**Application 1 Assignment**

Please complete the following tasks using Rstudio. Then answer questions on the corresponding Lab Quiz on Canvas. You are not required to upload your Rscript; just submit the quiz. You will have three attempts. Assume for all NHSTs.

1. Import the dataset “Manager Performance Data” from Canvas.
   1. Use the following code to create a dichotomous variable in the data “HadJob.”

for (i in 1:nrow(data)){

if (data$jobs[i]!=0){

data$HadJob[i]=1

} else {

data$HadJob[i]=0

}

}

* + 1. Note that this code assumes the Manager Performance Data object is called “data” in R.

1. Conduct an independent samples t-test to see if a difference exists between those who have had at least 1 job and those who have had 0 jobs on job performance (perform).
   1. Check for equality of variances
   2. Find t and p-value
   3. Find the effect size (e.g., Cohen’s d)
2. How would you interpret the effect size for this group mean comparison?
3. Using the same Manager Performance Data from Canvas, complete the following tasks:
4. Conduct a Pearson correlation between extraversion (extrav) and job performance (perform).
   1. What is Pearson r?
   2. What direction is the relationship?
   3. Is the result statistically significant?
5. Fit both a standardized and unstandardized simple linear regression with job performance (perform) as the dependent variable and extraversion (extrav) as the predictor.
   1. What is the r-squared effect size?
   2. Is the model statistically significant?
6. Create a scatterplot and fit line for the unstandardized (original) data