

Marine Biology R Assignment #3

Deadline

Your completed R assignment should be submitted on Canvas by 1:30pm on Thursday, March 14th. For this assignment, you will submit your R code (in a Rmarkdown document) and a Word Document containing your figures, figure captions, tables, and brief description of results (see below). This assignment can be completed with other members from your lab section but if you work with others, please include their names on your submission.

Assignment

Using the data we have collected as a class for lab skills (linked [here](#)), you will complete the following tasks. For each figure you create, make sure you use descriptive X and Y axis labels with units where applicable and write an informative figure caption. All figures, captions, and tables should be saved and placed within a Word document to submit along with a brief description of your results.

1. Make a bar plot of average (+/- standard deviation) value per sample for each of the following parameters:
 - pH
 - temperature
 - salinity
 - weights
 - calipers (L x W x H)
2. Make a scatter plot of the following parameters:
 - salinity versus temperature
 - shell width versus height
3. Find a new data visualization/figure to create in R to present some other relationship in your data that we have not learned yet in another R assignment (i.e., no line, scatter, or bar plots). Be creative and have fun!
4. Perform a statistical test in R (I recommend a T test or ANOVA) on one of the parameters you plotted in part 1 above. Present the results of your statistical test in a table.
5. Finally, write a brief results-style section discussing the statistical test you performed in part 4. In this section, present the p-value and discuss if your results were statistically different or not.

Walk-in R Help Session

I will be available on email for most of spring break if you choose to work on this during that time and run into any issues that you want to ask for help with. However, I do not expect you to start this assignment until your return from break! In addition to my open hours and being available for appointments by request, I have set aside 2 time slots for additional pop-in hours for R help specifically. Please come by with any and all your questions!

- 3-4 PM Monday March 11th, Thomas 224 (Dr. Bove's Office)
- 3-4 PM Wednesday March 13th, Thomas 224 (Dr. Bove's Office)