

ALY6000: Executive Summary Report 2

Overview and Rationale

As a data analyst, you will need to be able to create understandable data visualizations and clearly summarize the data for executives. This assignment allows you to demonstrate your skills to process data, present the data visually, and calculate basic; all with explanatory analysis.

Module Outcomes

This assignment links directly to the following learning outcomes from this module:

- Calculate basic descriptive statistics to describe a set of data
- Create various types of graph based on data provided
- Use R to visualize data
- Explain the significance of calculate statistics and graphs

Assignment Summary

In this assignment, you will create an executive summary based on a set of data provided by your instructor. You will write and execute an R script in order to gather the information required to complete your report. You are provided with an assignment instruction document (Module 2 Project Instructions) to guide the R-code you need to write an Executive Summary specified below.

Your Executive Summary should consist of:

Cover Page: **Title Page:** name, date, title

Pages 1-3: A short introduction, methodology, key findings about the data (Content outlined the assignment below and in the Project Instructions) and your concise conclusion.

Page 4: **Bibliography:** This includes Youtube videos, instruction materials, google search results, texts that informed your study of statistics and R. Use your repo link as a reference while you mention about Appendix with code. Adhere to APA standards.

Page 5: **Appendix:** The R Script you wrote and executed

There are three aspects of this assignment as follows:

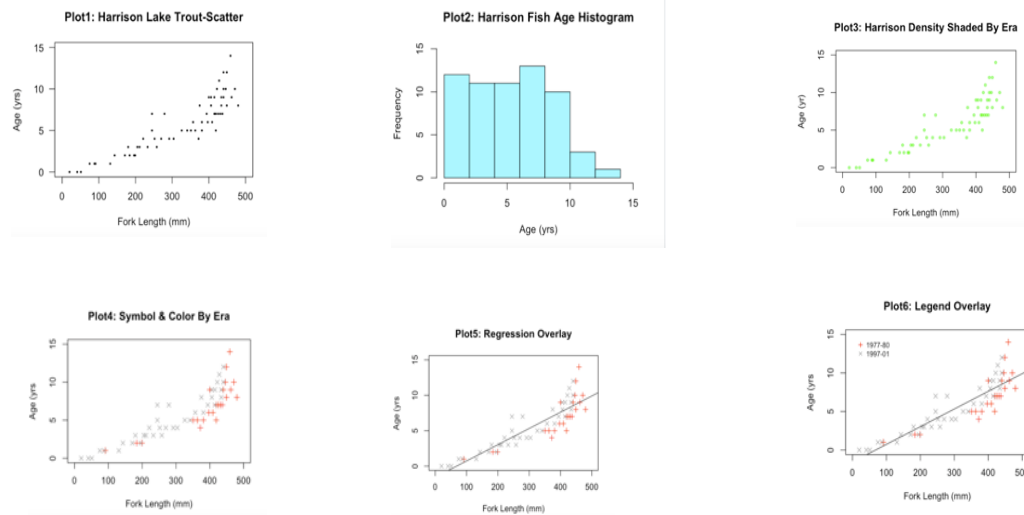
- A. Provide an analysis of descriptive characteristics of the data set provided by your instructor. This includes pertinent statistics including mean, median, quartiles, variance, standard deviation, skew, kurtosis, outliers etc. Include R console screen snippet to support your observations and conclusions. Below is a sample excerpt of an analysis of Harrison Lake fish from the BullTroutRML2 dataset.

Example: *A structural analysis of the BullTroutRML2 data set revealed that two lakes and two time periods must be factored into our study. We will initially focus our research on understanding the descriptive statistical differences in age and length between the Harrison Lake and Osprey BullTrout.*

```
> headtail(BullTroutRML2, n=3)
  age fl lake era
1  14 459 Harrison 1977-80
2  12 449 Harrison 1977-80
3  10 471 Harrison 1977-80
94   4 298  Osprey 1997-01
95   3 279  Osprey 1997-01
96   3 273  Osprey 1997-01
```

- B. Provide the executive with visualizations (at least 6) in that help them see the key characteristics you want to highlight. They can be boxplots, histograms, frequency and probability distributions, barplots (bar charts) or pareto. Not only is the goal to present your visual results, but also to explain the significance of what the visuals are displaying.

Example: *In Part B we will be providing an understanding and interpretation of the six plots below. Each of these is plots will provide you the crucial information to make both strategic and operational decisions about how to best cultivate and harvest BullTrout from your various fish hatcheries as well as stock and harvest mature specimens from your lake farms. The plots we discuss in this report are:*



C. Finally, provide a clear two to three sentence paragraph summary of the key points that you want the audience to walk away with regarding your analysis. This summary should present accurate analysis and be supported by the data presented in the rest of the report.

Instructions

Using the assignment instruction document (Module 2 Project Instructions), complete the assignment above.

Supporting Files

To complete this assignment you will need to download the following file:

Module 2 Project Instructions.pdf

What to Submit

- Submit a single file with the following title: LastName_M2_Project2.pdf.