**In-Class Activity #9.2: Descriptive Statistics Using R/RStudio**

**Try It Yourself:**

Now we want to compare point guards (PG) to shooting guards (SG). The only change you need to make is in Line 80: change 'SF' to 'SG', and Line 87 will now look like this:

subset <- dataSet[ which(dataSet$Position=='PG' | dataSet$Position=='SG'), ]

Now re-run the script. Go to the Code menu and select Run Region/Run All…

Based on the new output, are these average salaries significantly different in a statistical sense?

Hint:

*A small p-value (typically ≤ 0.05) indicates strong evidence against the null hypothesis, so you reject the null hypothesis.*

*A large p-value (> 0.05) indicates insufficient evidence against the null hypothesis, so you fail to reject the null hypothesis.*

**Output from RStudio:**

 Welch Two Sample t-test

data: subset$Salary by subset$Position

t = -0.13178, df = 222.99, p-value = 0.8953

alternative hypothesis: true difference in means is not equal to 0

95 percent confidence interval:

 -1314129 1149391

sample estimates:

mean in group PG mean in group SG

 4076415 4158784

**Answer:**

We can see that the p-value is 0.8953. A p-value that is larger than 0.05 indicates that we **fail to reject** the null hypothesis (H0) that there is no difference between the means. In other words, we conclude that the two player groups, statistically, have the same average salary.