EDS 430 - Intro to Shiny
(Workshops in Environmental Data Science)

About the course:

EDS 430 - Intro to Shiny is a 1-unit, 2-day, hands-on coding workshop offered in winter 2024 through the Bren School of Environmental Science & Management, in partnership with the National Center for Ecological Analysis & Synthesis (NCEAS).

In this workshop, students will learn how to build and deploy Shiny applications. The `{shiny}` package provides a framework that allows R users to build interactive web applications and dashboards, and has become a popular tool for sharing data analyses and data-derived outputs with broad audiences. In this two-part short course, students will learn the fundamentals of reactivity and building functioning apps, how to customize an application user interface (UI), best practices and workflows for developing shiny apps, how to deploy their apps online via RStudio's hosting service, shinyapps.io, and more.

While the primary focus during in-person instruction time is learning the fundamentals of building shiny apps and gaining confidence in doing so, workshop slides (which are openly available for anyone to access here) include detailed instruction and examples to get attendees started on the following:

- **high-level overview of Shiny** (what is it, anatomy of an app, where to find examples)
- **building shiny apps & dashboards** (setting up and organizing code repositories, writing apps/dashboards, deploying/redeploying apps using shinyapps.io (and other app deployment considerations)
- **beautifying user interfaces** (creating custom themes using available packages, styling apps using Sass & CSS)
- **improving your app's user experience** (important UX considerations, improving web accessibility)
- **debugging & testing** (approaches & available tools)
- **streamlining code** (writing functions & modules)
- **wrap up** (alternatives to building shiny apps, words of wisdom, additional resources to explore)

Materials:

All materials are available on the course website and are meant to be a stand-alone resource for those who were unable to attend the workshop, but would like to follow along / self-learn. The workshop walks through building a number of shiny apps and dashboards -- find complete versions of each in this GitHub repository.

About the instructor:

Sam Csik is the Data Training Coordinator at the NCEAS, where she works to develop and teach data science workshops for the Master of Environmental Data Science (MEDS) program and other data science initiatives across NCEAS / UCSB. She's been an avid R-user since 2018 and firmly believes that the best way to learn is to lean into the many awesome and supportive R communities (those here at UCSB and / or in Santa Barbara, those online, and those beyond). In her spare time, she's a co-organizer of R-Ladies Santa Barbara, a local data science group that works to promote diversity in the data science community.