Exercise – Simple Linear Regression

Answer the following questions with R code by creating (*and editing if you make a mistake*) an R script and iteratively running the code in RStudio.

1. Load the data in the **LakeTroutALTER.csv** file into a data frame in R.

2. Fit the linear model betwween total length (dependent variable) and otolith radius. Assess the appropriateness of this model.

3. Fit the linear model betwween total length (dependent variable) and the natural log of otolith radius. Assess the appropriateness of this model.

4. Answer the following questions with the total length and natural log of otolith radius model.

   (a) Is the relationship between total length ans otolith radius significant? How much variability in total length is explained by otolith radius?

   (b) Predict the total length if the scale radius is 1.2 mm.

   (c) Construct a plot that illustrates the model with prediction intervals on the original scale.

5. *If time permits ...* fit the length-weight regression for the Lake Trout data.