

## **ZOO 800**

### **Homework Week 2**

#### ***Submission instructions***

Submit a single URL to a public GitHub repository on Canvas. For this homework, it can be empty other than the Readme file. Answers to Objectives 1 and 2, along with a link to the repo for Obj 2 and citation info for the paper, should be included in the Readme file.

#### ***Problem***

The Open Science philosophy states that research, including data and methods, should be: Open, Transparent, Accessible and Reusable. To what extent is this practiced in your field?

Open Science workflows based on R, RStudio, and GitHub are one way to make it easier for your research to meet these goals.

#### ***Objective 1***

For each person in your group, find 10 recently published (2023 – present) journal articles (so, 30 for a 3 person group) in your specific field (this should also be a chance for you to do another literature search on your research topic) that present some quantitative analysis of data and determine how well they adhere to the Open Science philosophy.

List the field(s) or search terms and then describe how many of each set of 10 articles:

- 1) Used open source software like R or Python?
- 2) Placed data in a public repository (and which repositories did they use)?
- 3) Placed the code for their analysis in a public repository (and which repositories did they use)?

#### ***Objective 2***

1. Find an article (perhaps one from your team's collection in Objective 1 – just one for the whole group, not one per person) which placed data and R code in a GitHub repository.
2. Clone the repo to your computer as an R Project
3. Run at least some of the code. Depending on how extensive the code is, you may be able to run all of it.
4. Recreate at least one figure from the paper. No need to submit it, just write which one in the Readme that you submit.
5. Did you need to change anything (e.g., paths) other than installing missing packages to get the code to run for you?

If you're really struggling to find a GitHub repo for Objective 2, here are a couple papers that you could use (but try to use something from your field first):

Jensen, O.P., Vastano, A.R., Allen, M.C., Hernandez, M.F., Lockwood, J.L., Vasslides, J.M. and Weldon, O., 2024. Migratory passage and run size of American Shad and river herring in the Raritan River, New Jersey, USA. *Transactions of the American Fisheries Society*, 153(3), pp.289-300. [PDF](#)

Solokas M.A., Feiner Z.S., Al-Chokachy R., Budy P., DeWeber J.T., Sarvala J., Sass G.G., Tolentino S.A., Walsworth T.E., Jensen O.P. (2023) Shrinking body size and climate warming: Many freshwater salmonids do not follow the rule. *Global Change Biology*, 29(9): 2478-2492. [PDF](#)