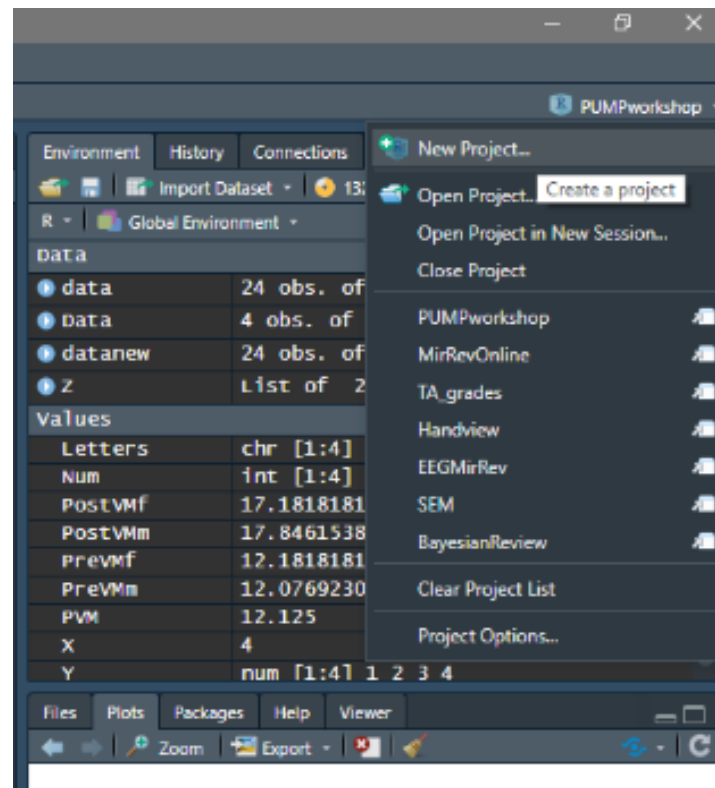PUMP: Coding in R (Introduction to the Basics)

March 10, 2022, 6:00 PM EST
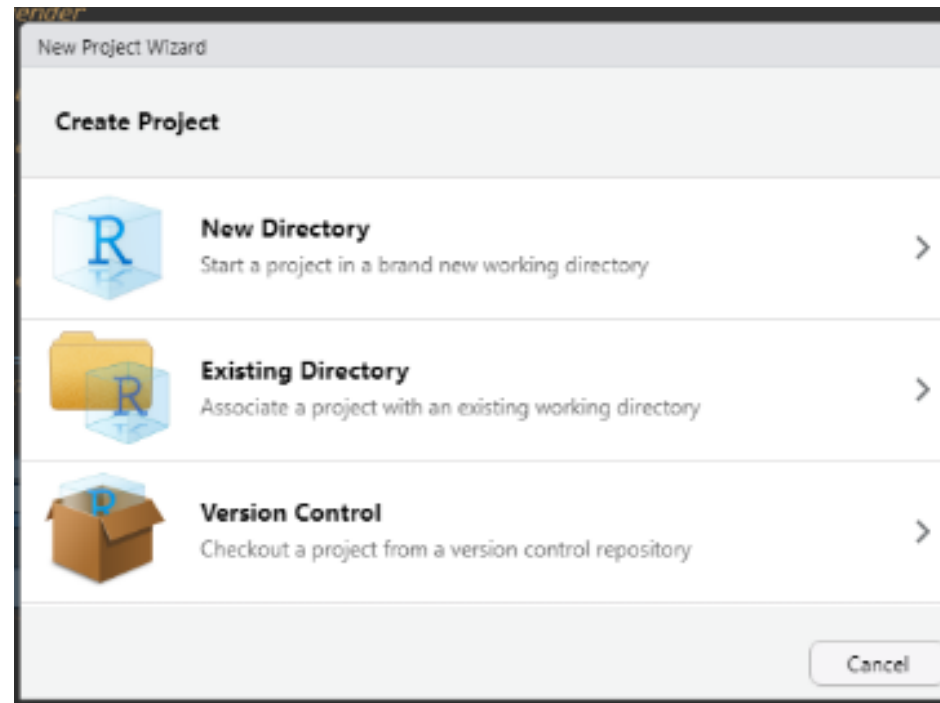
Before attending the workshop

- To get the most out of the workshop and to be able to follow along with the discussion, you would need to have R and RStudio installed in your computer. Note that the presenters will not discuss how to download both software.
    - R and RStudio are two different things. R is the software that allows for all code that we will be running to actually happen. That is, it does things in the background. RStudio is the software or app that we will be using to code stuff (the interface that we will discuss and show you in this workshop).
    - Please refer to this website for a step-by-step account of how to download both.
        - https://techvidvan.com/tutorials/install-r/#install-r-windows
- All workshop materials are made available on Github, a cloud-like website, which allows you to track your work, but it's important to keep the files and folders in the same organization as they are downloaded from Github. To download the related files and code on your computer, please refer to the steps below. Alternatively, we will also send the data as a csv file, in case the steps outlined below leads to issues.
    - Note that you may need to have Git installed, for these steps to push through. You can find instructions here: https://github.com/git-guides/install-git
    - Once you're sure that Git, R and RStudio are installed, you may follow the steps below.

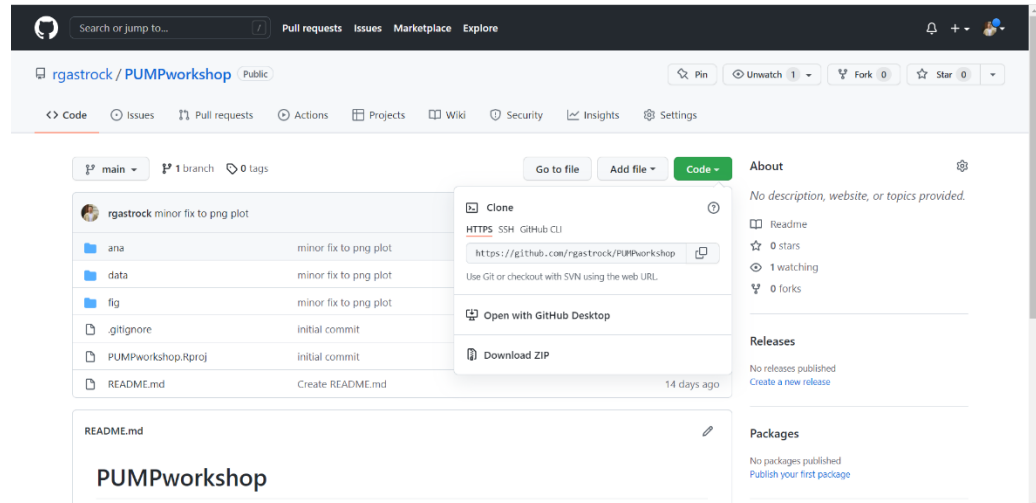1. On RStudio, click on the project tab (little blue box in upper-right corner), and select **New Project**.

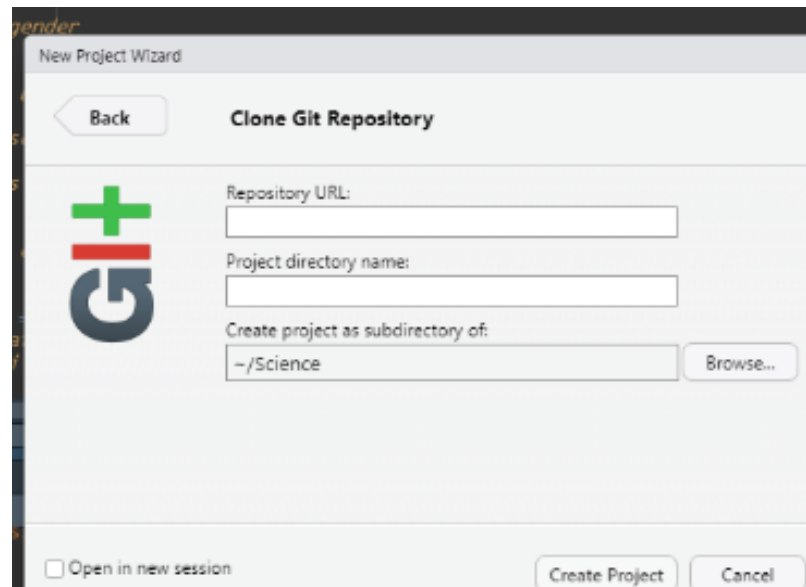2. Select **Version Control** from the pop-up menu.

New Project Wizard

Create Project

R	**New Directory**	>
	Start a project in a brand new working directory	
R	**Existing Directory**	>
	Associate a project with an existing working directory	
P	**Version Control**	>
	Checkout a project from a version control repository	

Cancel

3. Select **Git.**

4. The window will ask for a repository URL. This will be found on the Github website. To access the link, go to: https://github.com/rgastrock/PUMPworkshop

Then **click on the green Code button** and copy the link you'll find there.

5. Paste the link back into RStudio. You can then name it and assign where it will be saved in your computer. Once you've done that, you can click **Create Project**.
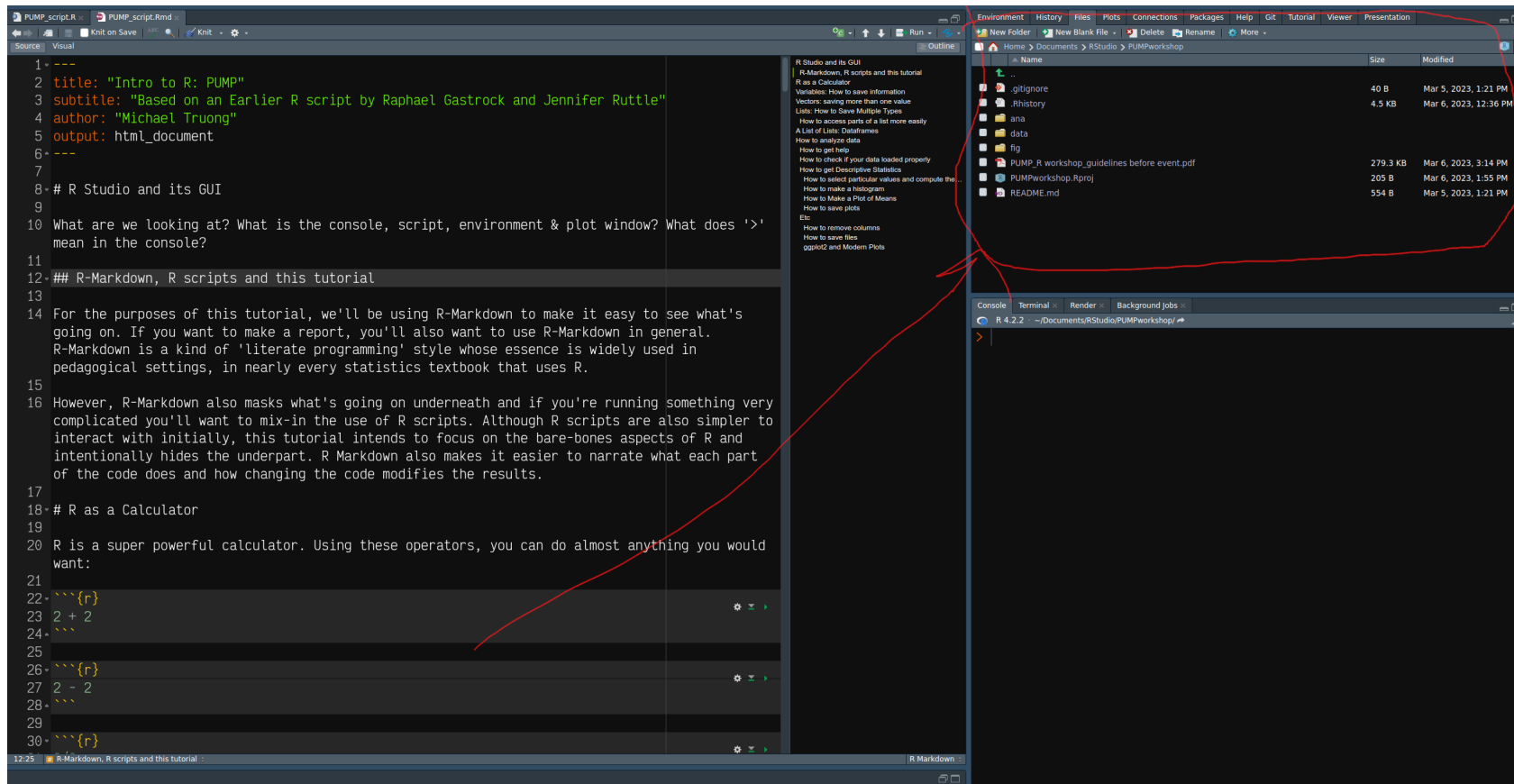
6. RStudio will now have access to the data and code we will go through in the workshop.

7. For this tutorial, we'll be using the file "PUMP_script.Rmd" located under the ana folder in the project you just got. You can also see a completely compiled version of what we'll be doing in PUMP_script.html, which you can open with your web browser.
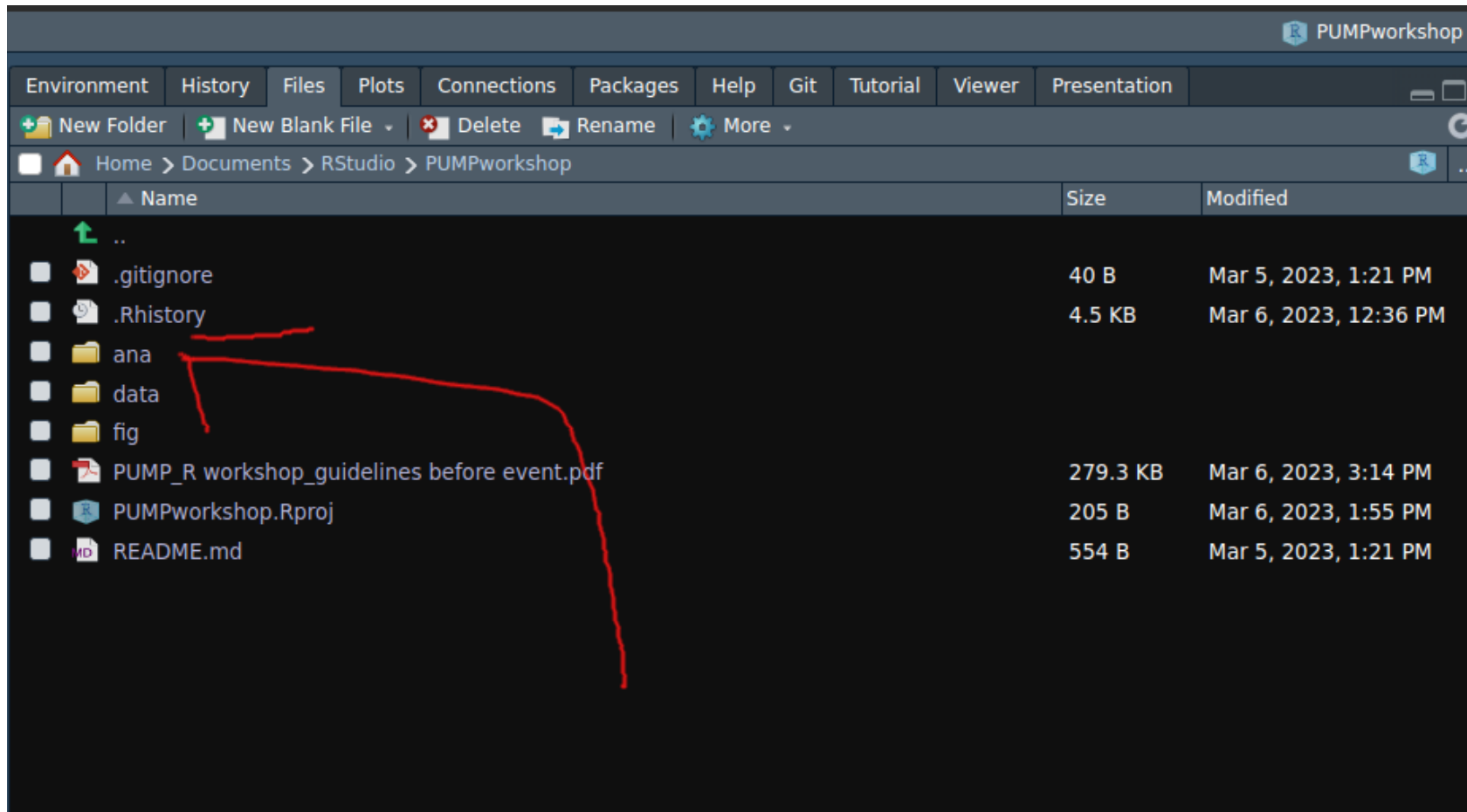
R studio may ask you if you want to download and install the "R markdown package". If it does, press Yes.

See the next few pages for how to select the file

Here's how you can navigate to it in the "Files Tab"

Go into the `ana` file

Select PUMP_script.Rmd