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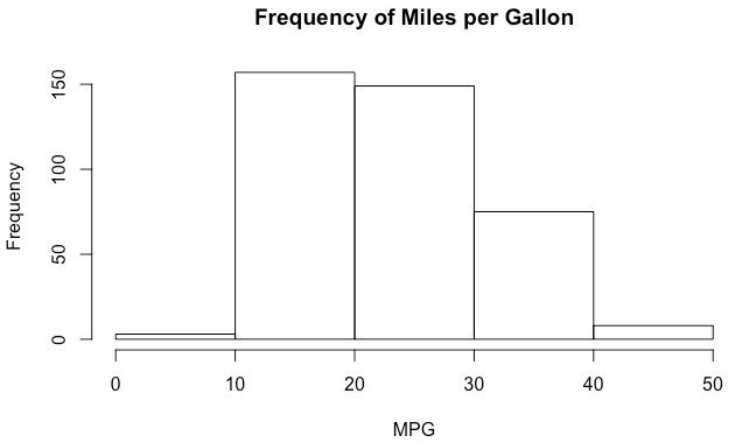
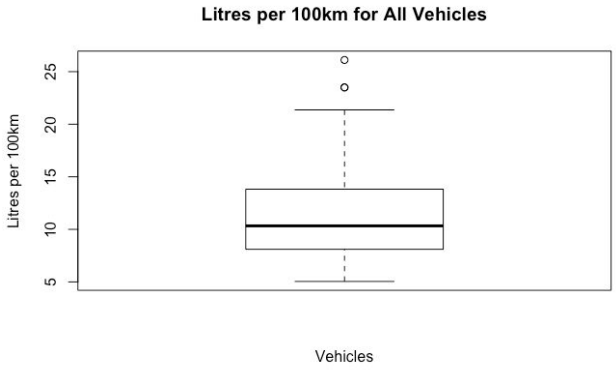
Motor Trend Road Tests

1.



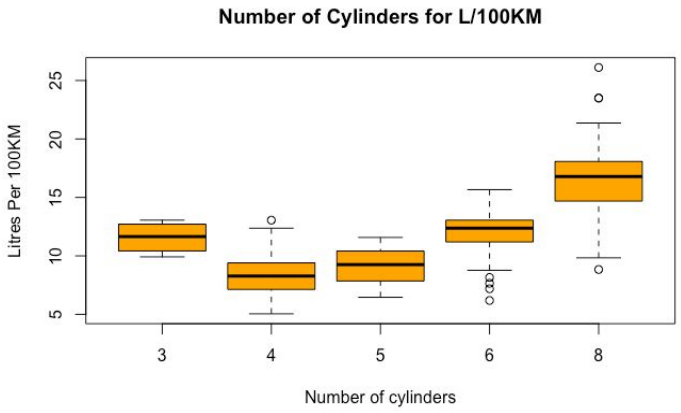
This simple bar graph shows the total number of MPG per vehicle. It states that the majority of vehicles use 10 to 30 miles per gallon. The distribution of data is in a right skewed.

2.



Instead of looking at distance as we are doing with the mpg value, we are looking at litres used, so a different attribute of a vehicle.

3.

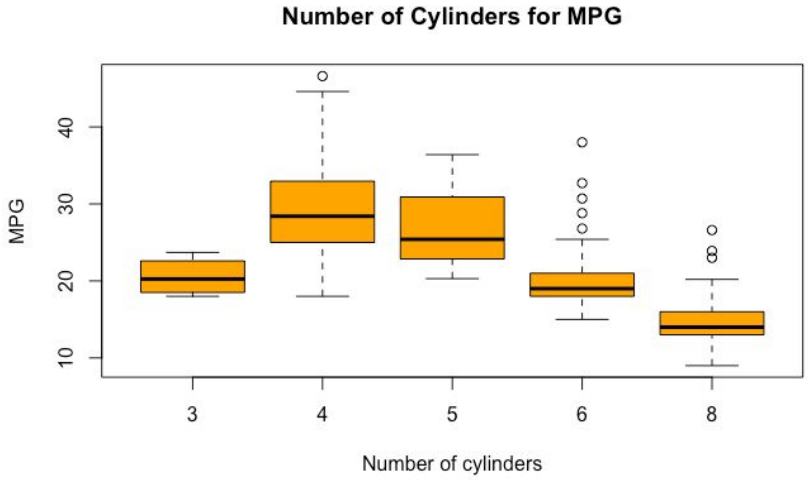


Location - With the exception of 3 cylinders, Litres Per 100KM are on an upward trend when increasing the amount of cylinders - more cylinders is worse for gas mileage

Spread - There is noticeable bigger spread on vehicles with 8 cylinders (long whiskers)

Skewness - There is little skewness in the results

4.



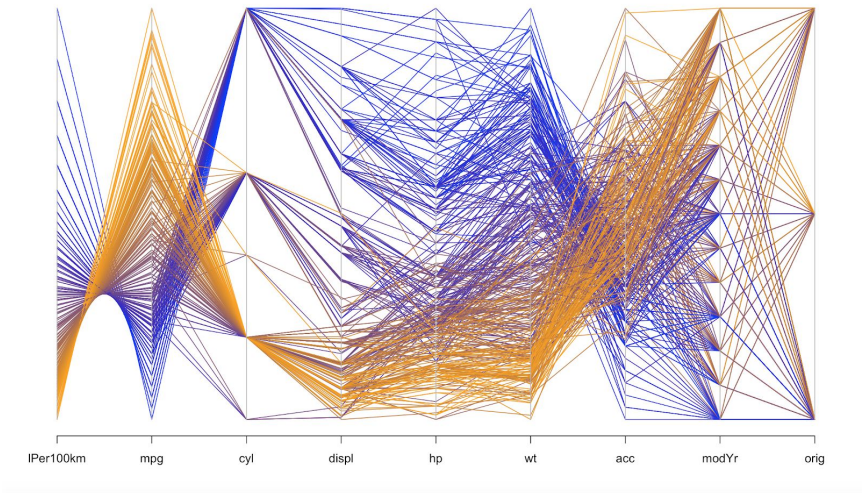
Location - With the exception of 3 cylinders, Miles Per Gallon are on a downward trend when increasing the amount of cylinders - more cylinders is worse for gas mileage

Spread - There is noticeable bigger spread on vehicles with 4 cylinders (long whiskers)

Skewness - There is some skewness in the 4 cylinders

We are seeing an opposite relationship (upward vs. downward) with cylinders for questions 3 and 4 due to reverse comparison, fuel per distance vs distance per fuel. Its connection is between amount of gas the car needs in order to go a certain distance, all depending on the amount of cylinders. So the higher amount of cylinders will most likely mean more gas and less amount of distance available to travel for the gas amount.

5.



6. Vehicles that tend to have good fuel efficiency have low displ, low hp, low wt, and high modYr.
7. lPer100km and mpg has negative correlation

   mpg and cylinder have negative correlation

   displ and hp have positive correlation

   hp and wt have positive correlation

   wt and acc have negative correlation

   There are no other strong correlations with side-by-side variables

Cartograms

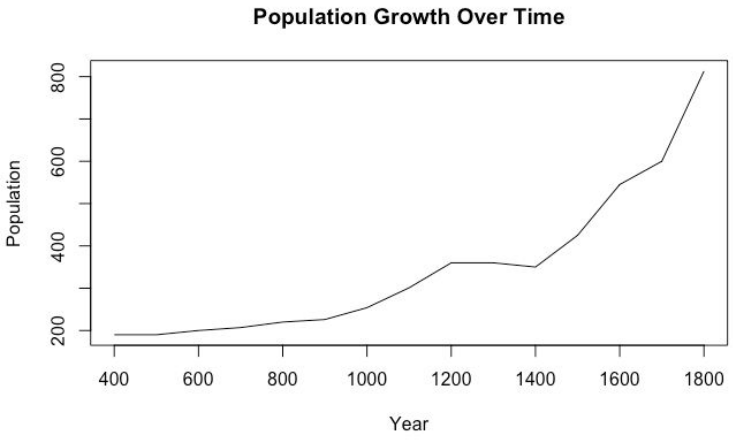
8. Removed from assignment.
9. a) From the looks of the election map blue (right-wing) seems like it had the majority of wins.

   b) The winner is not as obvious in the third graph due to seemly equal amounts of red versus blue.
10. An area would have grown in the third graph because the population in that area is quite dense whereas in an area that has shrunken means there is a low volume of people.

    The color that occurs more in the third graph is red, which means that the areas where red has more votes is where there is a higher population of people, even though it is a small area physically. That is vice versa for blue areas, meaning blue covers more land physically but has less density of people living in it.

Population

11.



12. There was a stop in population growth during 1200 to 1400 due to the Black Death which killed around 50 million people in Europe (Benedictow, 2005).

Bibliography

Benedictow, O. (2005, March 3). The Black Death: The Greatest Catastrophe Ever. Retrieved January 25, 2020, from https://www.historytoday.com/archive/black-death-greatest-catastrophe-ever