Stat 21 - Class 8

Data Visualization

Instructions

Complete the following blocks of R code to create the requested visual displays. Before you can run any of the code, make sure the following packages are installed and then use the following lines of code to call them into your working library.

```
library("datasets")
library("tidyverse")
```

The mtcars data set is taken from the 1974 Motor Trend magazine and covers fuel consumption and other aspects of automobile design for 32 different cars. Make sure you understand what the different variables are in this data set and what type of variables they are.

```
head(mtcars)
```

```
##                   mpg cyl disp  hp drat    wt  qsec vs am gear carb
## Mazda RX4         21.0   6  160 110 3.90 2.620 16.46  0  1    4    4
## Mazda RX4 Wag     21.0   6  160 110 3.90 2.875 17.02  0  1    4    4
## Datsun 710        22.8   4  108  93 3.85 2.320 18.61  1  1    4    1
## Hornet 4 Drive    21.4   6  258 110 3.08 3.215 19.44  1  0    3    1
## Hornet Sportabout 18.7   8  360 175 3.15 3.440 17.02  0  0    3    2
## Valiant           18.1   6  225 105 2.76 3.460 20.22  1  0    3    1
```

```
class(mtcars)
```

```
## [1] "data.frame"
```

The different plot types we have covered so far include: `geom_histogram(nbins=)`, `geom_bar()`, `geom_point()`, and `geom_boxplot()`.

Part 1

Create a scatterplot of miles per gallon and weight. Label the axes clearly so that the reader can understand the units.

```
#ggplot(, aes()) +
#                +
#  labs() +
#  xlab() +
#  ylab()
```

Part 2

Create a bar chart for the variable that indicates transmission type.

```
#ggplot(, aes()) +
#                +
#  labs() +
#  xlab() +
#  ylab()
```

Part 3

Create a histogram for the variable miles per gallon.

```
#ggplot(, aes()) +
#                +
#  labs() +
#  xlab() +
#  ylab()
```

Part 4

Create a box plot for the variable miles per gallon over each of the two different transmission types.

```
#ggplot(, aes()) +
#                +
#  labs() +
#  xlab() +
#  ylab()
```