All Hands useR Meeting** Participant
Jun - Sep 2019	**Python Software Carpentry Workshop, UC Santa Barbara** Participant
Jan 2019	**Git & R Software Carpentry Workshop, UC Santa Barbara** Participant
2019, 2020	**Respirometry Workshop for Government Scientists, Stakeholders & Academics, UC Santa Barbara** Participant & Presenter
2018-2019	[**Tidy Tuesday Coding Club**](#), **UC Santa Barbara** Participant

SKILLS & TOOLS ---

Languages & Environments: R + RStudio (proficient), Python + JupyterLab & VS Code (intermediate), bash (proficient)

Workflows & Collaboration Tools: git + GitHub, project-oriented workflows (e.g. R projects), RMarkdown, Quarto, Google Suite, Slack