



Car Mileage (MPG) Analysis and Prediction

This Streamlit app performs **Data Analysis, Visualization, and Machine Learning** on Car Mileage dataset.

Upload your car-mpg.csv dataset



Drag and drop file here
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Browse files



car-mpg.csv 18.5KB



Data Overview

Shape of dataset: (398, 11)

Preview of data:

	mpg	cyl	disp	hp	wt	acc	yr	car_type	origin_america	origin
0	18	8	307	130	3504	12	70	0	1	USA
1	15	8	350	165	3693	11.5	70	0	1	USA
2	18	8	318	150	3436	11	70	0	1	USA
3	16	8	304	150	3433	12	70	0	1	USA
4	17	8	302	140	3449	10.5	70	0	1	USA

Summary Statistics:

	mpg	cyl	disp	hp	wt	acc	yr	car_type	origin_america	origin
count	398	398	398	398	398	398	398	398	398	398
mean	23.5146	5.4548	193.4259	104.304	2970.4246	15.5681	76.0101	0.5302	0.6256	0.6256
std	7.816	1.701	104.2698	38.2226	846.8418	2.7577	3.6976	0.4997	0.4846	0.4846
min	9	3	68	46	1613	8	70	0	0	0
25%	17.5	4	104.25	76	2223.75	13.825	73	0	0	0
50%	23	4	148.5	93.5	2803.5	15.5	76	1	1	1
75%	29	8	262	125	3608	17.175	79	1	1	1
max	46.6	8	455	230	5140	24.8	82	1	1	1

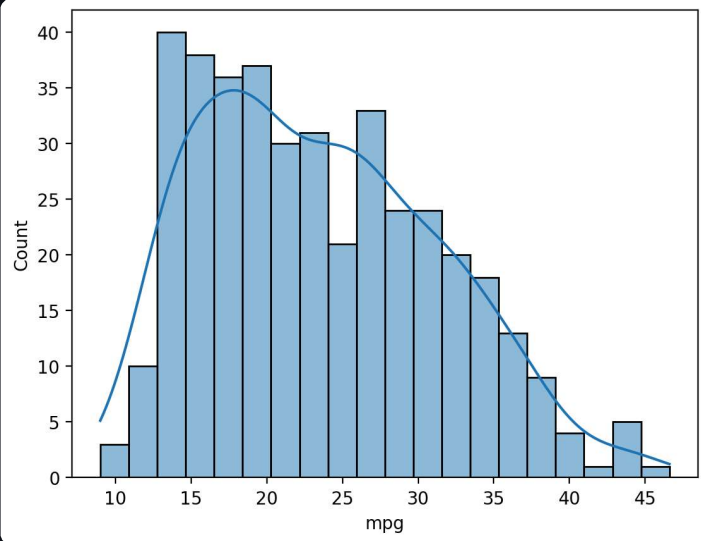
Missing Values:

	0
mpg	
cyl	
disp	
hp	
wt	
acc	
yr	
car_type	
origin_america	
origin_asia	
origin_europe	

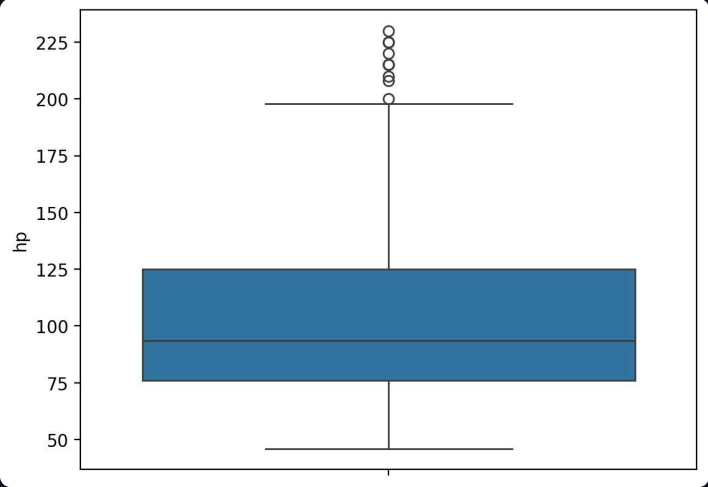


Data Visualization

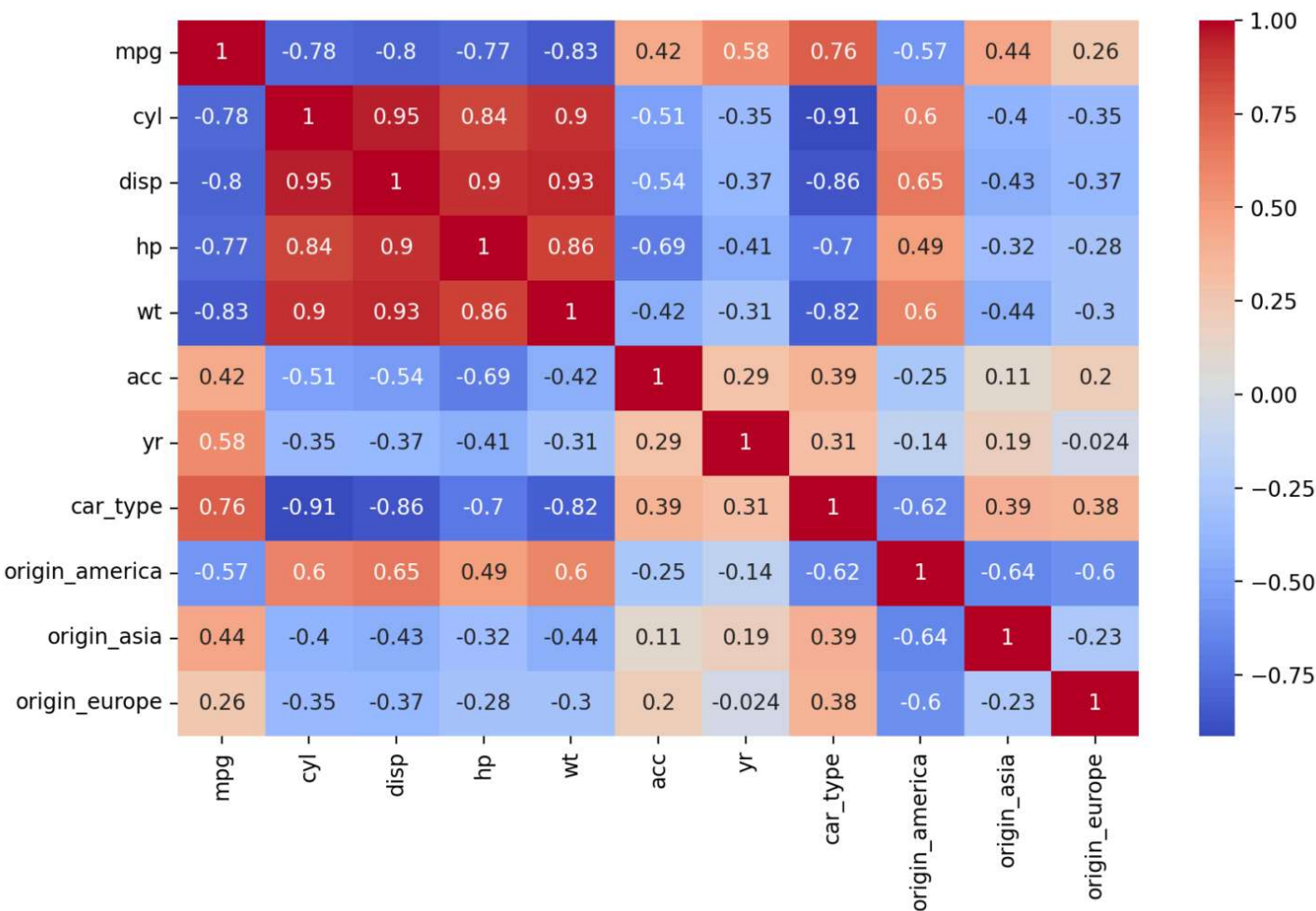
Histogram of MPG



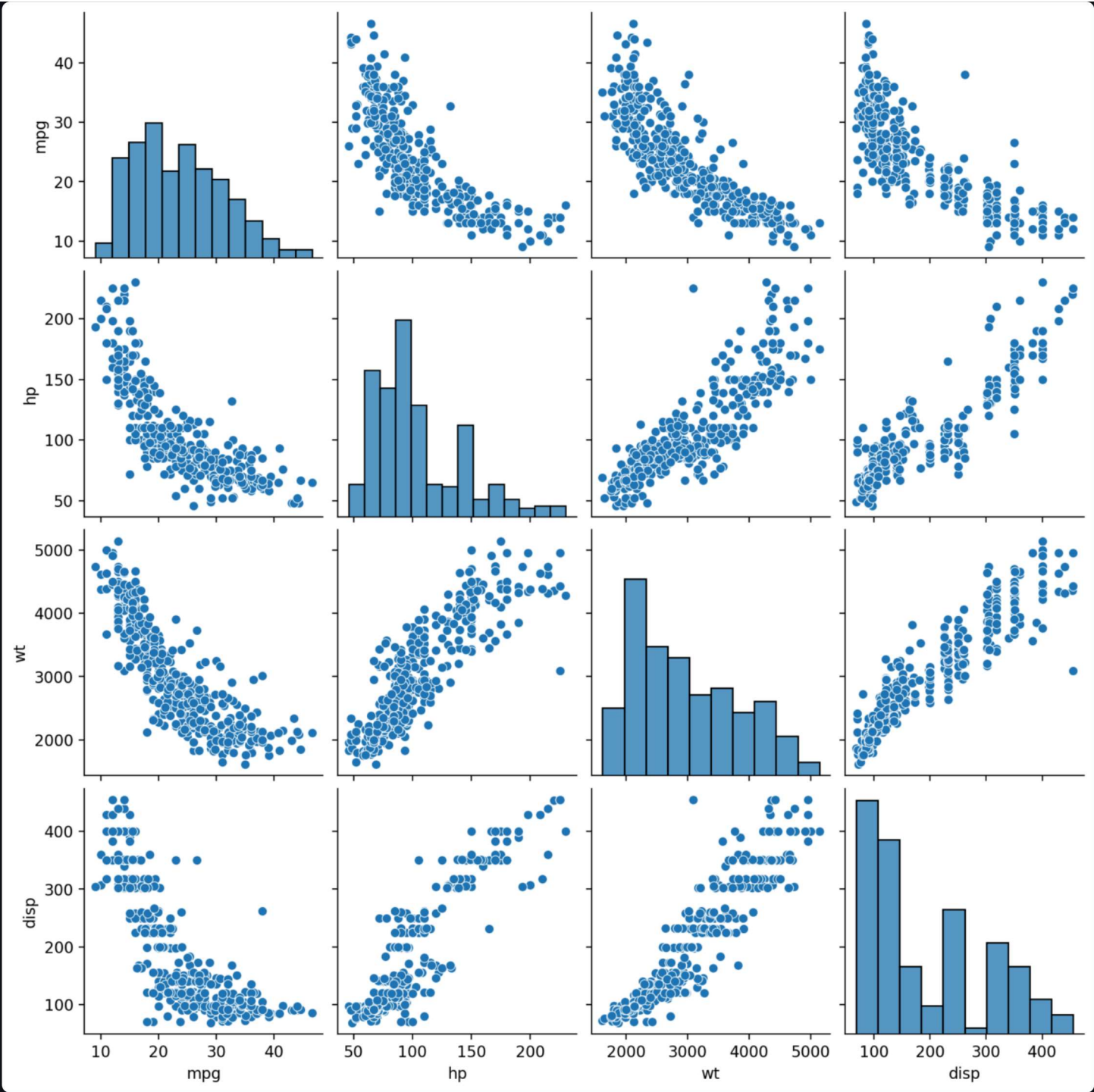
Boxplot of Horsepower



Correlation Heatmap



Pairplot (Subset Features)

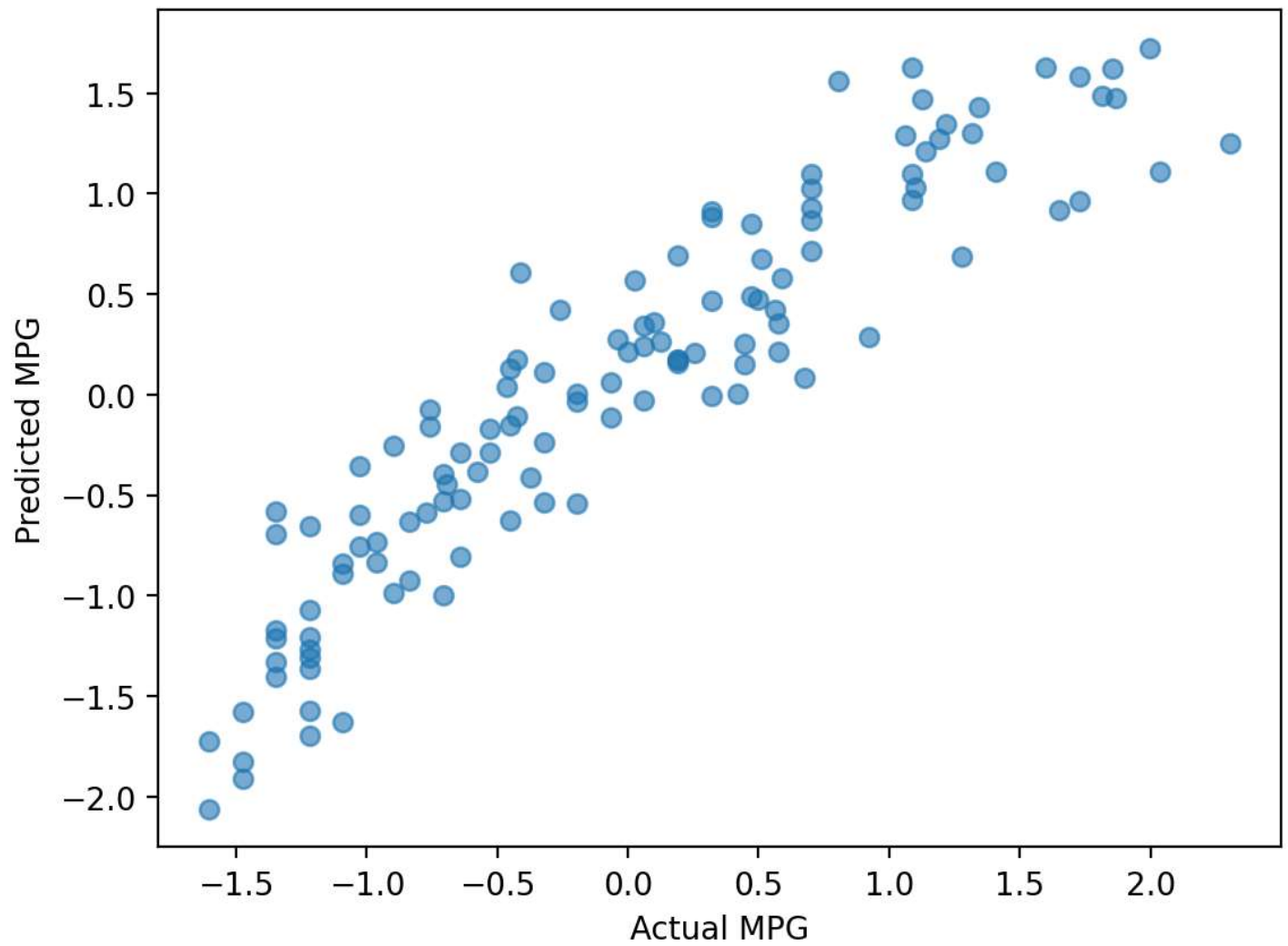


😊 Machine Learning Models

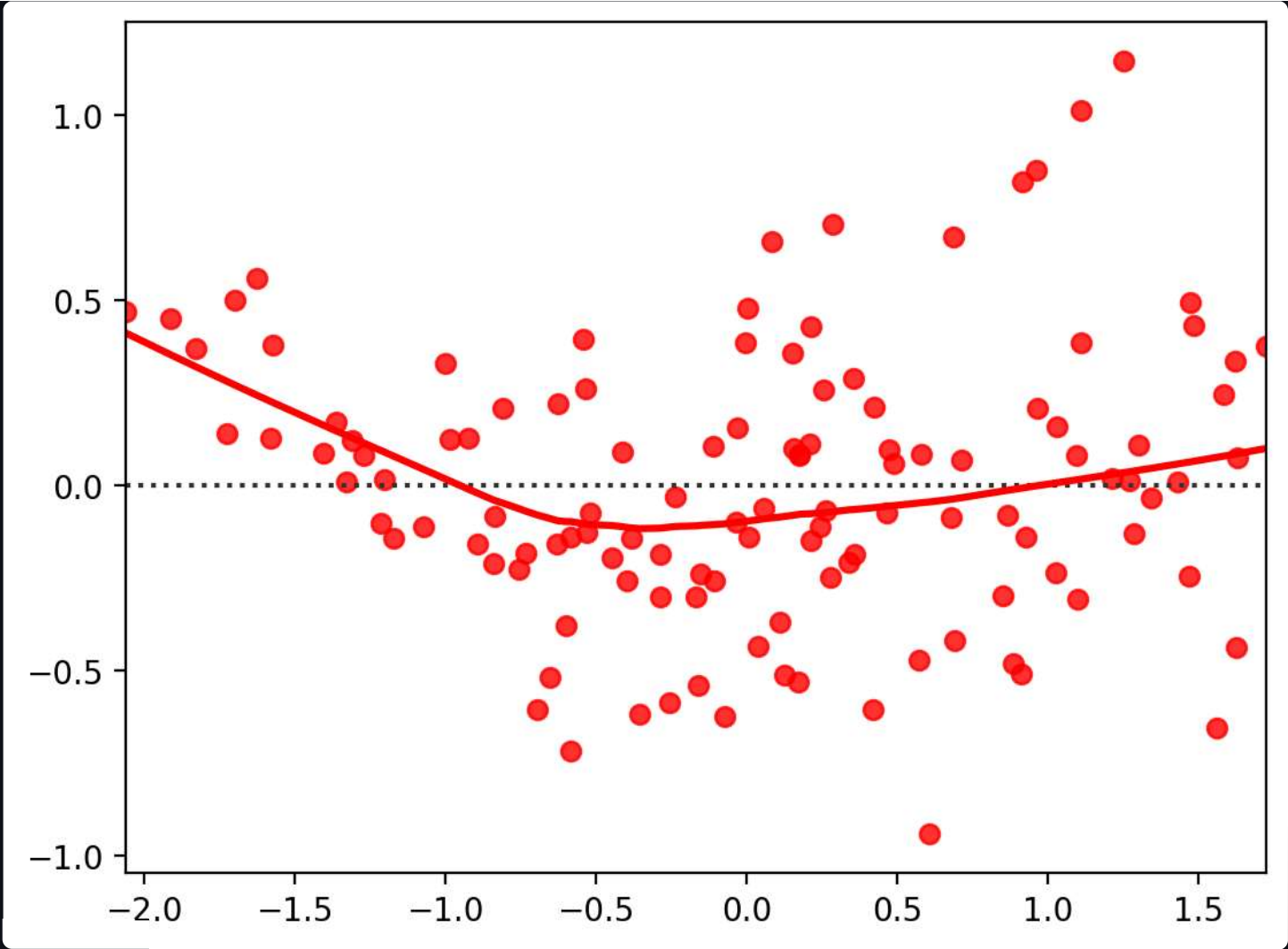
Model Performance

	R ²	RMSE
Linear Regression	0.8513	
Ridge Regression	0.8519	
Lasso Regression	0.8587	

Predicted vs Actual MPG (Linear Regression)



Residual Plot (Linear Regression)



Try Your Own Prediction

Enter car attributes below:

cyl

5.45

-

+

disp

193.43

-

+

hp

104.30

-

+

wt

2970.42

-

+

acc

15.57

-

+

yr

76.01

-

+

car_type

0.53

-

+

origin_america

0.63

-

+

origin_asia

0.20

-

+

origin_europe

0.18

-

+

Predicted Mileage (MPG): 0.02