Homework data viz

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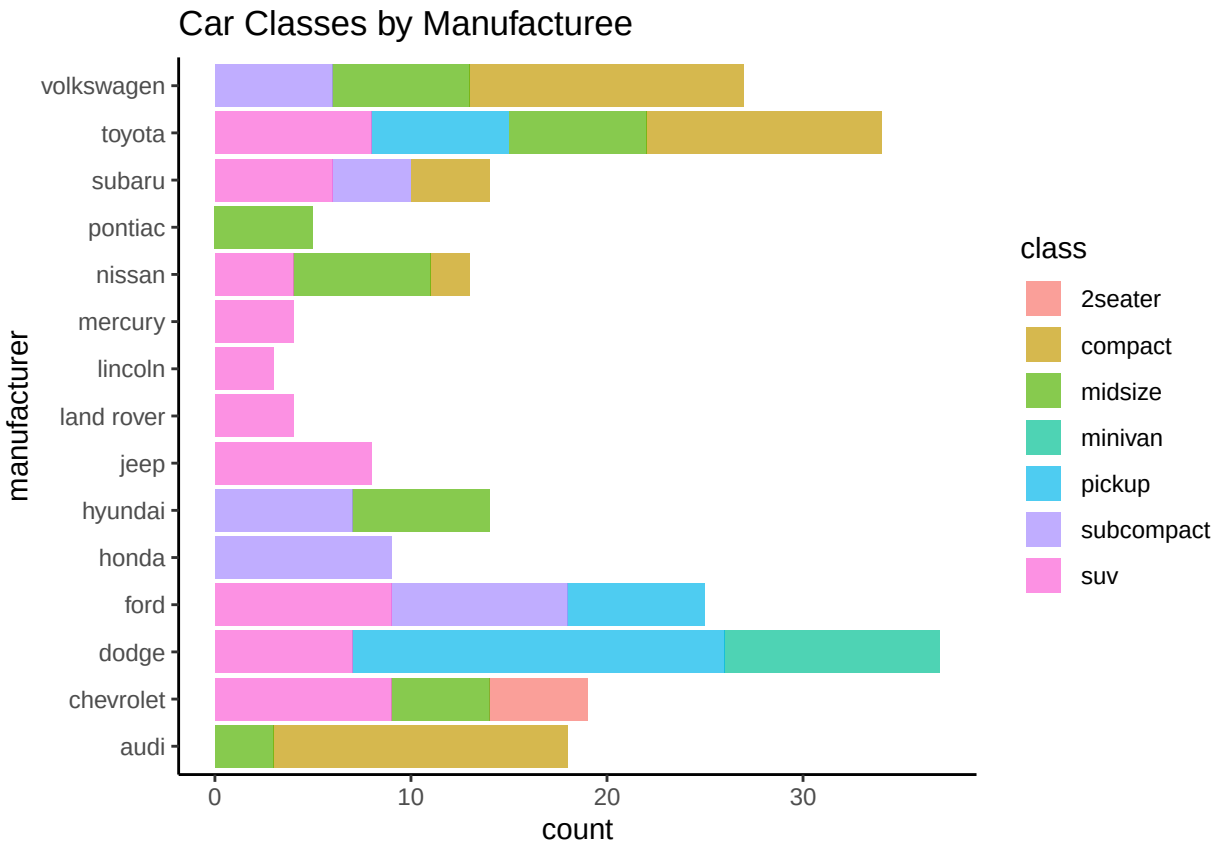
Homework

Explore data

```
## # A tibble: 6 x 11
##   manufacturer model displ  year   cyl trans      drv     cty   hwy fl    class
##   <chr>        <chr> <dbl> <int> <int> <chr>      <chr> <int> <int> <chr> <chr>
## 1 audi         a4      1.8  1999     4 auto(l5)   f        18    29 p     compa~
## 2 audi         a4      1.8  1999     4 manual(m5) f        21    29 p     compa~
## 3 audi         a4      2    2008     4 manual(m6) f        20    31 p     compa~
## 4 audi         a4      2    2008     4 auto(av)   f        21    30 p     compa~
## 5 audi         a4      2.8  1999     6 auto(l5)   f        16    26 p     compa~
## 6 audi         a4      2.8  1999     6 manual(m5) f        18    26 p     compa~
```

First chart

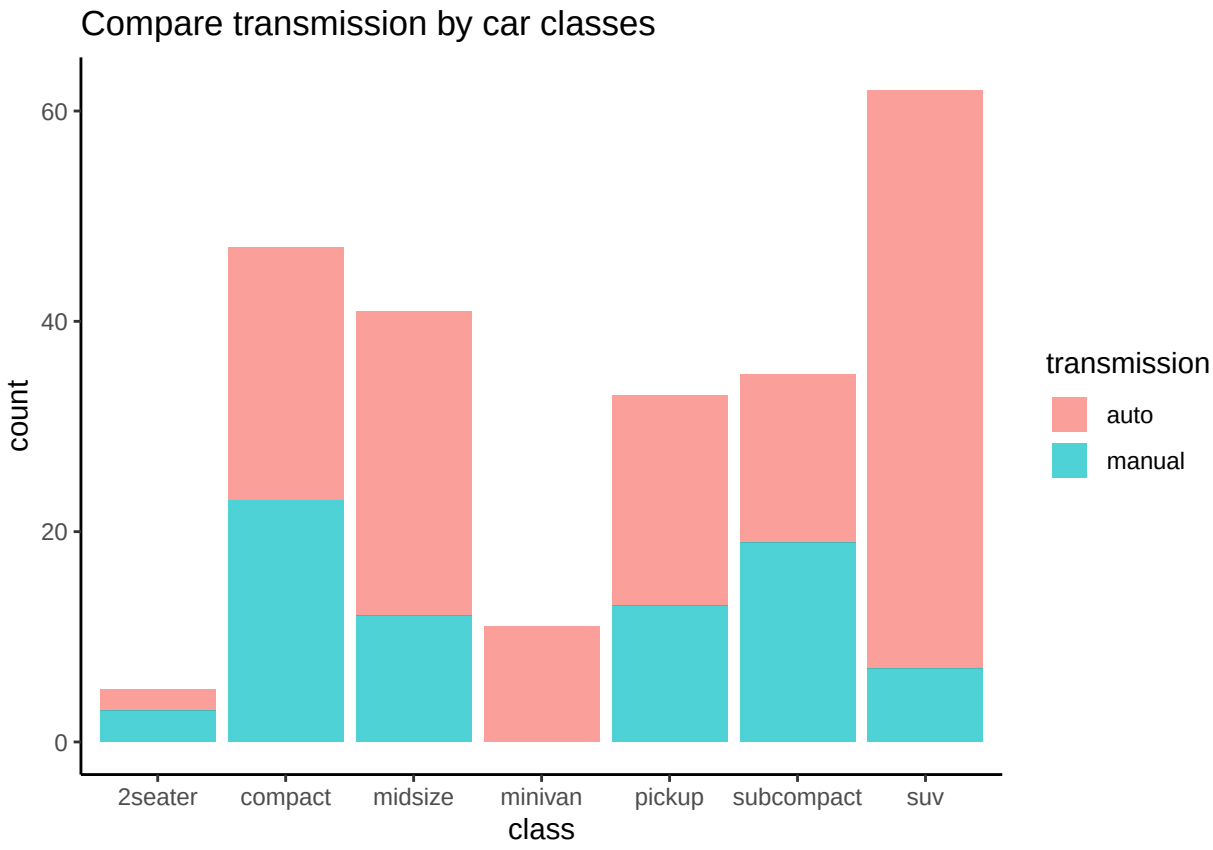
```
ggplot(mpg, aes(y = manufacturer , fill = class)) +
    geom_bar(linewidth = 3, alpha = 0.7)+
    theme_classic()+
    labs(title="Car Classes by Manufacturee")
```



Second chart

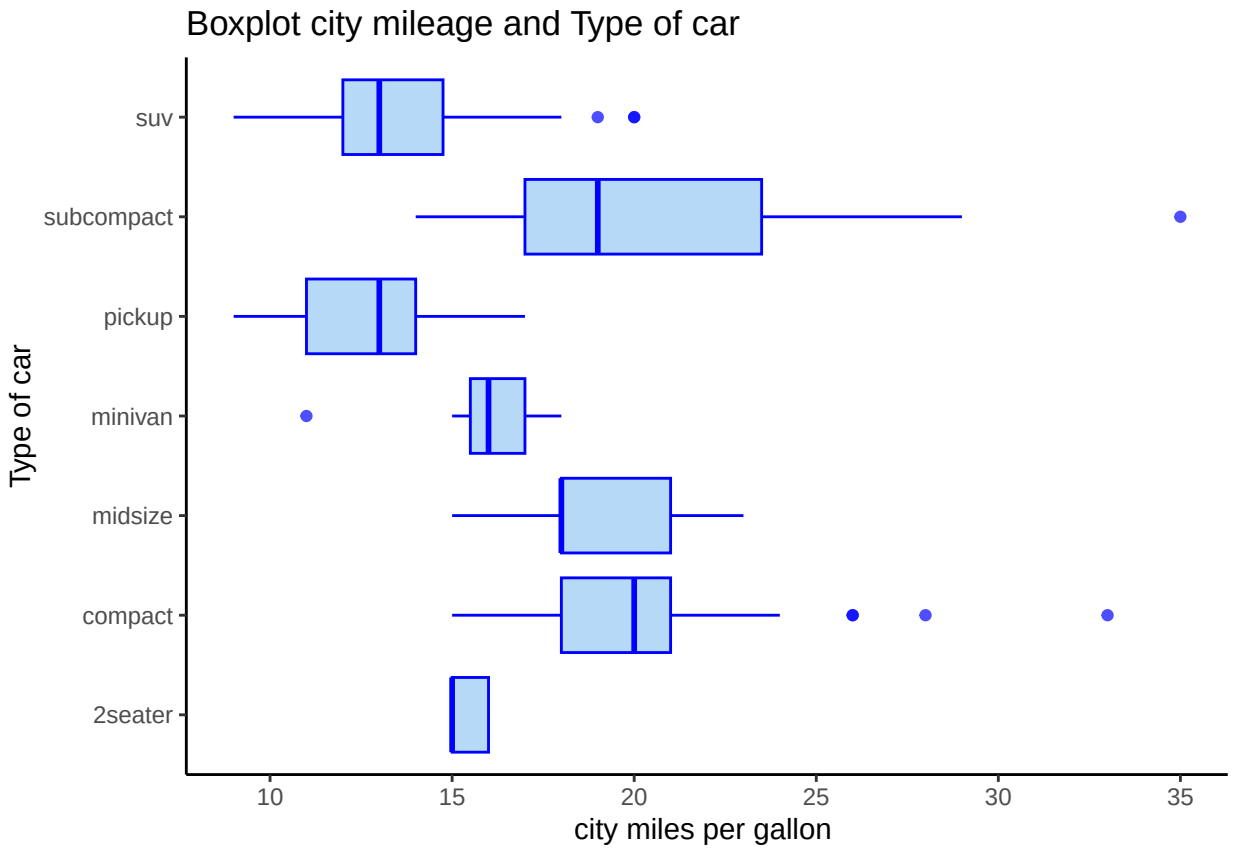
```
car_class_trans<-mpg %>%
  mutate(transmission = if_else(grepl("^a",trans) == TRUE, "auto","manual"))

ggplot(car_class_trans, aes(x = class, fill = transmission))+
geom_bar(linewidth = 3, alpha = 0.7)+
theme_classic()+
labs(title="Compare transmission by car classes")
```



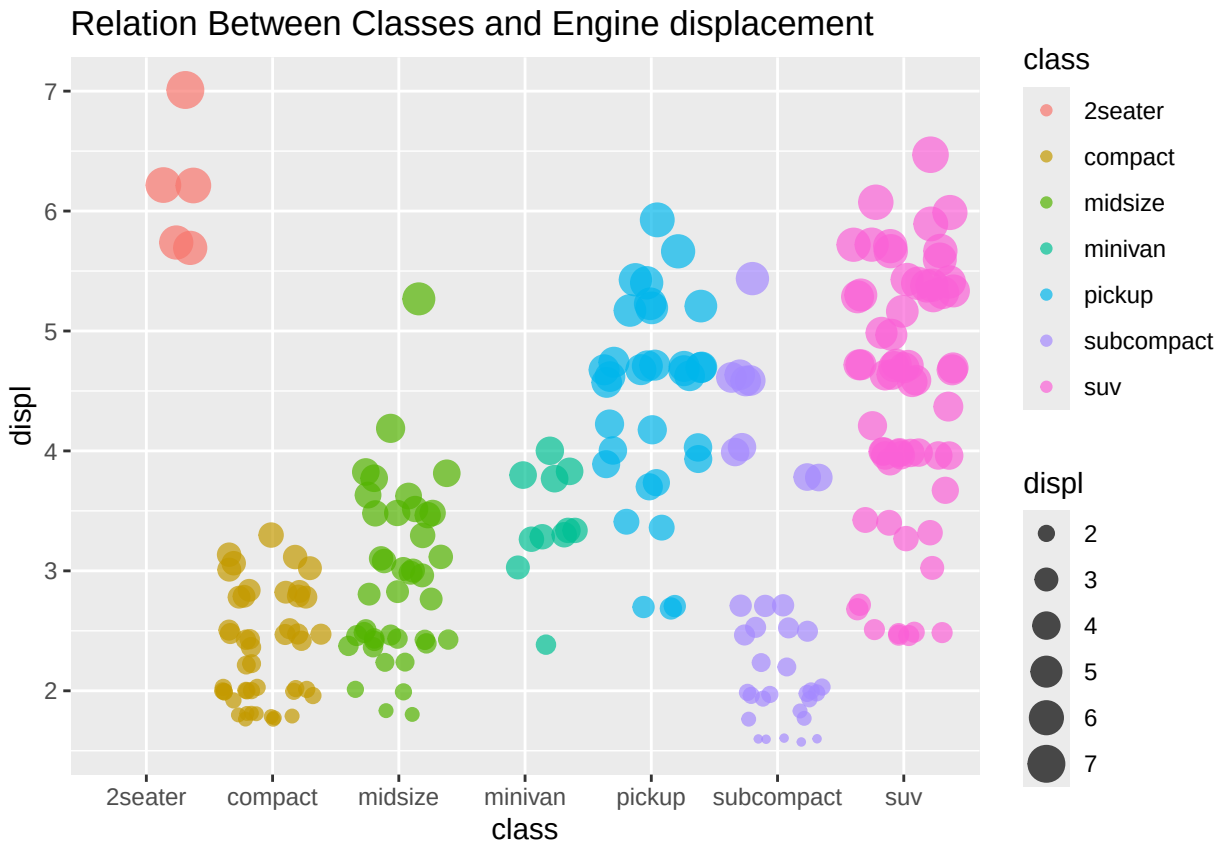
Third chart

```
ggplot(mpg, aes(x = cty, y = class))+
geom_boxplot(color="blue", fill="#96C9F4", alpha=0.7) +
theme_classic() +
labs(title = "Boxplot city mileage and Type of car ",
x = "city miles per gallon ",
y = "Type of car")
```



Fourth chart

```
ggplot(mpg, aes(class,displ,color = class, size = displ))+
geom_jitter(alpha = 0.7) +
labs(title =  "Relation Between Classes and Engine displacement")
```

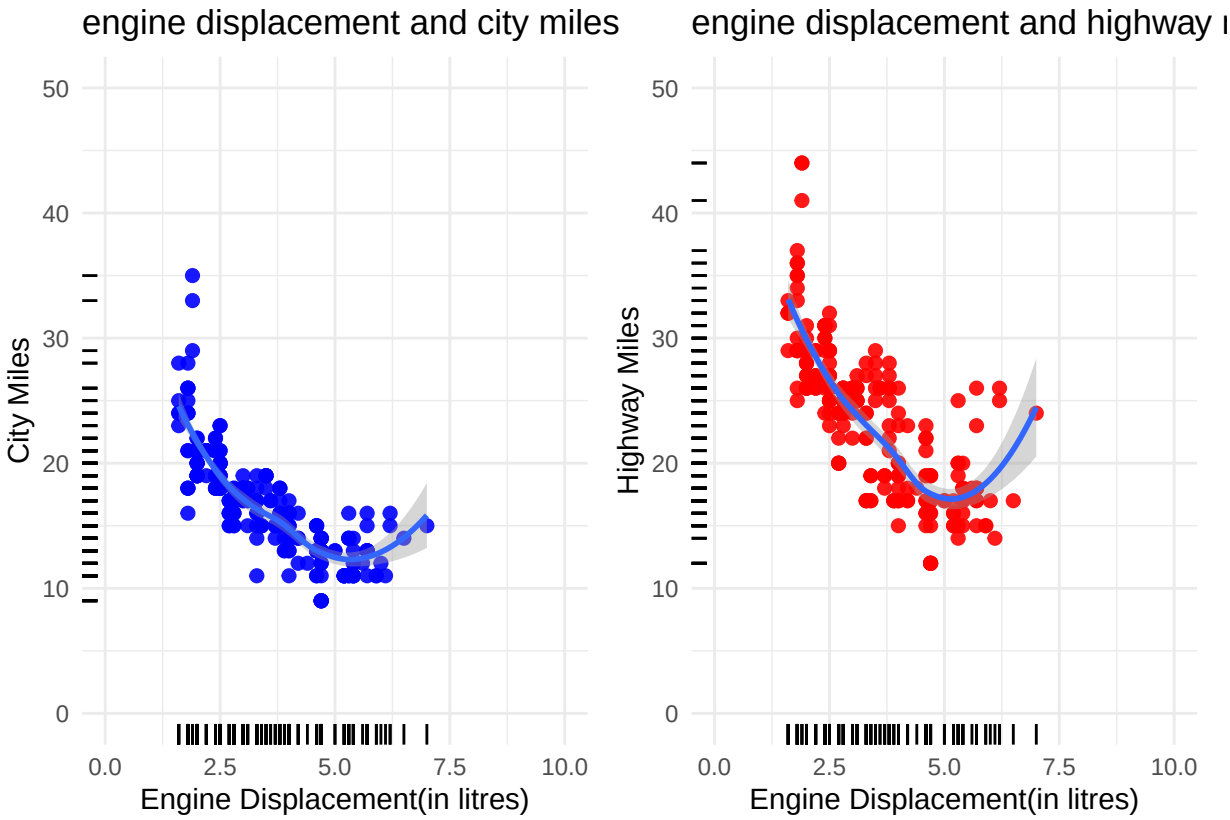


Fifth chart

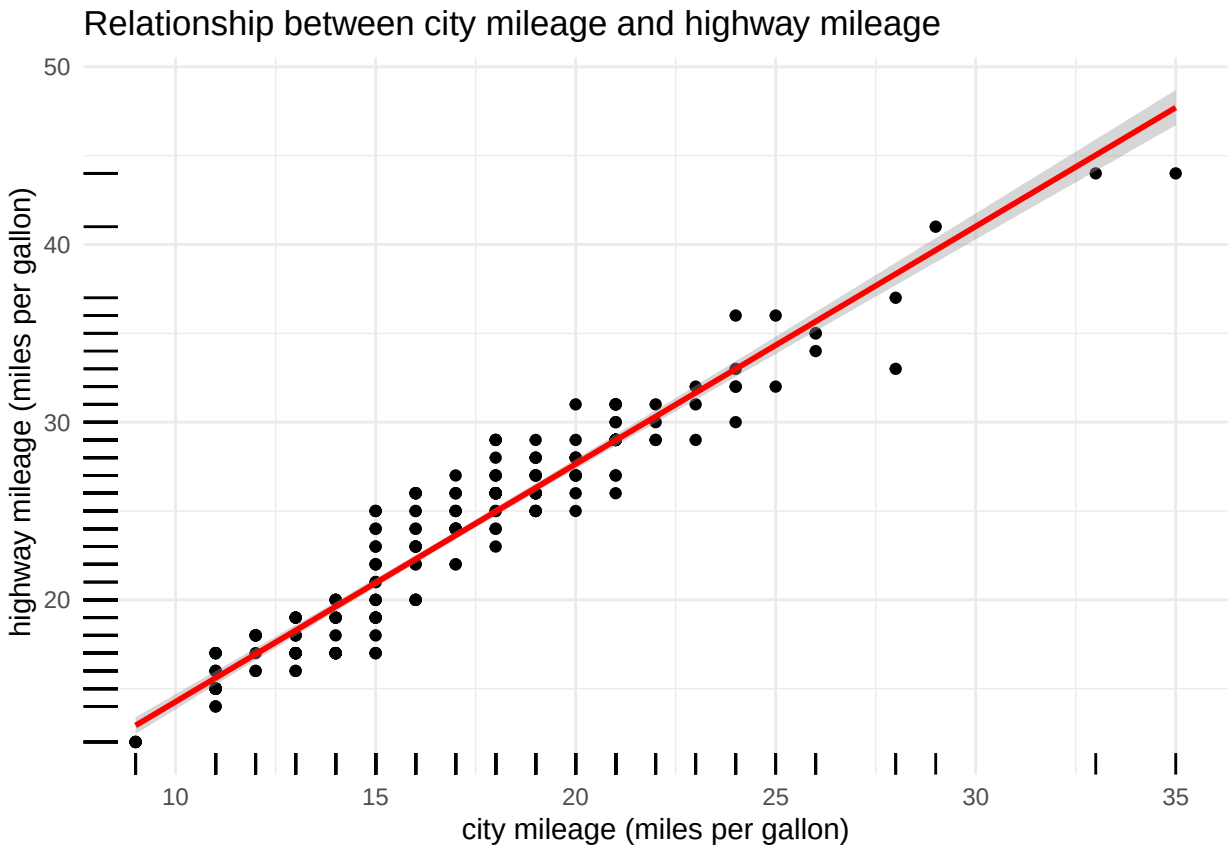
```
ct <- ggplot(mpg,aes(displ,cty))+
  geom_point(size = 2, alpha = 0.9 ,color = "blue")+
  geom_smooth()+
  geom_rug()+
    labs(title = "engine displacement and city miles",
       x = "Engine Displacement(in litres)",
       y = "City Miles")+
   coord_cartesian(xlim = c(0,10), ylim = c(0, 50))+
  theme_minimal()

hw <- ggplot(mpg,aes(displ,hwy))+
  geom_point(size = 2, alpha = 0.9 ,color = "red")+
  geom_smooth()+
  geom_rug()+
    labs(title = "engine displacement and highway miles",
       x = "Engine Displacement(in litres)",
       y = "Highway Miles")+
   coord_cartesian(xlim = c(0,10) ,ylim = c(0, 50))+
  theme_minimal()

ct + hw
```




```
ggplot(mpg, aes(cty , hwy))+
geom_point() +
geom_smooth(method = "lm", col="red") +
geom_rug() +
theme_minimal() +
labs(title = "Relationship between city mileage and highway mileage",
x= "city mileage (miles per gallon)",
y=" highway mileage (miles per gallon)")
```




```
## `geom_smooth()` using formula = 'y ~ x'
```