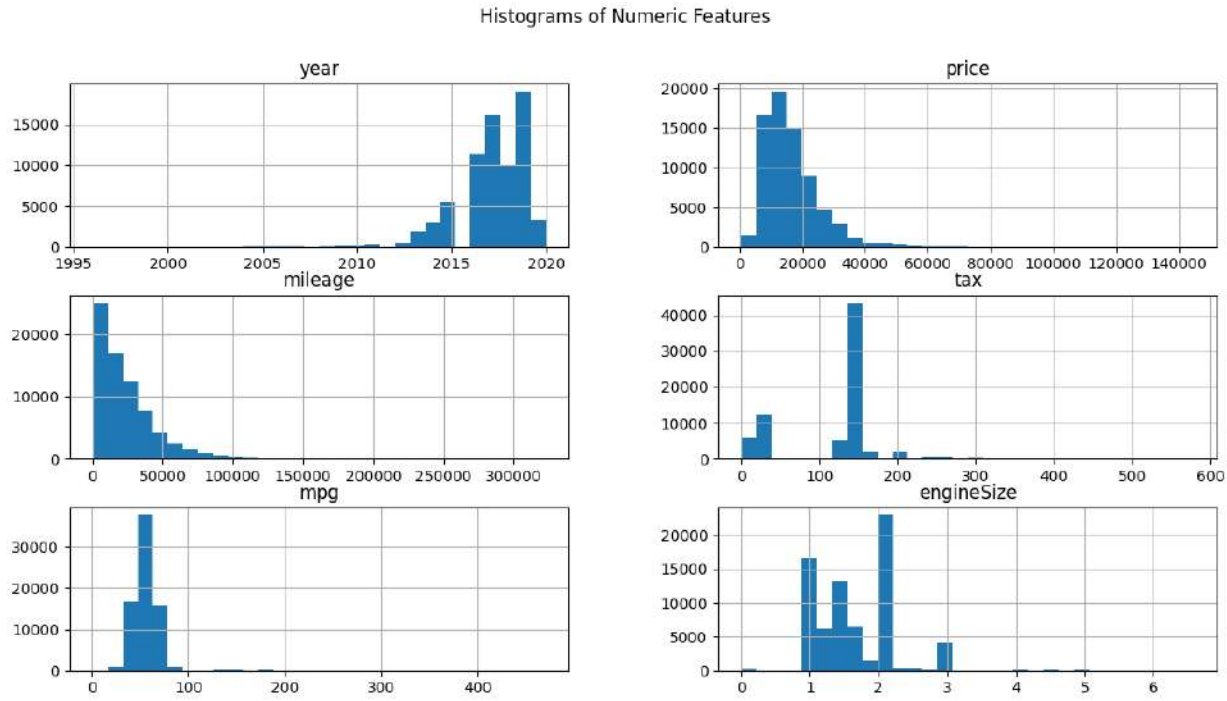
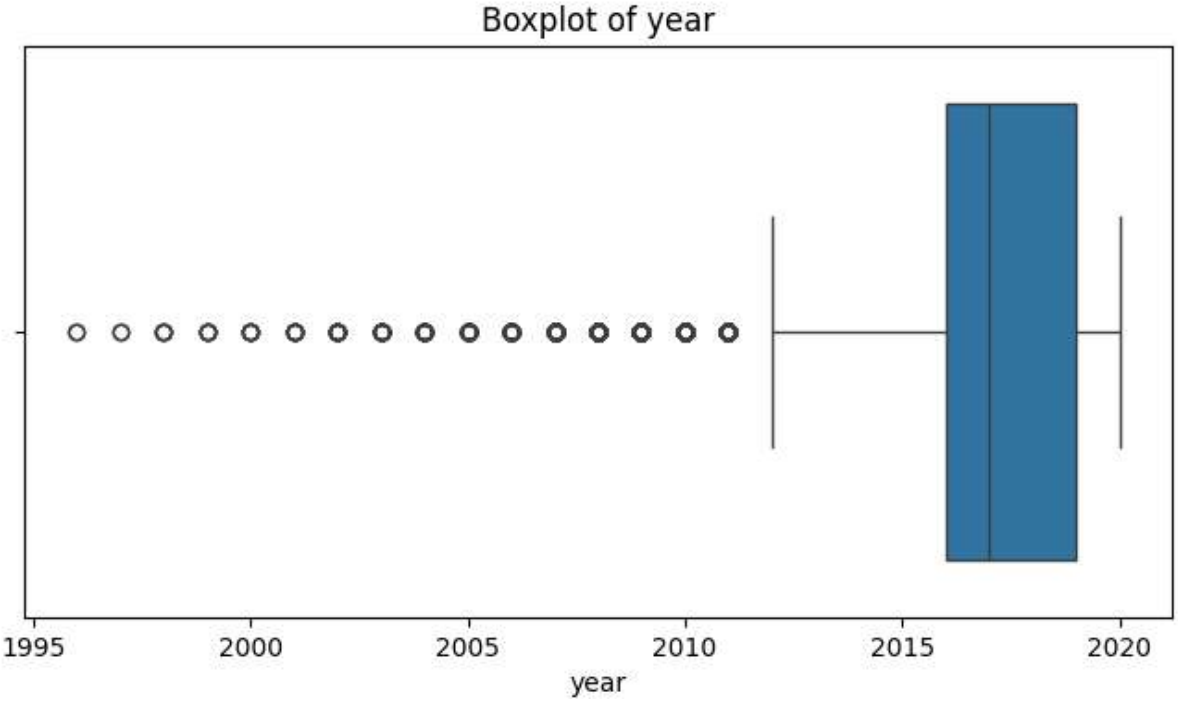
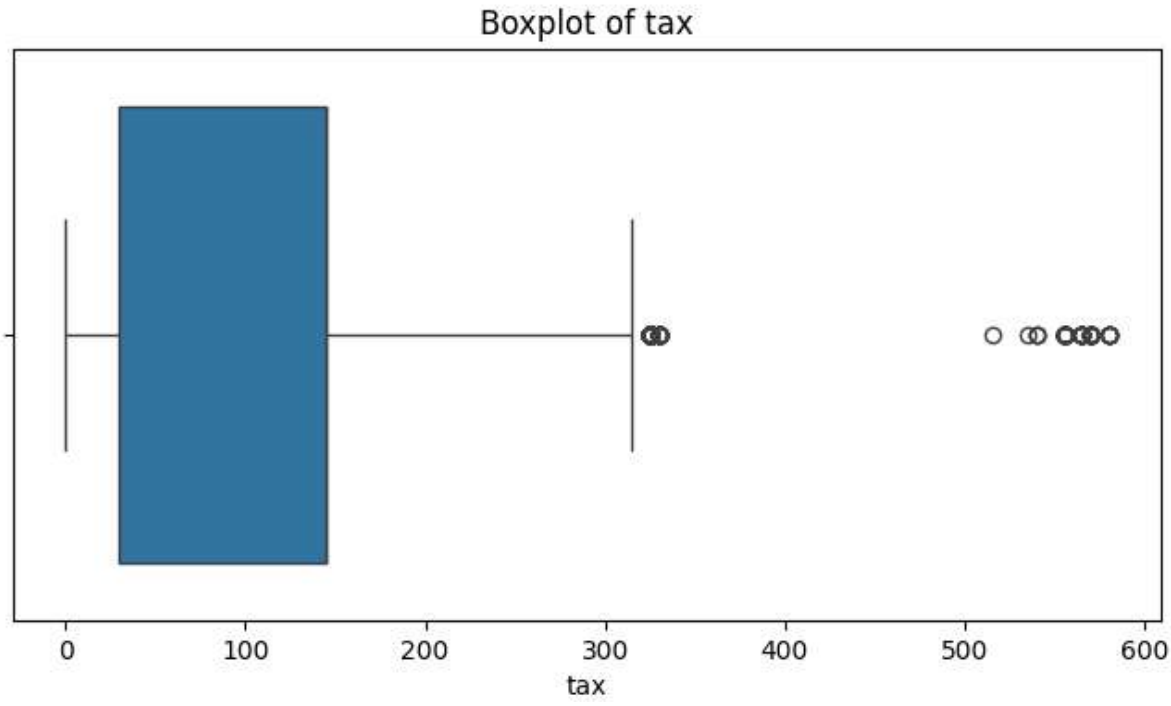
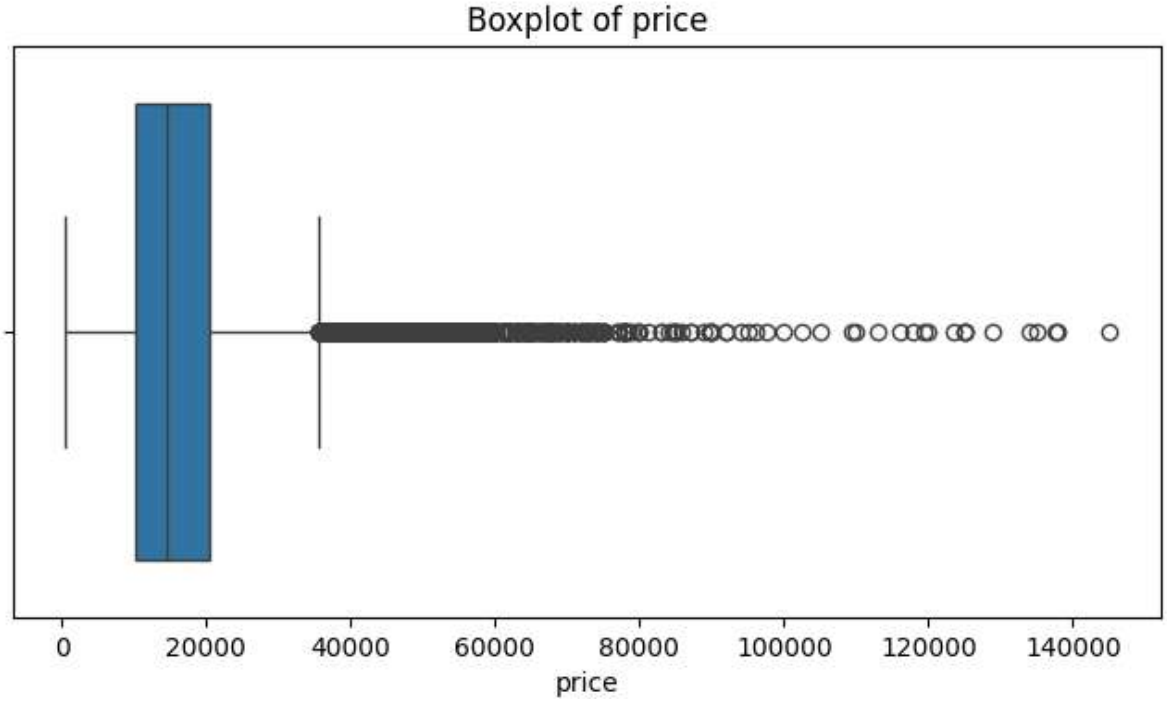
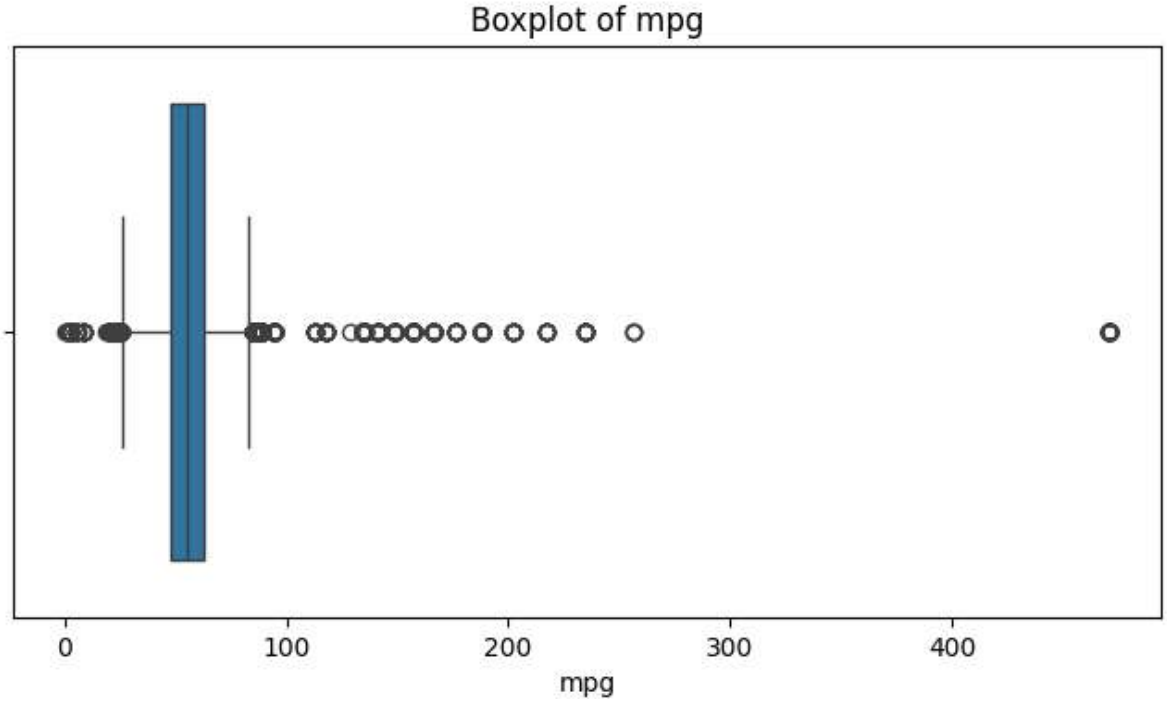
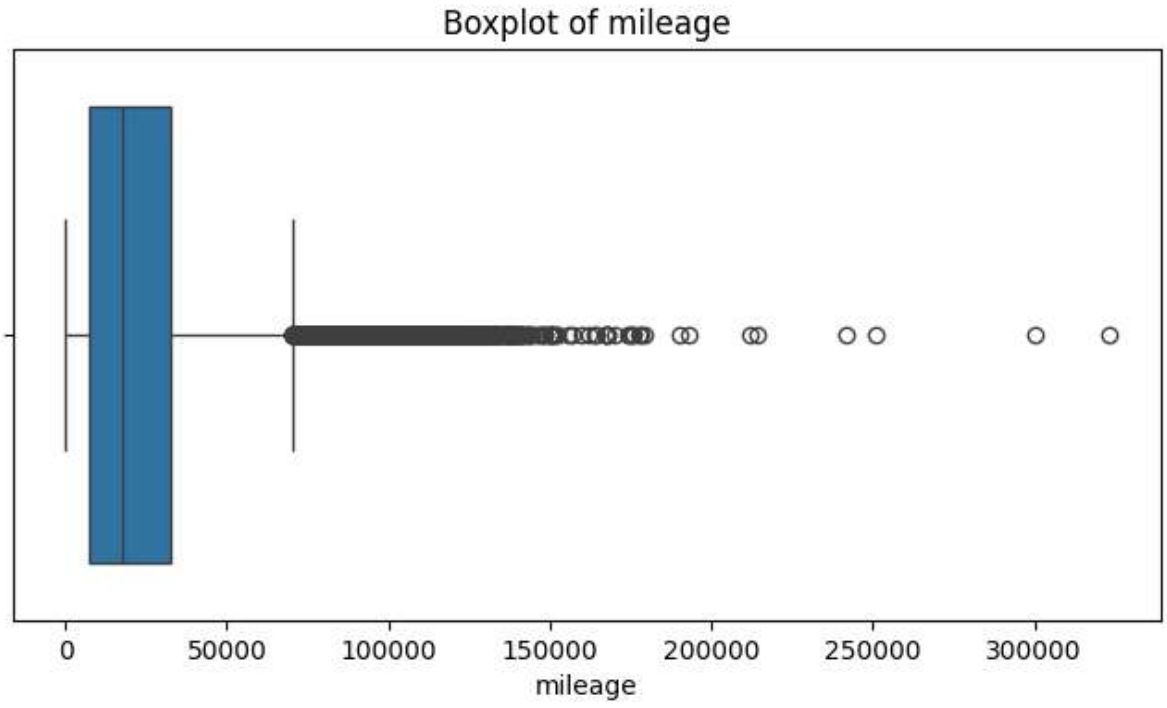

Histograms of Numeric Features
year
price
mileage
tax
mpg
engineSize

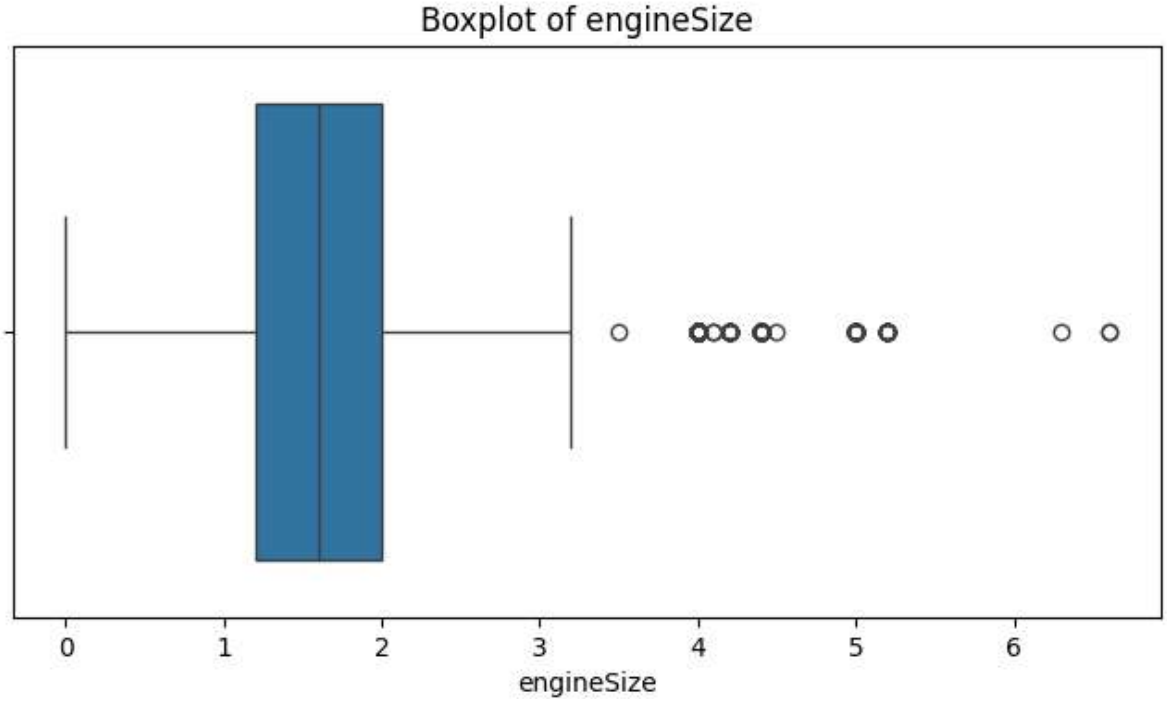

Boxplot of year
1995
2000
2005
2010
2015
2020
year

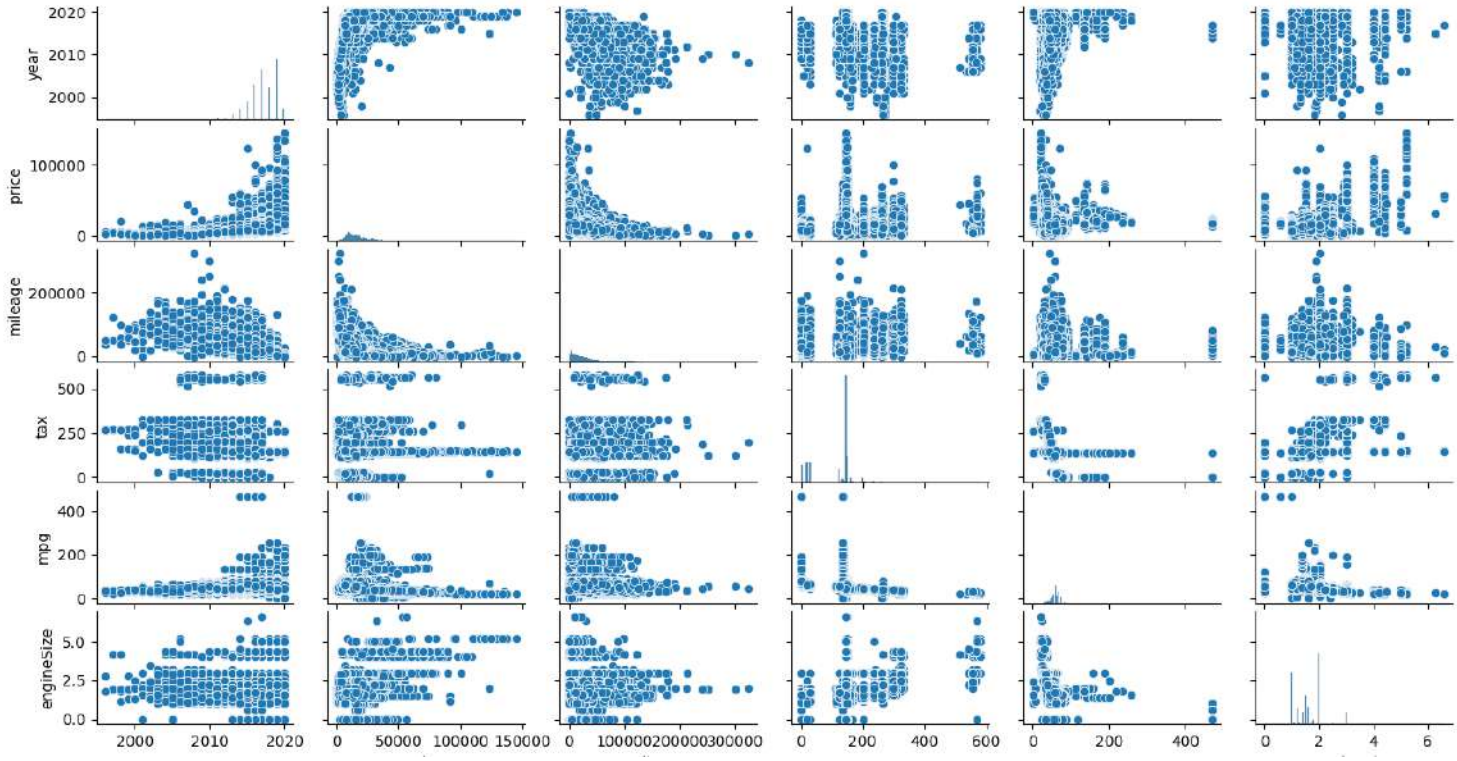

Boxplot of tax
0
100
200
300
400
500
600
tax


Boxplot of price
0
20000
40000
60000
80000
100000
120000
140000
price


Boxplot of mpg
0
100
200
300
400
mpg


Boxplot of mileage
0
50000
100000
150000
200000
250000
300000
mileage


Boxplot of engineSize
0
1
2
3
4
5
6
engineSize


year
price
mileage
tax
mpg
enginesize
2020
2010
2000
100000
0
200000
500
250
400
200
5.0
2.5
0.0
50000
150000
300000
600
6


Correlation Matrix
year
price
mileage
tax
mpg
engineSize
1.00
0.52
-0.75
0.24
-0.14
-0.03
0.52
1.00
-0.43
0.35
-0.33
0.63
-0.75
-0.43
1.00
-0.23
0.18
0.12
0.24
0.35
-0.23
1.00
-0.42
0.29
-0.14
-0.33
0.18
-0.42
1.00
-0.28
-0.03
0.63
0.12
0.29
-0.28
1.00
1.0
0.8
0.6
0.4
0.2
0.0
−0.2
−0.4
−0.6

Summary/Insights from the data: -

1. '''year -1.722457

price 2.173558

mileage 1.763542

tax -0.096783

mpg 9.824265

engineSize 1.068355

year column is Left-Skewed and price, mileage, mpg, enginesize, tax are Right-skewed'''

2. There are potential outliers in the boxplot of mpg, tax, year, engineSize
3. Correlation Insight

Year vs Mileage -0.75 Newer cars = less mileage

Price vs Engine Size +0.63 Bigger engine = higher price

Price vs Year +0.52 Newer cars = higher price

Mileage vs Price -0.43 More mileage = lower price

Tax vs MPG -0.42 Efficient cars = lower tax

MPG vs Engine Size -0.28 Bigger engine = lower MPG'''

'''Feature Pair Pattern Interpretation

Mileage vs Price Downward curve High mileage → lower price (clear inverse relationship)

Year vs Price Upward curve, newer cars → higher prices

EngineSize vs Price Moderate upward trend bigger engine → generally higher price

MPG vs EngineSize Slight downward Higher MPG usually with smaller engines

MPG vs Price Slight inverse curve Fuel-efficient cars tend to be cheaper

4. Clusters or Data Grouping

EngineSize, Tax, MPG: Show clustered points at common values

Year vs Tax or Year vs EngineSize: Chunky vertical lines, possible discrete jumps in data.'''