On this upload page you will submit unit 10 homework for grading.

For Live Session:

Problem 27 page 204 (Chapter 7 Problems). Analyze the data providing at least the following:

- a. A Scatterplot with confidence intervals of the regression line and prediction intervals of the regression line.
- b. A table showing the t-statistics and pvalues for the significance of the regression parameters: β_0 and &beta$_1$.
- c. Using the data in ii show all 6 steps of each hypothesis test.
- d. The regression equation.
- e. Interpretation of the slope and intercept in the model (regression equation.)
- f. Pick a stone mass and find and interpret the 95% confidence interval for the mean t-cell response conditional on that mass.
- g. For that stone mass, find and interpret the 95% prediction interval for the predicted t-cell response given that mass.
- h. Using the graphical method, find and interpret the calibration intervals for the t-cell response of 0.3. (Both for mean t-cell response and for a single t-cell response.
- i. Find the same calibration intervals analytically using the SE equations given in class and in the book (Version 3 page 194).
- j. A scatterplot of residuals.
- k. A histogram of residuals with normal distribution superimposed. (from SAS).

2.Find the journal Article: ("Weight Lifting and Health Status in the Black Wheatear," Behavioral Ecology 10(3) (1999): 281–86). Find Figure 1 in this article, and copy this scatterplot into your report. Compare it to your scatterplot in part (a) of the previous problem.

For Homework

I would like for you to practice preparing professional looking reports. For this reason, please type the information from this analysis into a Word document. Please include computer-generated graphics as necessary. These should be copied and pasted into your report.

Please keep your report under two pages (points will be counted off for going over). The two page limit includes graphics and tables. Therefore, you will have to choose which tables and graphics to present. Please also use no smaller than 11 point Ariel, Calibri, Helvetica, or Geneva font with one-inch margins (FYI – this assignment is written in Calibri 11 point).

If you would like help with Word or Excel please don't hesitate to ask.

Write up a complete analysis using the information you have gained from the previous problems. In your write up, be sure to:

1. State the problem.
2. State the assumptions you are making, why you are making them. Justify your decisions using descriptive statistics and/or plots. Any tables or graphics (histograms, qq plots, box plots etc.) that you used to make your decisions should be pasted into the paper in the appropriate place, with appropriate figure captions. Don't forget you have a page limit!!
3. Justify the statistical method you use, and comment on its validity as a result of the exploratory data analysis.
4. State your conclusion in plain language.

You will need this dataset to complete this assignment.