Average mpg 2018 is 24.7 miles per gallon. My question is, is there any difference between the 1974 Motor Trend data and the current average. What you need to do for this project is:

Visualize the dataset-3 points

Use the same techniques you learned in the first project to visualize the data

Making the labels for the visualization – 3 points

Use the same techniques you learned in the first project to visualize the data

Test to see if the dataset is normal – 3 points

A shapiro wilks test or similar can be done in order to get a p value for the test. You need to state the null and alternative hypothesis (1 point), run the test (1 point), and state the conclusion (1 point)

Make a histogram with a normal distribution – 3 points

Use the same techniques you learned in the first project to visualize the data

Run a t-test on the data and explain the test results – 4 point

A t test on the data can be done to get a p value. You need to state the null and alternative hypothesis (1 point), the alpha value (1 point), run the test (1 point), and state the conclusion (1 point)

Check to see if there is a correlation between two different types of data are. You need to take the data that you used in the first project and see if there is a correlation in the data – 3 points

You need to state the null and alternative hypothesis (1 point), run a pearson correlation test (1 point), and state the conclusion (1 point)

Show what the R^2 value is – 3 points

You need to state what an R^2 value is (1 point), calculate the R^2 value (1 point), and then draw conclusions from the data.

Visualize the correlation – 3 points

Visualize the correlation data.