Homework_DataVisualize_Piano

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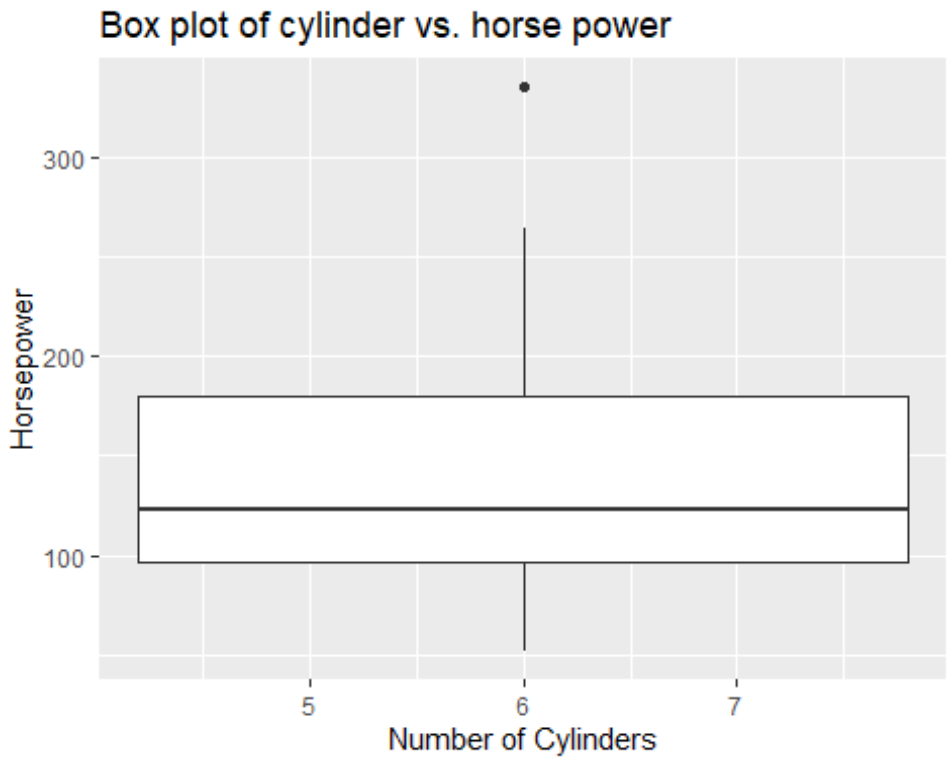
Call the library

```
## Warning: package 'tidyverse' was built under R version 4.3.2

## Warning: package 'lubridate' was built under R version 4.3.2

## Warning: package 'ggthemes' was built under R version 4.3.2
```

1.

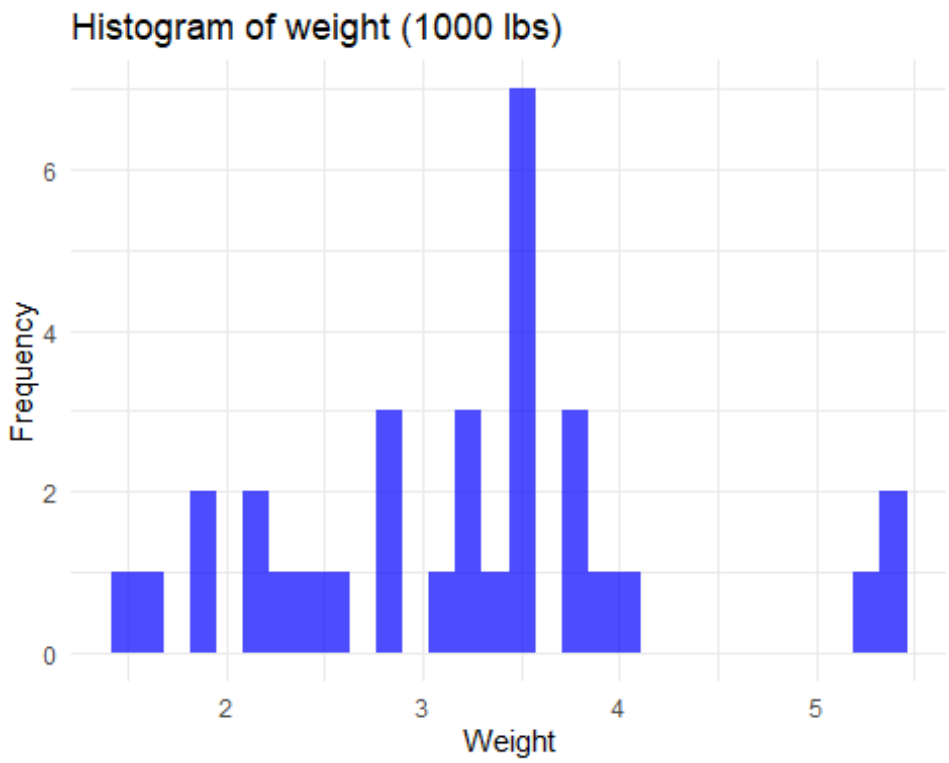
```
ggplot(mtcars,aes(x=cyl,y=hp))+
  geom_boxplot()+
  labs(
    title = "Box plot of cylinder vs. horse power",
    x = "Number of Cylinders",
       y = "Horsepower")

## Warning: Continuous x aesthetic
## ℹ did you forget `aes(group = ...)`?
```



2.

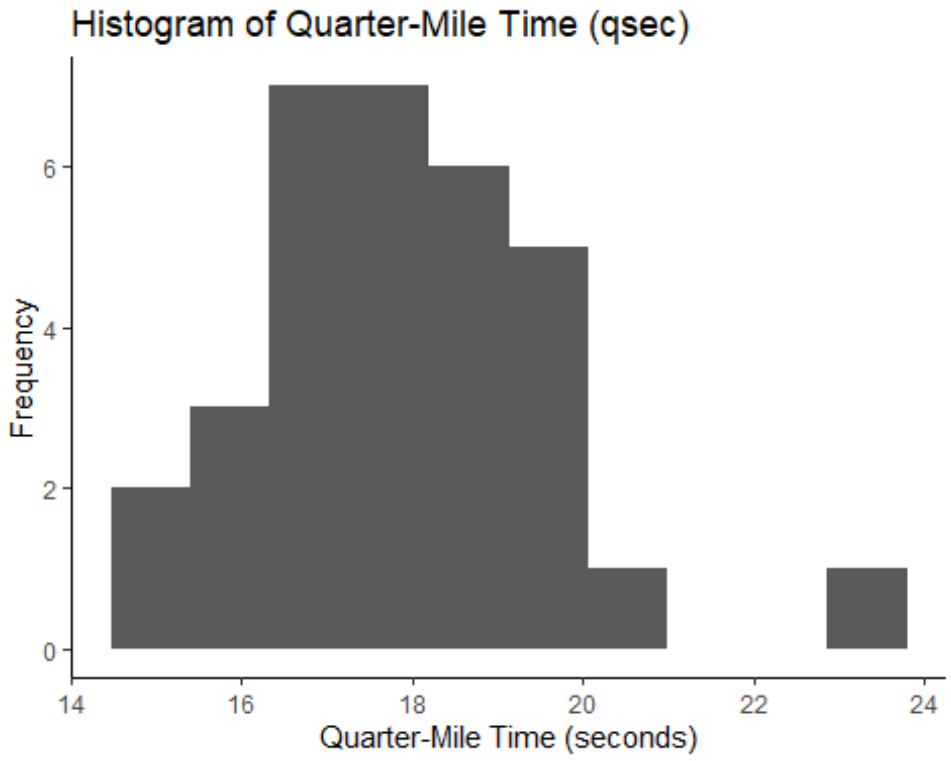
```
ggplot(mtcars,aes(wt))+
  geom_histogram(bin=10, fill = "blue",alpha=0.7)+
  theme_minimal()+
  labs(
    title = "Histogram of weight (1000 lbs)",
    x = "Weight",
    y = "Frequency"
  )
```

```
## Warning in geom_histogram(bin = 10, fill = "blue", alpha = 0.7): Ignoring
## unknown parameters: `bin`
```



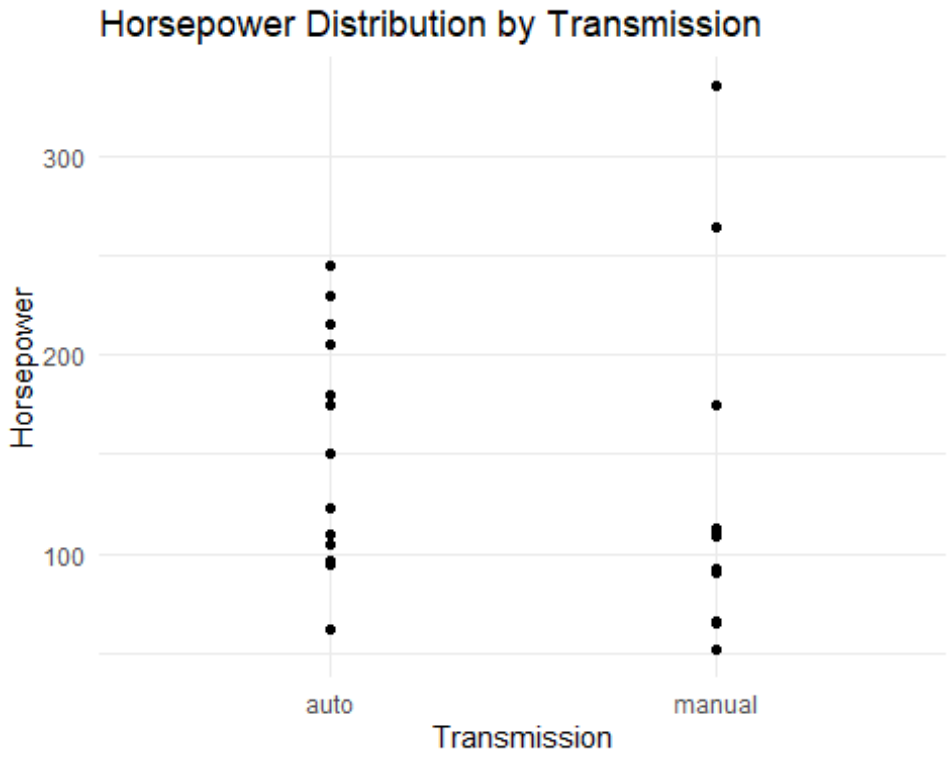
3

```
ggplot(mtcars, aes(x = qsec)) +
  geom_histogram(bins = 10) +
  theme_classic()+
  labs(title = "Histogram of Quarter-Mile Time (qsec)",
       x = "Quarter-Mile Time (seconds)",
       y = "Frequency")
```



4

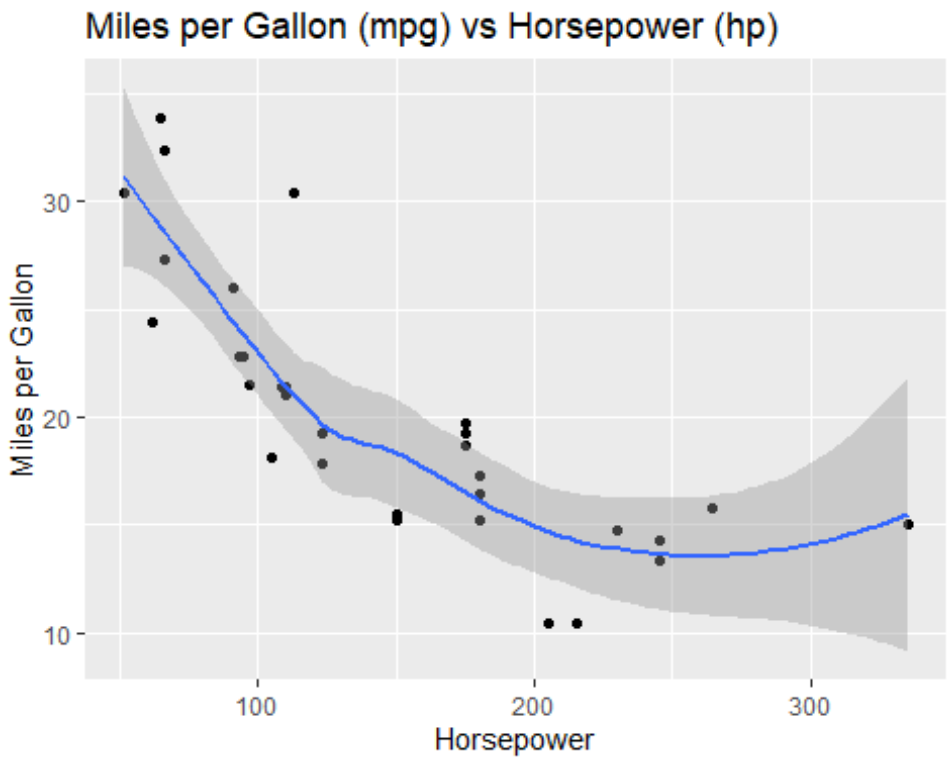
```
new <- mtcars %>%
  mutate(am = if_else(am==0,"auto","manual"))
ggplot(new, aes(x= am , y = hp))+
geom_point()+
   labs(title = "Horsepower Distribution by Transmission", x =
"Transmission", y = "Horsepower") +
  theme_minimal() +
  scale_x_discrete()
```



5

```
ggplot(mtcars, aes(x = hp, y = mpg)) +
  geom_point() +
  geom_smooth(method = "loess") +
  labs(title = "Miles per Gallon (mpg) vs Horsepower (hp)",
       x = "Horsepower",
       y = "Miles per Gallon")
```

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


Miles per Gallon (mpg) vs Horsepower (hp)
Miles per Gallon
30
20
10
100
200
300
Horsepower