

# Pedagogy of working with [climate] 'big' data using RStudio

## 1. Getting set up

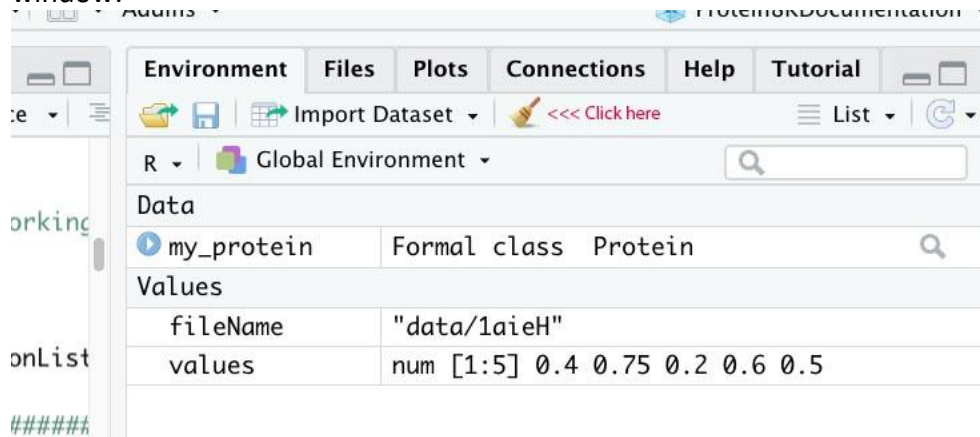
We will spend the first 15 mins getting set up and oriented before we start.

Use Chat for questions.

If you are working in RStudio Cloud . . .

1. Log into your RStudio Cloud account

- <https://rstudio.cloud/>
- Clean up from yesterday to give you lots of space! Click on the mop icon in the Environment window.



2. Add a New Space (on left menu) and name it whatever you want
3. In this space, go to New Project blue dropdown button (on right).
  - On the dropdown menu, select
  - New Project from Github
  - Enter this url <https://github.com/oreillycm/EDDIE-CO2.git>
  - The project will deploy . . .
4. Open the script and run the code to install the libraries and packages
  - In the lower left, open the scripts folder, and then open the eddie\_climate\_change\_script.R file
  - Highlight the first set of code and hit the 'Run' button
  - Highlight the second set of code and hit the 'Run' button
5. Open the Jam board (Google platform) which we will use later on
  - <https://jamboard.google.com/d/1gstR6ntxPkNBtghvU4NA8HUD09-hDBa13zeT7llk/edit?usp=sharing>

If you are working in RStudio on your own computer . . .

1. Go to github, <https://github.com/oreillycm/EDDIE-CO2.git>
  - On the green Code button, download the zipped file.
  - Open the zipped file on your computer.
  - In that new folder, open the file EDDIE\_ASMB.Rproj (it is not in any of the subfolders), which will open into RStudio.
2. Open the script and run the code to install the libraries and packages

- In the lower left, open the scripts folder, and then open the eddie\_climate\_change\_script.R file
  - Highlight the first set of code and hit the 'Run' button
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Reminder of the overarching questions for the Climate Change Activity

1. How different are current rates of change from what we have seen happen in in prehistoric time?
2. What does this suggest about whether human activity is contributing to current climate change?

## B. Activity answers

We will be using a Jam Board to post answers to the different parts of the activity. Jam boards are a link-based google platform, no login required.

1. Link: <https://jamboard.google.com/d/1gstR6ntxPkNBtghvU4NA8HUD09-hDBa13zeT7llk/edit?usp=sharing>
2. You share your answers by using the sticky notes tool on the left menu. (It's ok to put your sticky note on top of someone else's if we run out of space!)
3. Places to post:
  - a. Your answer to Part A
  - b. Your answer to Part C
  - c. Your answer to the overarching questions

## C. Discussion responses

We will be using a Jam Board to post responses to the different discussion questions. Jam boards are a link-based google platform, no login required.

1. Link: <https://jamboard.google.com/d/1gstR6ntxPkNBtghvU4NA8HUD09-hDBa13zeT7llk/edit?usp=sharing>
2. You share discussion responses by using the sticky notes tool on the left menu.

### Questions for discussion

When looking at these questions, you can also reframe them as 'what might happen if we didn't do that?' to help think about the alternatives.

1. What is the value of having an overarching question?
2. What is gained by sharing answers for Part A, the first activity?
3. What is the value in allowing students to choose the path of analysis later in the activity?
4. Since students are making different choices about what data to use to explore, they will end up with different answers from each other. What do the students learn when they see these different answers?

5. Why is it important that the students determine an answer themselves, compared to you just giving them the answer to work with?
6. How does answering an overarching questions help them develop quantitative reasoning?

Reminder – the three parts of quantitative reasoning are:

1. quantitative skills – calculating a number
2. quantitative literacy – using a number to support an argument
3. disciplinary context/relevancy