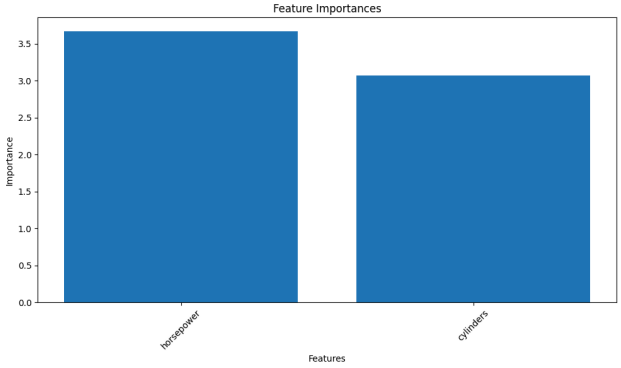
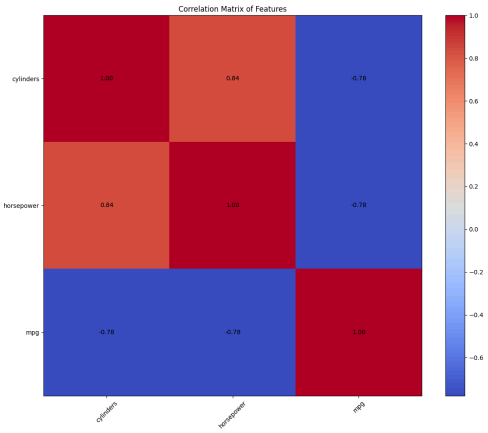
Q: Are you satisfied that the package has found the best solution. How can you check. Explain.

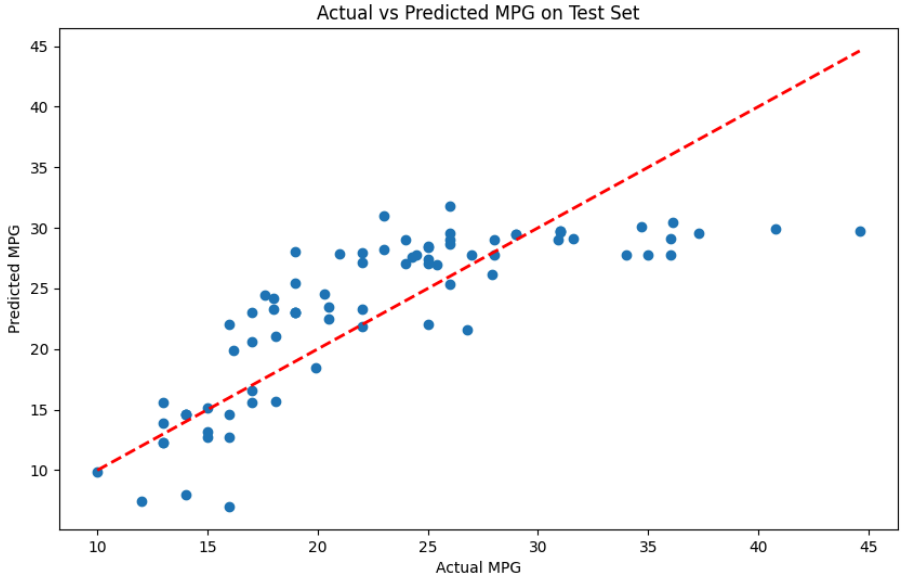
A: We are satisfied that the package has found a good solution. We are currently checking the R2 value of both the testing and training data to evaluate our solution. Also checking performance via a plot of actual vs predicted data, we see that our linear regression line follows closely with our own plotted predictions. However, we could import more data as stated in class is more effective for increasing performance than increasing the efficiency of our training model.

1.

Train MSE: 20.8913, R2: 0.6647
Test MSE: 21.1786, R2: 0.6124



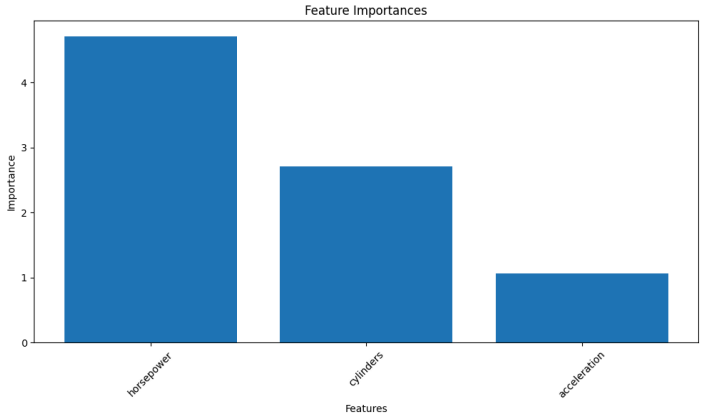


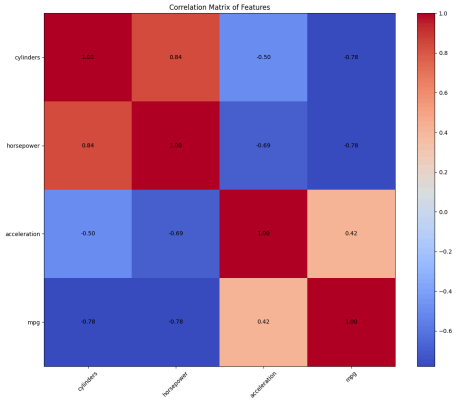


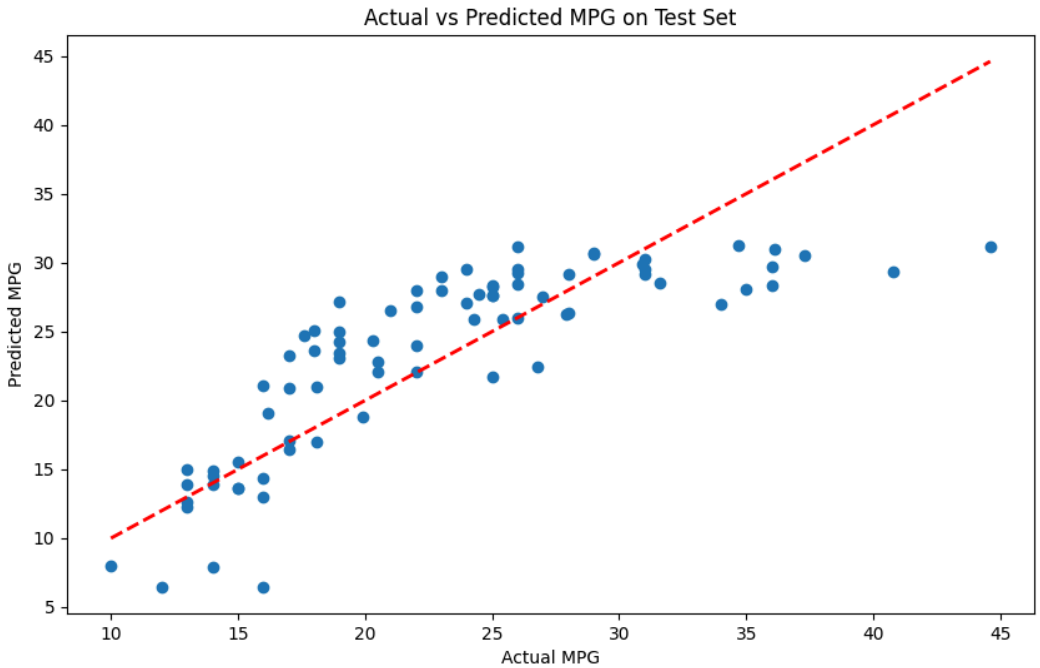
2.

Train MSE: 20.3196, R2: 0.6739

Test MSE: 19.6990, R2: 0.6395



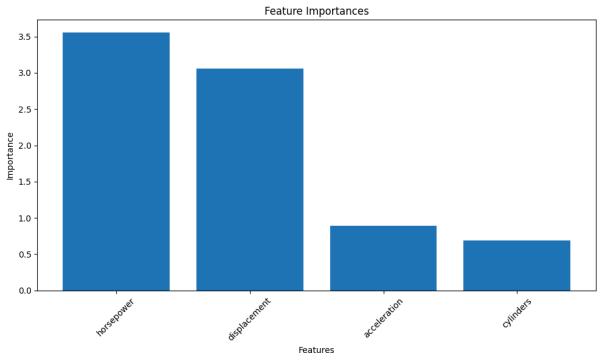


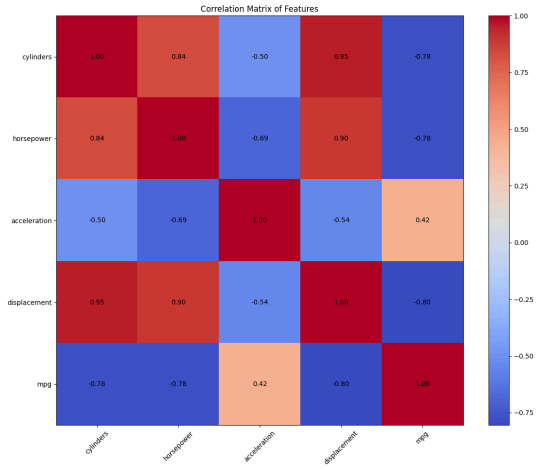


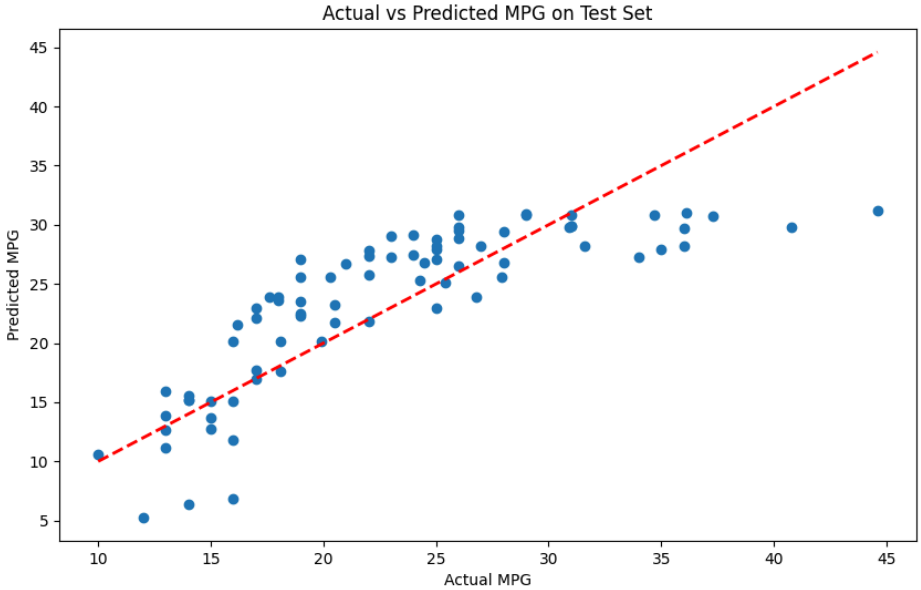
3.

Train MSE: 19.7532, R2: 0.6830

Test MSE: 19.8708, R2: 0.6363



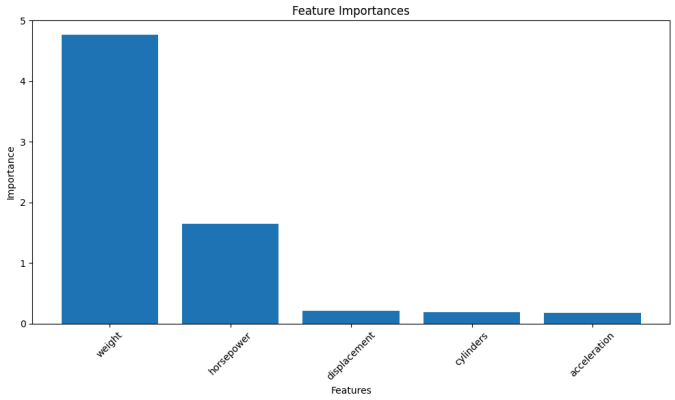


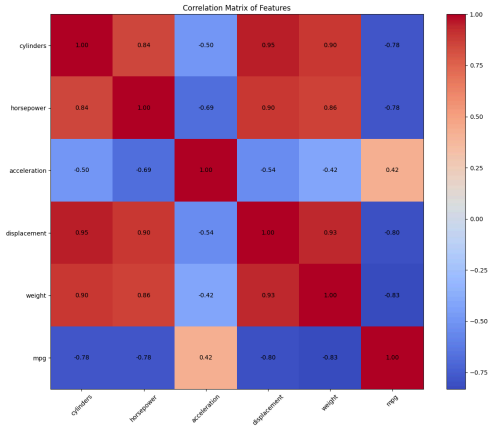


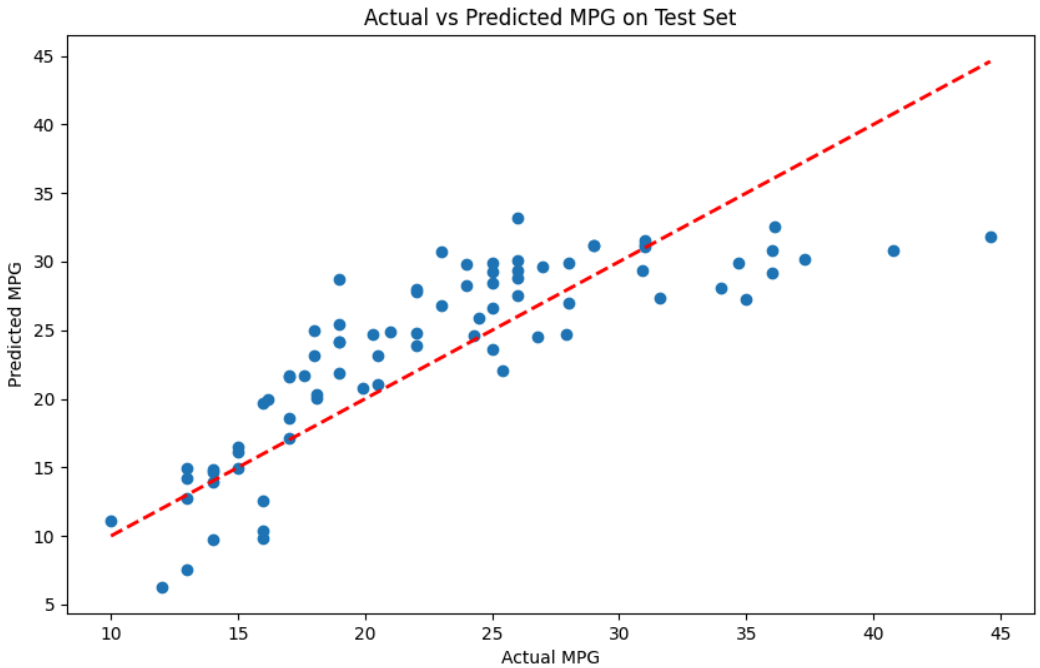
4.

Train MSE: 17.5248, R2: 0.7187

Test MSE: 19.4055, R2: 0.6448



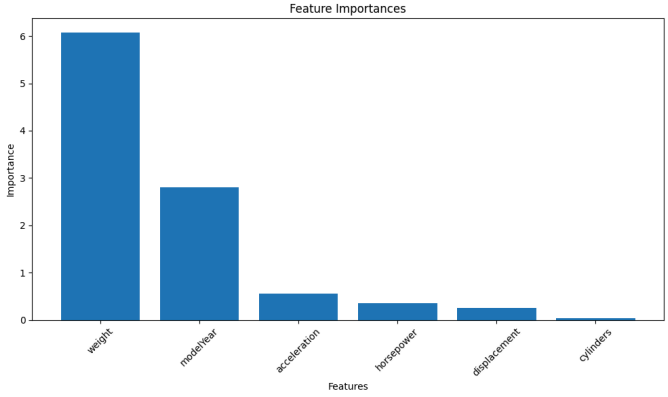


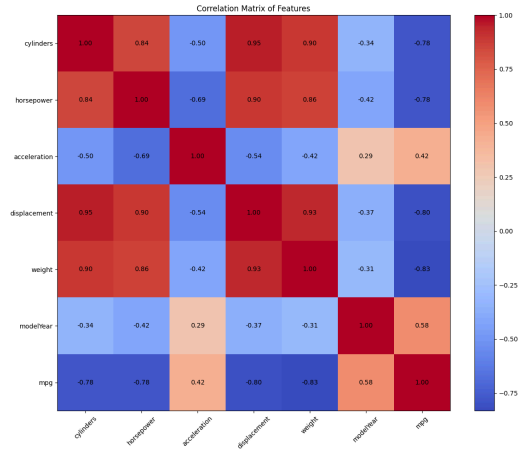


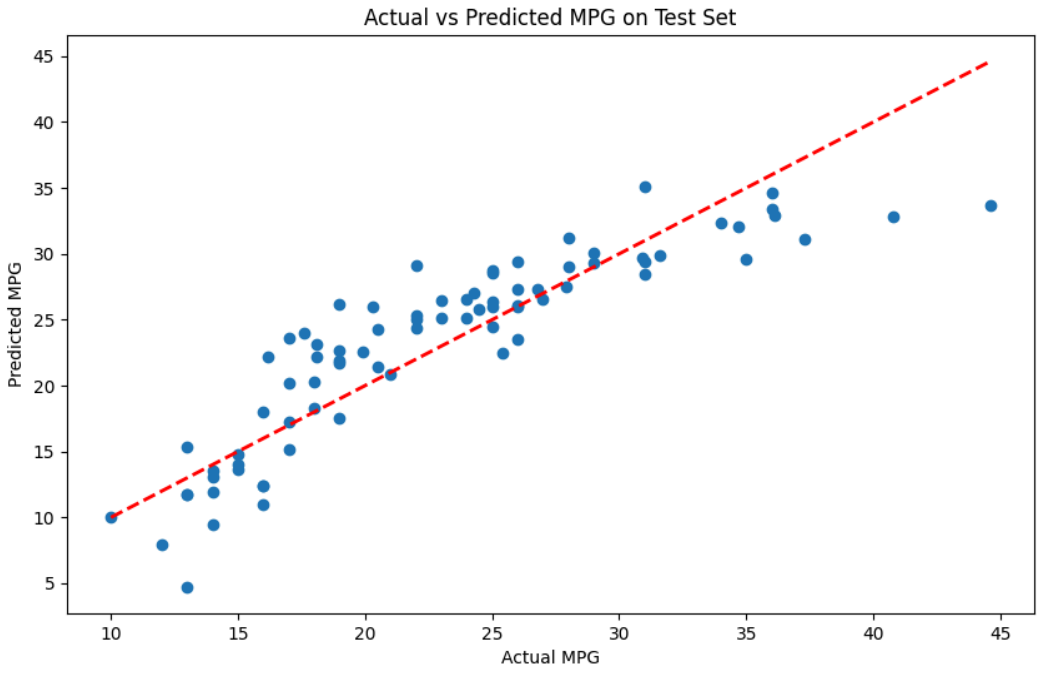
5.

Train MSE: 11.4792, R2: 0.8158

Test MSE: 12.5080, R2: 0.7711







6. [BEST RESULT]

Train MSE: 11.6225, R2: 0.8135

Test MSE: 11.9282, R2: 0.7817