MA615_HW2_pdf

Yiping Jiang 9/20/2019

Class assignment:

Using the MPG dataset, which is available with the ggplot2 library, produce a document that includes the following elements: headers, text, tables, and plots.

Tables should include a comparison of city and highway mileage by the class of car and the best three car models for city and highway mileage for all the years in which data is available.

Plot the data displaying as much of the data as you can. Put continuous variables on the axes and include a locally smoothed regression line to show the relationship with mileage. Also make a box plot comparing city and highway MPG by class of car.

Table One

Table 1: Average City and Highway MPG by Car Class

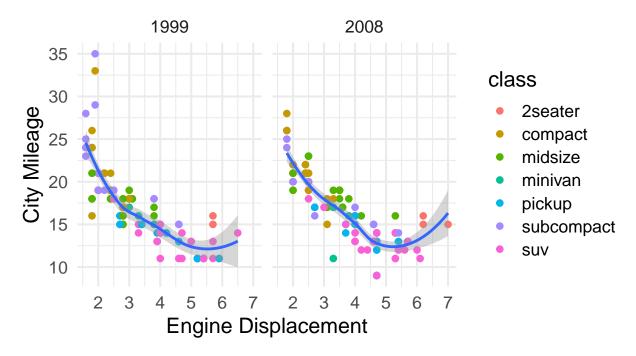
| class | City MPG | Highway MPG |
|----------------------------------|-------------------------|-------------------------|
| subcompact compact midsize | 20.37 20.13 18.76 | 28.14 28.30 27.29 |
| minivan 2seater | 15.82 15.40 | 22.36 24.80 |
| suv pickup | 13.50 13.00 | 18.13 16.88 |

Table Two

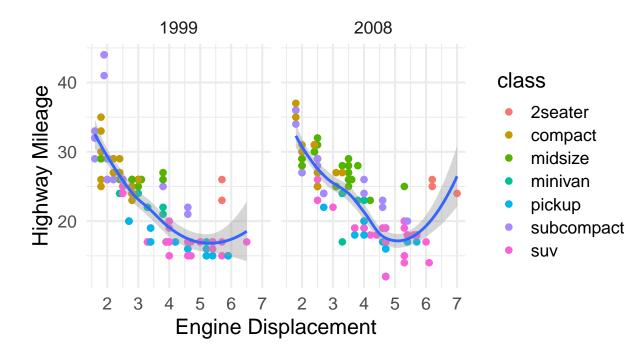
Table 2: Top 3 MPG Performing Cars: 1999, 2008

| City 1999 | | Highway 1999 | | City 2008 | | Highway 2008 | |
|--------------------------------|-------------------------|--------------------------------|-------------------------|-------------------------|----------------------|-------------------------|-------------------------|
| model | City | model | Highway | model | City | model | Highway |
| new beetle civic corolla | 26.00 24.80 24.67 | new beetle corolla civic | 35.00 32.67 31.60 | corolla civic gti | 27.0 24.0 21.5 | corolla civic gti | 36.00 33.75 29.00 |

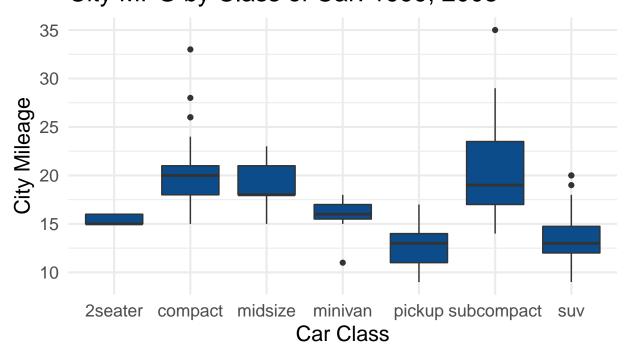
Plot One City MPG by Class of Car: 1999, 2008



Highway MPG by Class of Car: 1999, 2008



Plot Two
City MPG by Class of Car: 1999, 2008



Highway MPG by Class of Car: 1999, 2008

