

R for Biologists

Class 1 Homework:

Due Sept. 27, 2021

During this course you will be learning R and working on a personal project related to your own research*. Please write one paragraph that describes the biological motivation for your project (like an abstract describing the general project you are working on). In addition, please answer the following questions:

- Please describe the dataset you will be working with. Did you generate the data, or did someone else? Make sure to describe the experimental design of the dataset, including the technique used to generate the data, the number of replicates, what the different samples (if any) are...
- What are your goals for your in-class project as far as this dataset goes?
- Describe your current strengths and weaknesses in terms of R skills as well as in general for achieving these goals. In what areas do you feel you need to grow? What do you think you have a strong grasp of?
- Finally, describe the expected results from your analysis, as it relates to the initial introductory paragraph.

The aims of this homework assignment are several: 1) this is good for you to set some expectations and begin thinking about how your data fit into a larger project; 2) this helps us know what you will be spending your time doing; 3) this helps us tailor the syllabus of the course to make sure we cover the areas necessary for you to achieve your goals.

* If you do not have a dataset of your own, or perhaps the data you have doesn't yet fit into a larger biological question, that's OK. Please use this space to describe what kind of data you would like to work on. If you need to find data to analyze, one place to start would be to take a seminal paper in your field and to re-analyze its data yourself. (This works only in cases where the raw data have been published, and is therefore suitable for several genomics techniques, but is perhaps less well suited for other large datasets (like imaging).)