

# 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 trainings 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 support open data science learning opportunities by publishing all of my educational materials on GitHub.

## 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.
- 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*

- |            |  |
|------------|--|
| June 2022  | <p><b>Hello Quarto!</b> (<a href="#">recording</a> &amp; <a href="#">blog post</a>) [moderator]<br/> R-Ladies Santa Barbara &amp; Openscapes</p> <p><i>A discussion with NASA Openscapes and RStudio developers about using Quarto to enable collaborative, data-intensive, open science in the cloud</i></p>  |
| June 2022  | <p><b>Filling a training gap in environmental workplaces - The emergence of environmental science degree programs &amp; lessons learned from running one</b> (<a href="#">slides</a>) [co-presented with Dr. Allison Horst]<br/> The Statistical Society of Canada</p> <p><i>An invited talk for the “Environmental Data Science Growth &amp; Opportunities” session</i></p> |
| May 2022   | <p><b>Demystifying the Technical Interview</b> (<a href="#">slides</a>)<br/> Master of Environmental Data Science program</p> <p><i>A discussion about the different types of technical interviews environmental data scientists may encounter, followed by some fun practice with peers</i></p>   |
| April 2022 | <p><b>An Intro to Cloud Computing</b> (<a href="#">slides</a>)<br/> Master of Environmental Data Science program</p> <p><i>An interactive workshop on how to launch an Amazon EC2 instance</i></p>   |

- 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 ([slides](#))**  
UC Santa Barbara Data Science Summit  
*The Data Science Summit 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.*

- Nov 2021      **RStudio Tips & Tricks** ([slides](#))  
Master of Environmental Data Science program  
*A talk on the RStudio IDE tips & tricks and other keyboard shortcuts*
- Oct 2021      **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:  
> StatLab @ the Brown School, University of Washington in St Louis |  
Mar 2022 ([recording](#))  
> R-Ladies, Saint Louis | Feb 2022  
> Master of Technology Management, UCSB | Jan 2022
- 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*
- Aug 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*
- 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*

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

### Mentorship .....

- Summer 2022      **Halina Do-Linh**, R Shiny Developer Fellow  
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*

## 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 25 2022

**Hack<sub>2</sub>O Organizer**

Master of Environmental Data Science program x Environmental Science 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 Data. The event also included a panel discussion with MEDS students, and MEDS capstone project lightning talks.*

## PUBLICATIONS -----

### Peer Reviewed .....

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 (**in review**) Ten simple rules to cultivate

belonging in collaborative data science research teams. *PLOS Computational Biology*.

Montgomery J, **Csik S**, Horst A (**in review**) Filling a training gap in environmental data science: academic programs respond to workplace needs. *Environmetrics*.

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> (in press)

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                      **SoCal All Hands useR Meeting**



	Participant
Jun - Sep 2019	<b>Python Software Carpentry Workshop, UC Santa Barbara</b> Participant
Jan 2019	<b>Git &amp; R Software Carpentry Workshop, UC Santa Barbara</b> Participant
2019, 2020	<b>Respirometry Workshop for Government Scientists, Stakeholders &amp; Academics, UC Santa Barbara</b> Participant & Presenter
2018-2019	<a href="#"><u>Tidy Tuesday Coding Club</u></a> , UC Santa Barbara Participant

## SKILLS & TOOLS -----

**Languages & Environments:** R + RStudio, Python + JupyterLab & VS Code, bash

**Workflows & Collaboration Tools:** git + GitHub, R projects, RMarkdown, Quarto, Google Suite, Slack