# Homework

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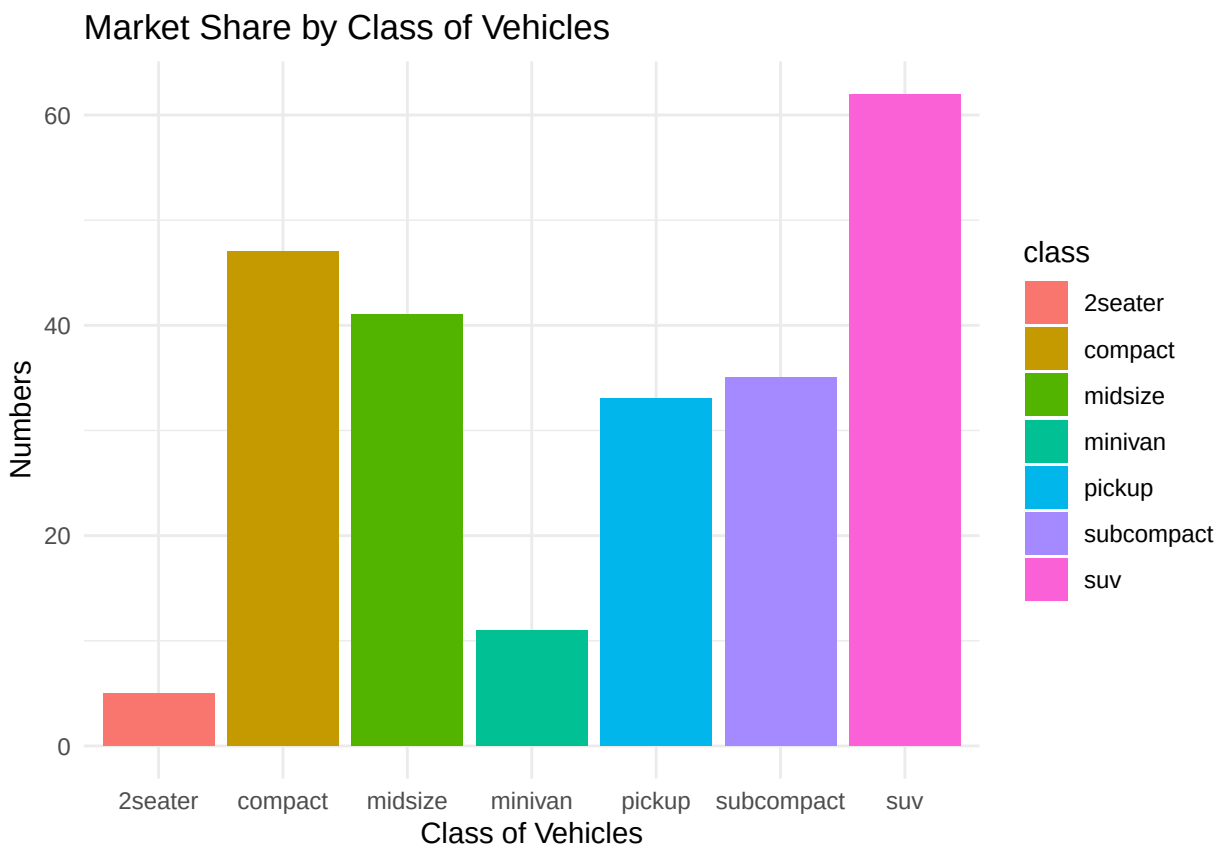
## Homework

### 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~
```

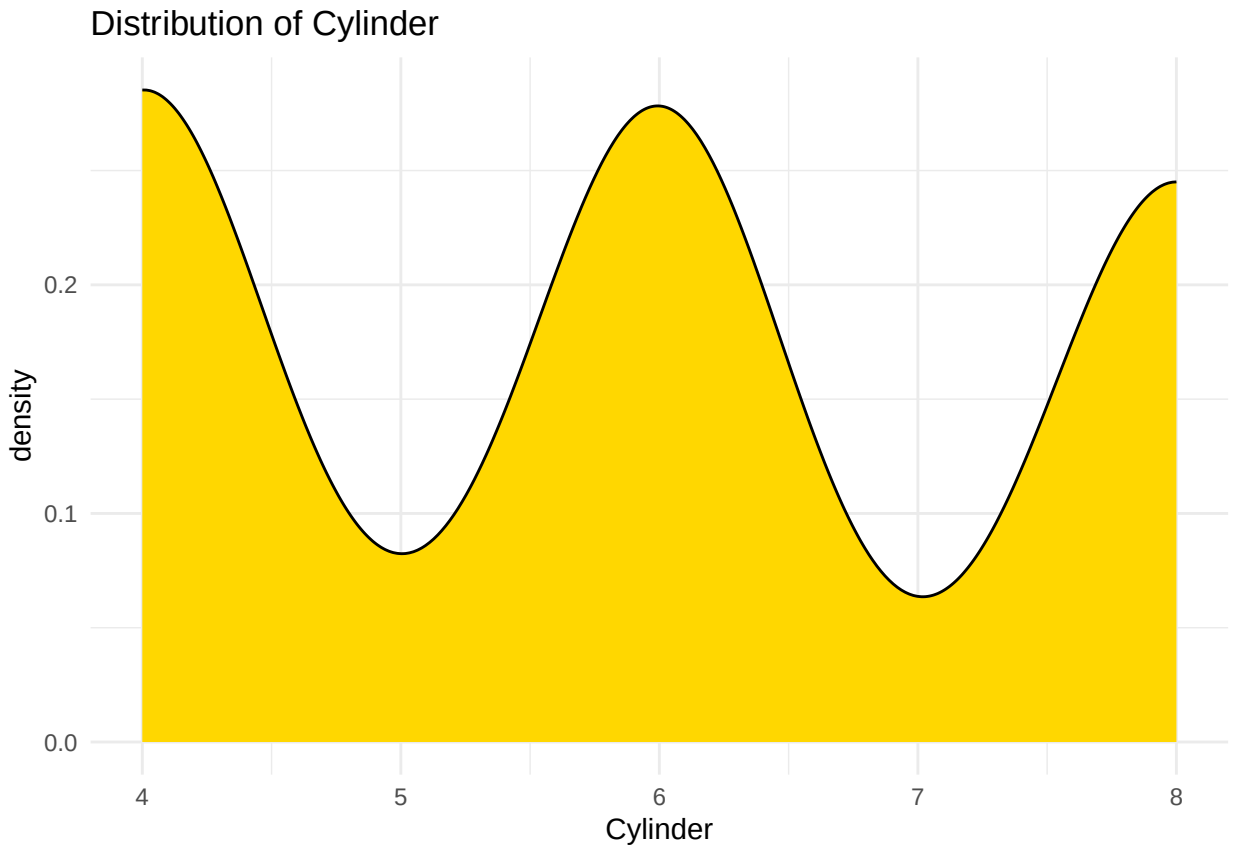
### 1. Market Share by Class of Vehicles

```
ggplot(mpg, aes(class, fill=class)) +
  geom_bar() +
  theme_minimal() +
  labs(
    title="Market Share by Class of Vehicles",
    x="Class of Vehicles",
    y="Numbers"
  )
```



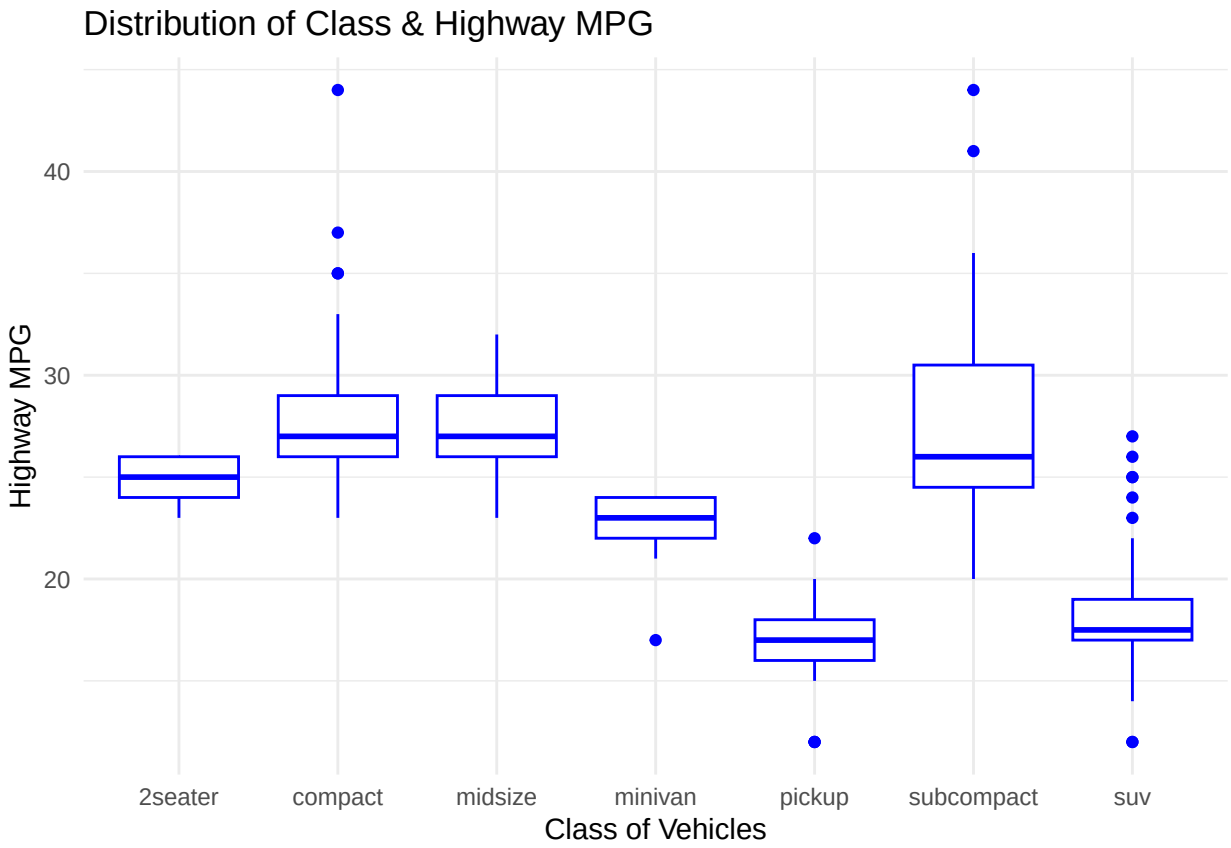

## 2. Distribution of cylinder

```
ggplot(mpg, aes(cyl)) +
  geom_density(fill="gold") +
  theme_minimal() +
  labs(
    title="Distribution of Cylinder",
    x="Cylinder"
  )
```




### 3. Distribution of Class & Highway MPG

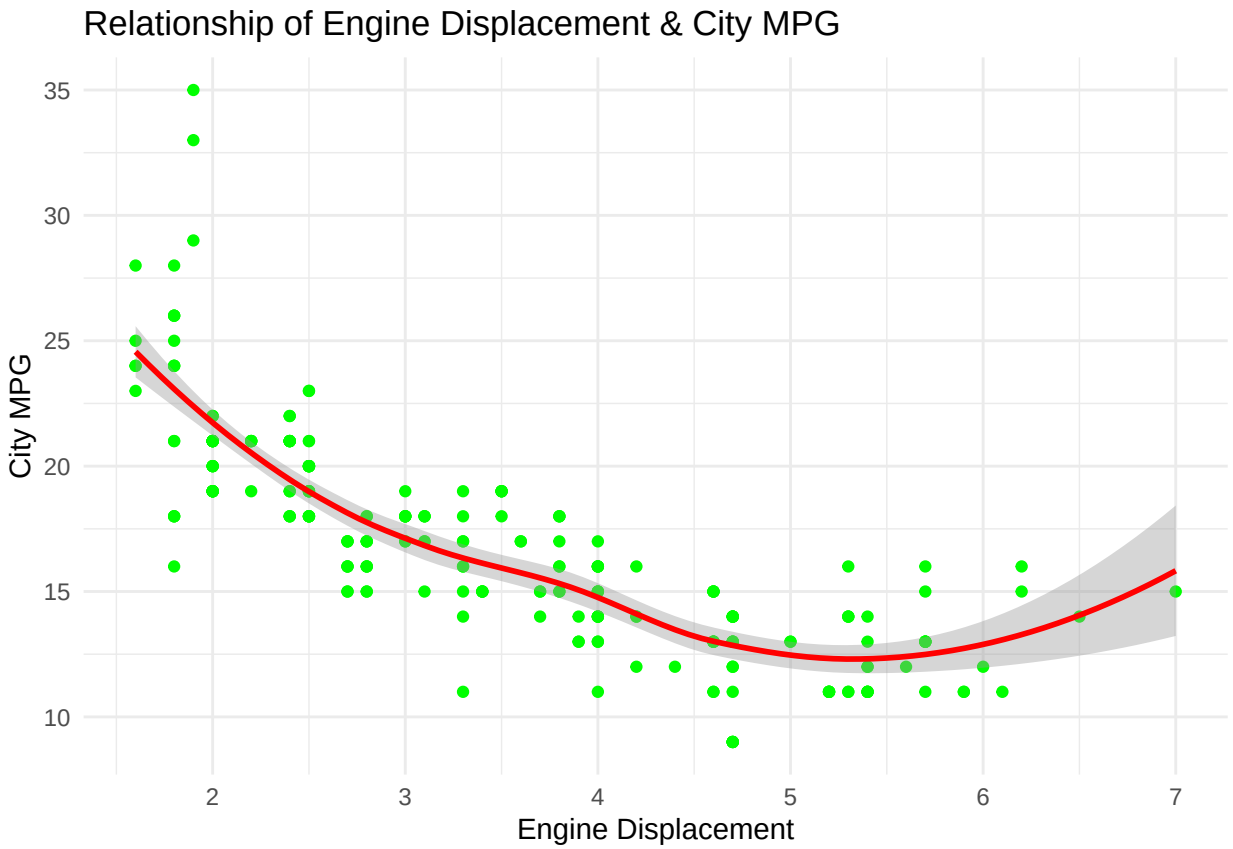
```
ggplot(mpg, aes(class, hwy)) +
  geom_boxplot(color="blue") +
  theme_minimal() +
  labs(
    title="Distribution of Class & Highway MPG",
    x="Class of Vehicles",
    y="Highway MPG"
  )
```




### 4. Relationship of Engine Displacement & City MPG

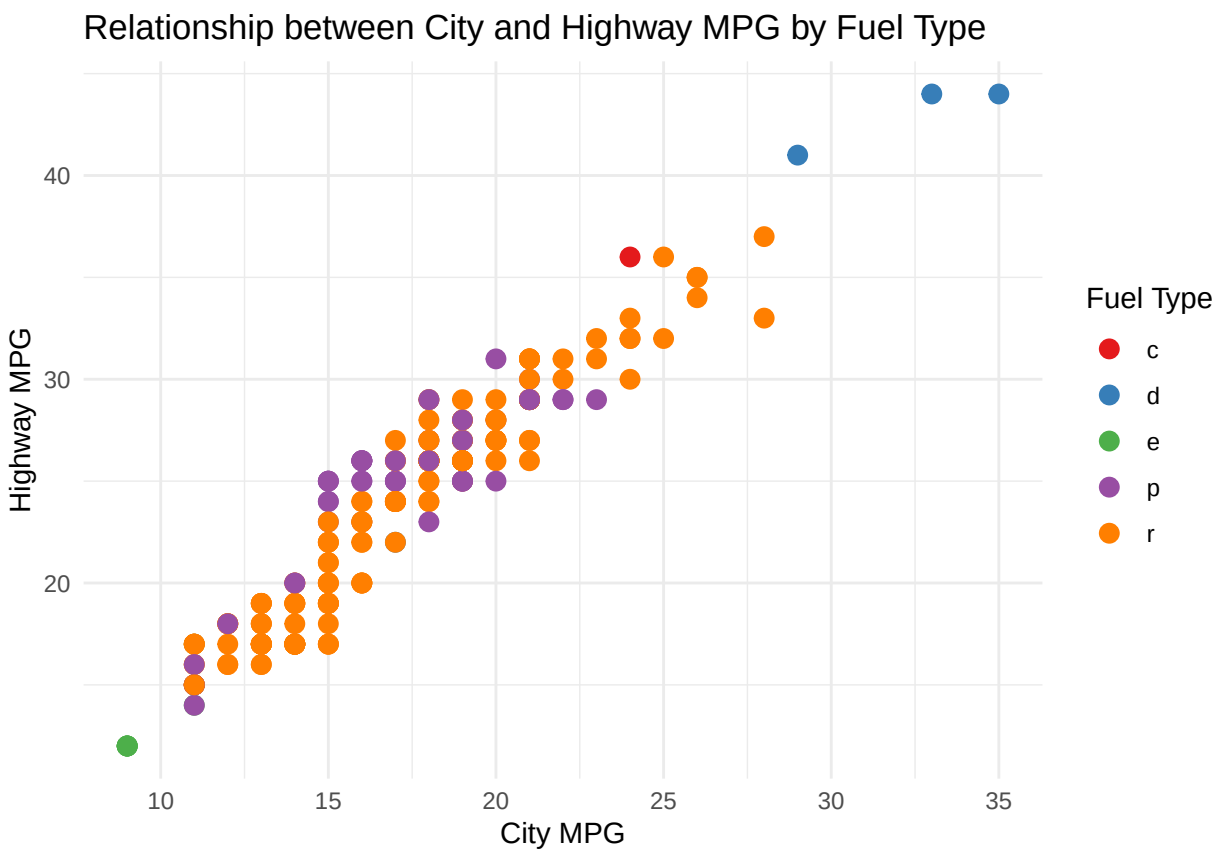
```
ggplot(mpg, aes(displ, cty))+
  geom_point(color="green") +
  geom_smooth(color="red") +
  theme_minimal() +
  labs(
    title="Relationship of Engine Displacement & City MPG",
    x="Engine Displacement",
    y="City MPG"
  )
```

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




### 5. Relationship between City and Highway MPG by Fuel Type

```
ggplot(mpg, aes(cty, hwy, color = fl)) +
  geom_point(size = 3) +
  labs(title = "Relationship between City and Highway MPG by Fuel Type",
       x = "City MPG",
       y = "Highway MPG",
       color = "Fuel Type") +
  scale_colour_brewer(palette = "Set1") +
  theme_minimal()
```


Relationship between City and Highway MPG by Fuel Type
Highway MPG
City MPG
40
30
20
10
15
20
25
30
35
Fuel Type
c
d
e
p
r