HW 02: Introduction to R

Graphical Analysis of Biological Data

By the end of this assignment, you will be able to perform the following tasks in R.

- assign values to variables;
- create and manipulate vectors;
- create and perform computations on arrays;
- create, subset, and compare factors;
- create data frames, extract data from rows, columns, and cells; and
- create and manipulate lists.

Click on any blue text to visit the external website.

Assignment

This exercise will teach you basic commands and types of data objects in R, using an interactive website provided by DataCamp. DataCamp offers a range of beginning to advanced courses, most of which target programming for the data sciences. Some courses are free, and you will use one of them.

1. Create a `hw02` folder inside your local repo.
2. Register for a *free* DataCamp account. If you get subsequent email from them, just click on the `unsubscribe` link at the bottom of the email.
3. Complete all six parts of this free Introduction to R course. It took me about 2 hours but I knew what I was doing. You should allow about 3–4 hours. You do not have to do it all at once but finish them all by the due date.
4. After you have completed successfully all six parts, you will be able to download a Statement of Accomplishment PDF. Download the PDF, and place it in your `hw02` folder.
5. Do *one* of the following. After you do one, the other will not work. The second choice will help you become more familiar with Git commands and increase your Git-Fu.

   - Launch R Studio, open the Project file, commit the PDF file to your local repo, and then push it to the remote repo (GitHub).

   or instead

   - Choose `Tools > New Terminal`, which will open a terminal / shell in the lower left console panel. It will automatically switch you into the same folder as your R project file.
   - Type `git status` and press return. You should see your statement of accomplishment listed in red, inside the `hw02` folder.
   - Type `git add *.pdf` and press return. This will add your statement for commit but it must still be committed.
   - Type `git commit -m "Proof I finished homework 2."` and press return. You can type any meaningful but *short* statement between the quotes. This commits the file to your local repository.
   - Type `git push origin master` and press return. This will push the file from your local repo to your remote GitHub repo.
   - These are the steps that occur when you do commit and push files from R Studio.

6. For more practice, I recommend that you read and work through R for Data Science Chapter 4 (R4ds), and answer the three questions at the end of the chapter.

Grading Rubric

This assignment is all or none.

No work: 0	Needs work: 1	Satisfactory: 2	Excellent: 3
Did not upload certificate indicating successful completion of DataCamp course.	Does not apply.	Does not apply.	Successfully completed DataCamp course. Uploaded certificate to remote repo.

et Voilà