Lab 1 - Data visualization

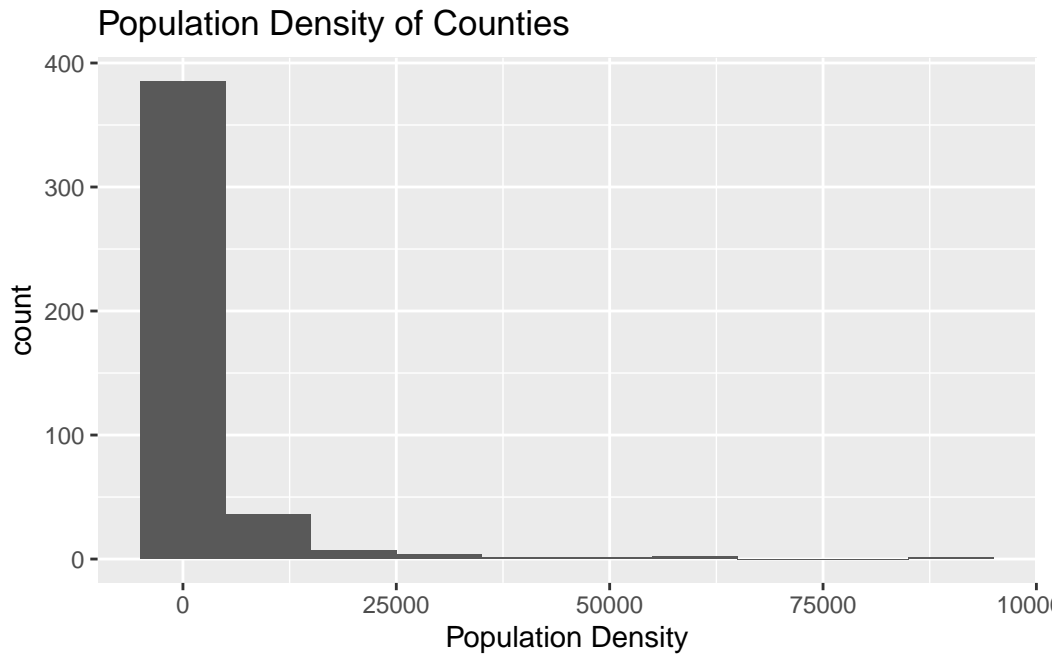## Lauren Valle

Load Packages

```
library(tidyverse)
```

```
Warning in system("timedatectl", intern = TRUE): running command 'timedatectl'
had status 1
```

```
library(viridis)
```
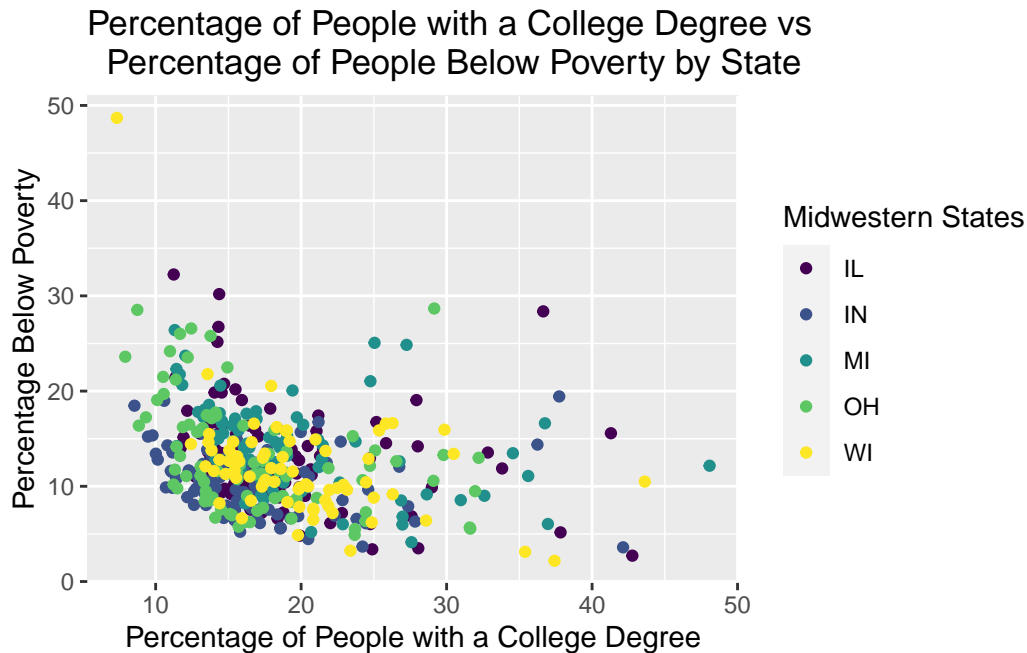
Exercise 1

```
ggplot(midwest)+
  geom_histogram( aes(popdensity), binwidth = 10000)+
labs(
  x = "Population Density",
  y = "count",
  title = "Population Density of Counties"
)
```

Population Density of Counties

This histogram is right skewed. It looks like there is an outlier in between x=7500 and x = 100000

Exercise 2

```
ggplot(data = midwest,
       mapping = aes(x = percollege, y = percbelowpoverty, color = state)) +
  geom_point()+
  labs(
  x = "Percentage of People with a College Degree",
  y = "Percentage Below Poverty",
  title = "Percentage of People with a College Degree vs
  Percentage of People Below Poverty by State",
  color = "Midwestern States"
)+
  scale_color_viridis_d()
```

Percentage of People with a College Degree vs
Percentage of People Below Poverty by State

Exercise 3

This is a general trend among the states included in the dataset that those below the poverty line are less likely to obtain a college degree.

Exercise 4

```
ggplot(data = midwest,
       mapping = aes(x = percollege, y = percbelowpoverty, color = state)) +
  geom_smooth(se = FALSE)+
  geom_point(alpha = 0.5)+
  labs(
  x = "Percentage of People with a College Degree",
  y = "Percentage Below Poverty",
  title = "Percentage of People with a College Degree vs
  Percentage of People Below Poverty by State",
  color = "Midwestern States"
)+
  facet_wrap("state")
```

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

Percentage of People with a College Degree vs
Percentage of People Below Poverty by State

Exercise 5

Exercise 6

Exercise 7