

assignment_04_SyversonLuke.R

syver

2023-04-23

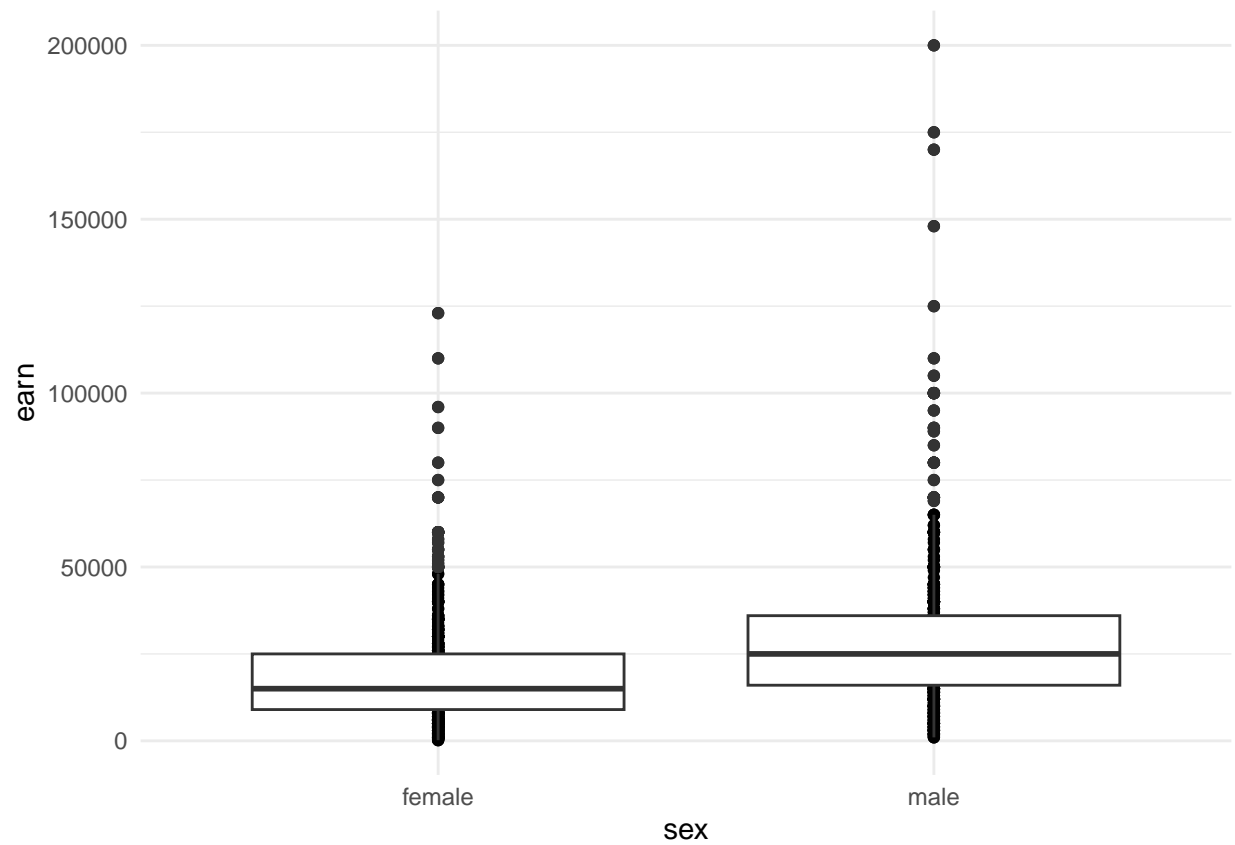
```
# Assignment: ASSIGNMENT 4
# Name: Syverson, Luke
# Date: 2023-04-23

## Load the ggplot2 package
library(ggplot2)
theme_set(theme_minimal())

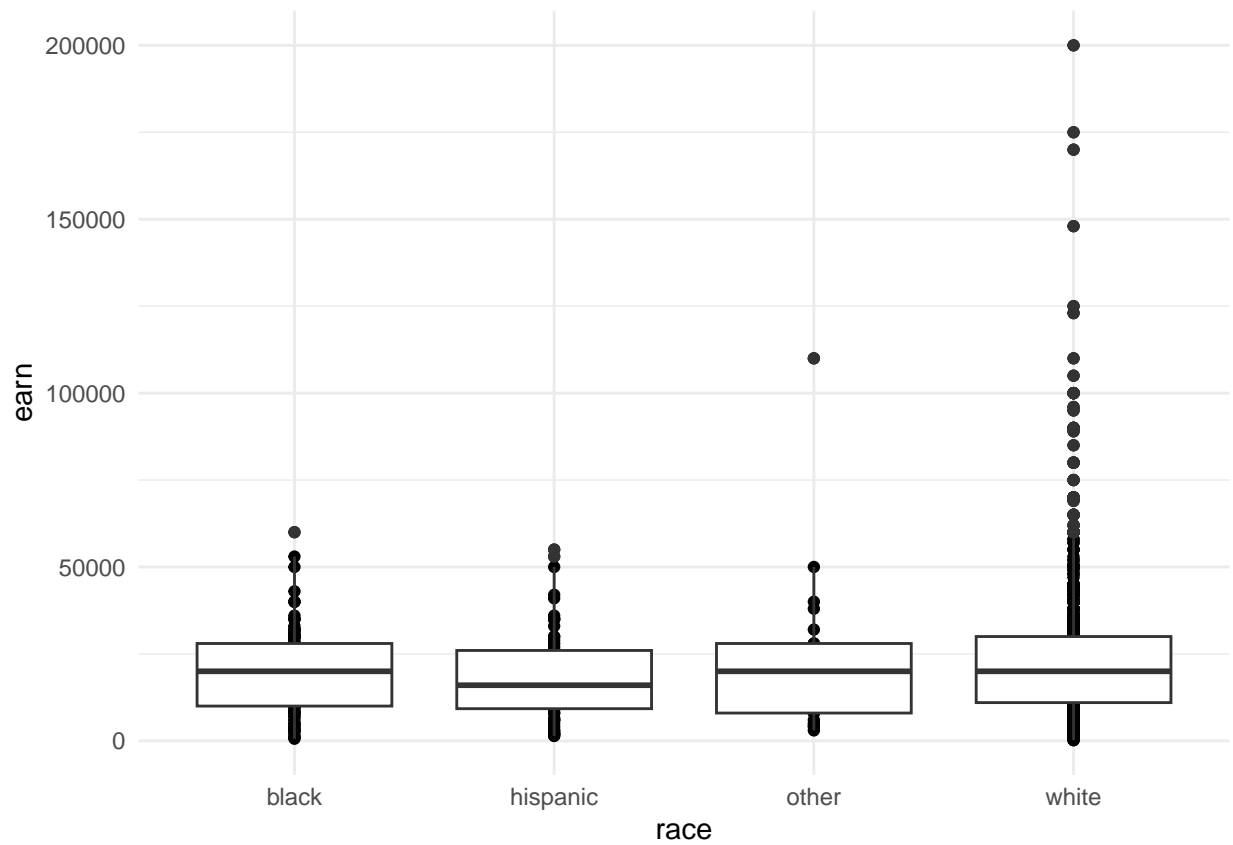
## Set the working directory to the root of your DSC 520 directory
setwd("~/School/Github Desktop/dsc520")

## Load the `data/r4ds/heights.csv` to
heights_df <- read.csv("data/r4ds/heights.csv")

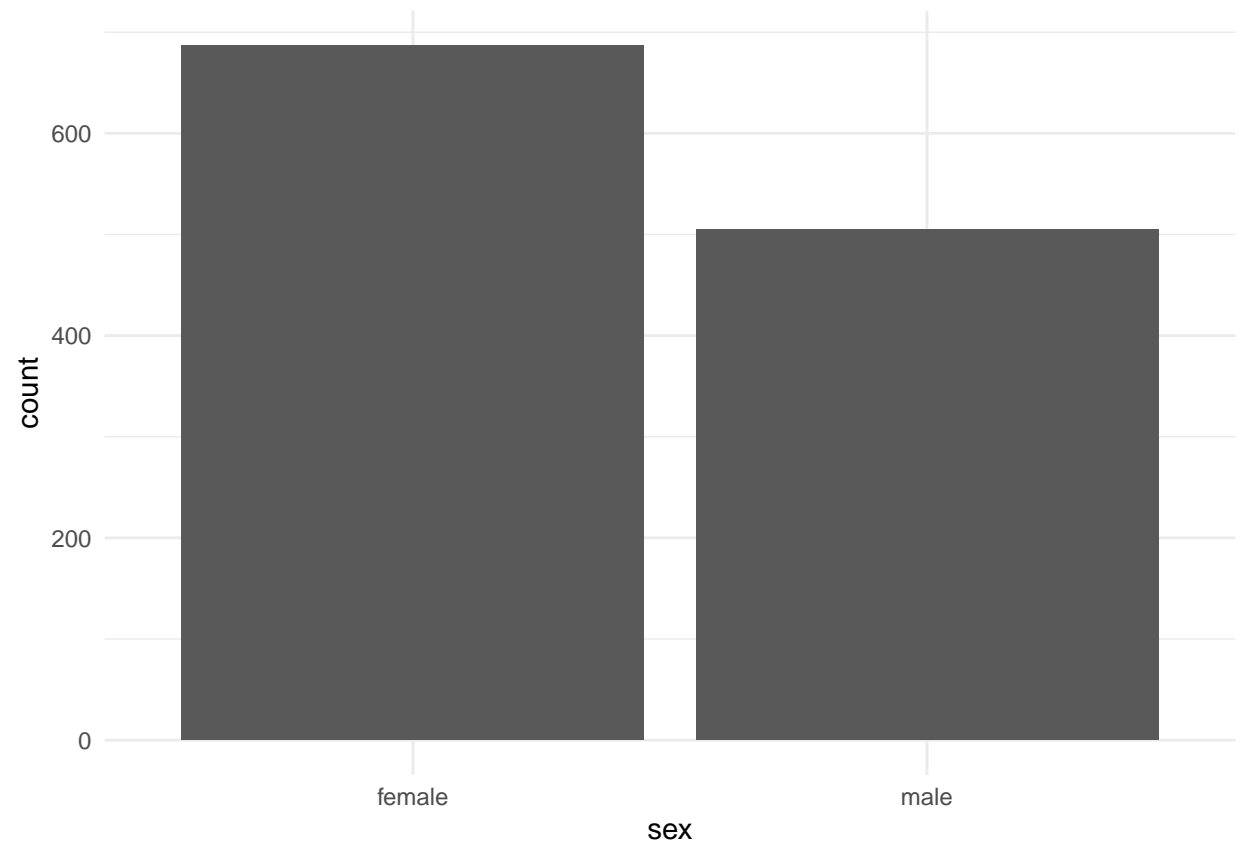
# https://ggplot2.tidyverse.org/reference/geom\_boxplot.html
## Create boxplots of sex vs. earn and race vs. earn using `geom_point()` and `geom_boxplot()`
## sex vs. earn
ggplot(heights_df, aes(x=sex, y=earn)) + geom_point()+ geom_boxplot()
```



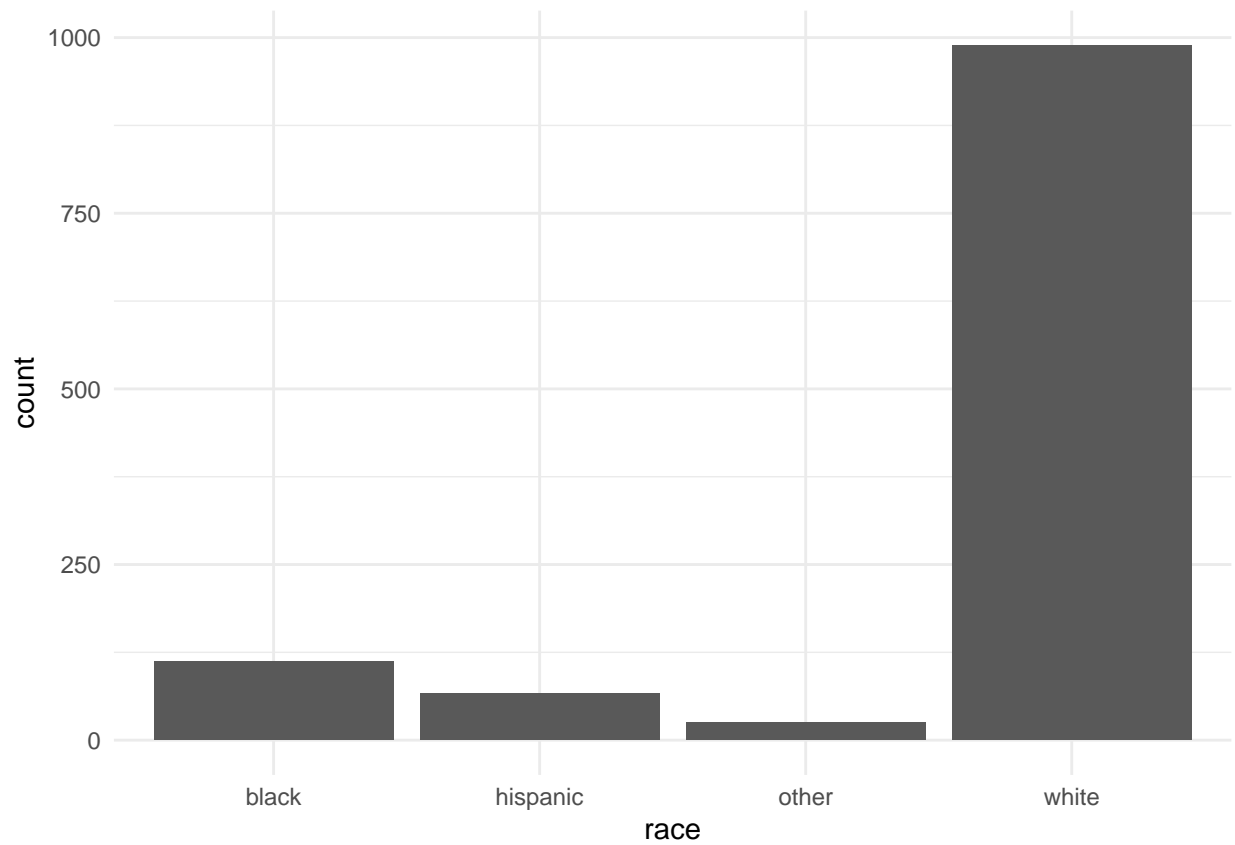
```
## race vs. earn  
ggplot(heights_df, aes(x=race, y=earn)) + geom_point()+ geom_boxplot()
```



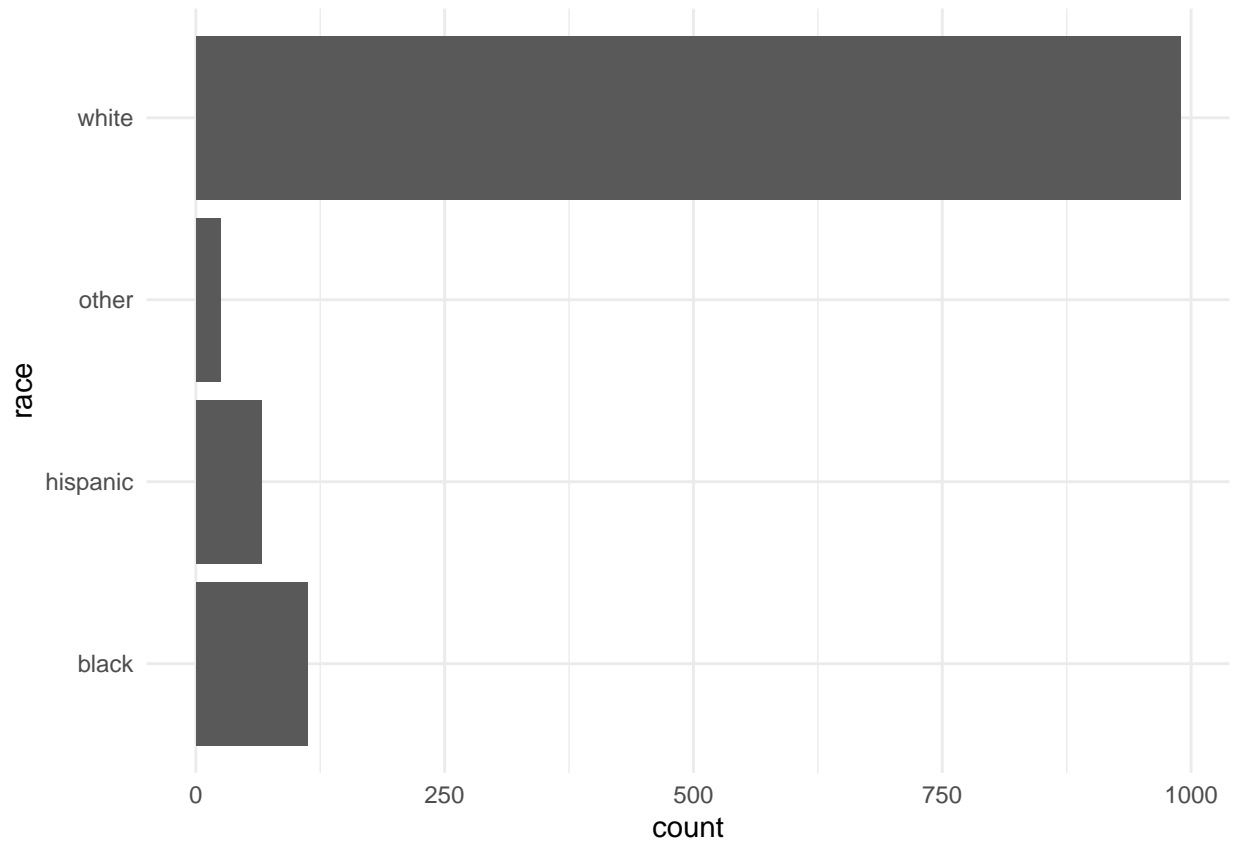
```
# https://ggplot2.tidyverse.org/reference/geom\_bar.html  
## Using `geom_bar()` plot a bar chart of the number of records for each `sex`  
ggplot(heights_df, aes(sex)) + geom_bar()
```



```
## Using `geom_bar()` plot a bar chart of the number of records for each race  
ggplot(heights_df, aes(race)) + geom_bar()
```



```
## Create a horizontal bar chart by adding `coord_flip()` to the previous plot  
ggplot(heights_df, aes(race)) + geom_bar() + coord_flip()
```

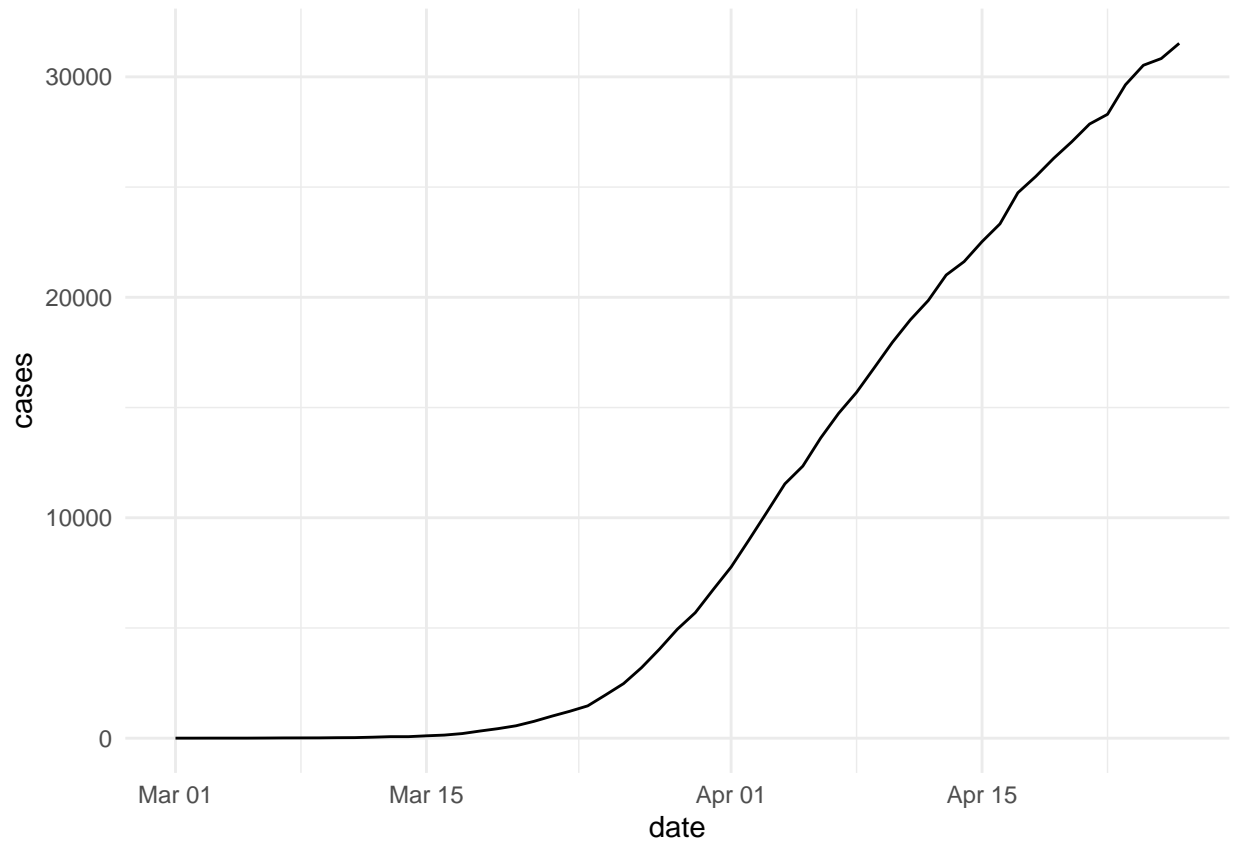


```
# https://www.rdocumentation.org/packages/ggplot2/versions/3.3.0/topics/geom\_path
## Load the file `"data/nytimes/covid-19-data/us-states.csv"` and
## assign it to the `covid_df` dataframe
covid_df <- read.csv("data/nytimes/covid-19-data/us-states.csv")

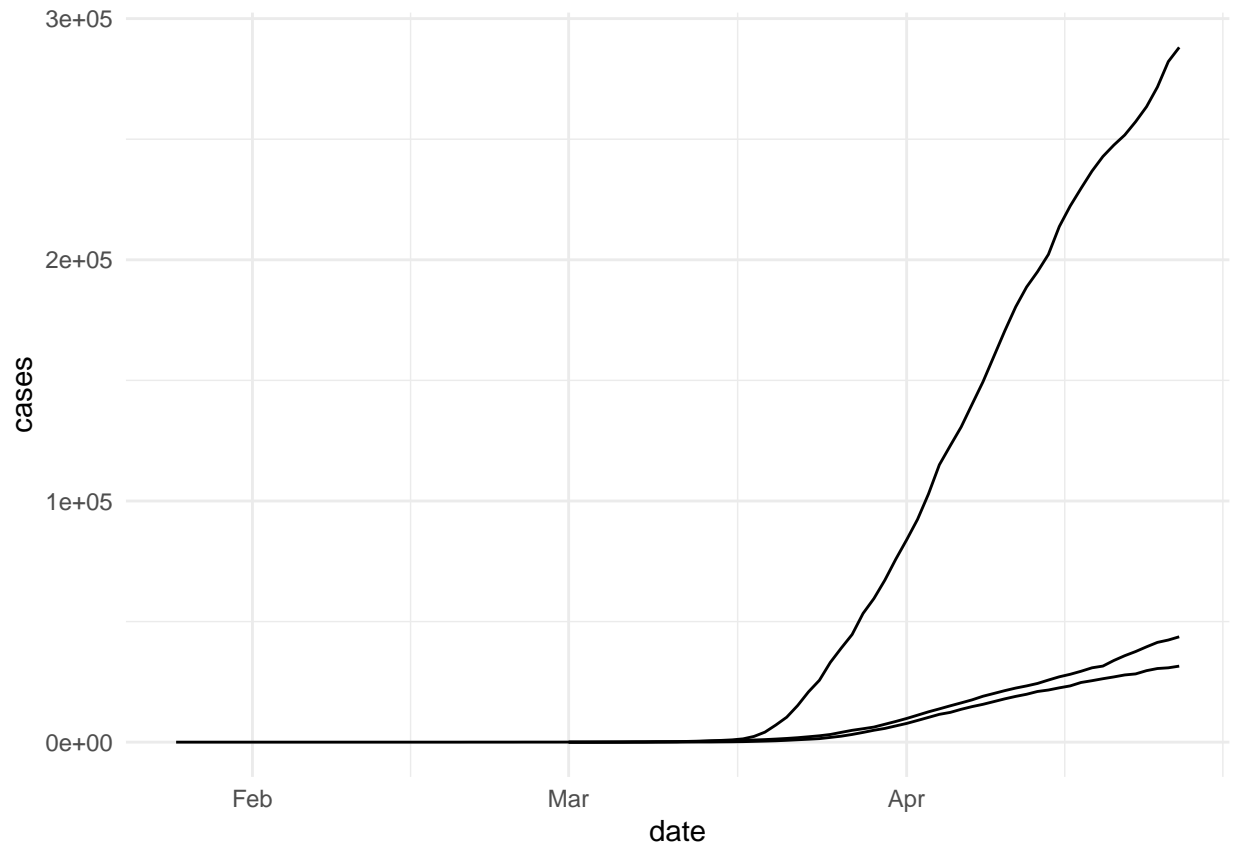
## Parse the date column using `as.Date()`
covid_df$date <- as.Date(covid_df$date)

## Create three dataframes named `california_df`, `ny_df`, and `florida_df`
## containing the data from California, New York, and Florida
california_df <- covid_df[ which( covid_df$state == "California"), ]
ny_df <- covid_df[ which(covid_df$state == "New York"),]
florida_df <- covid_df[ which(covid_df$state == "Florida"),]

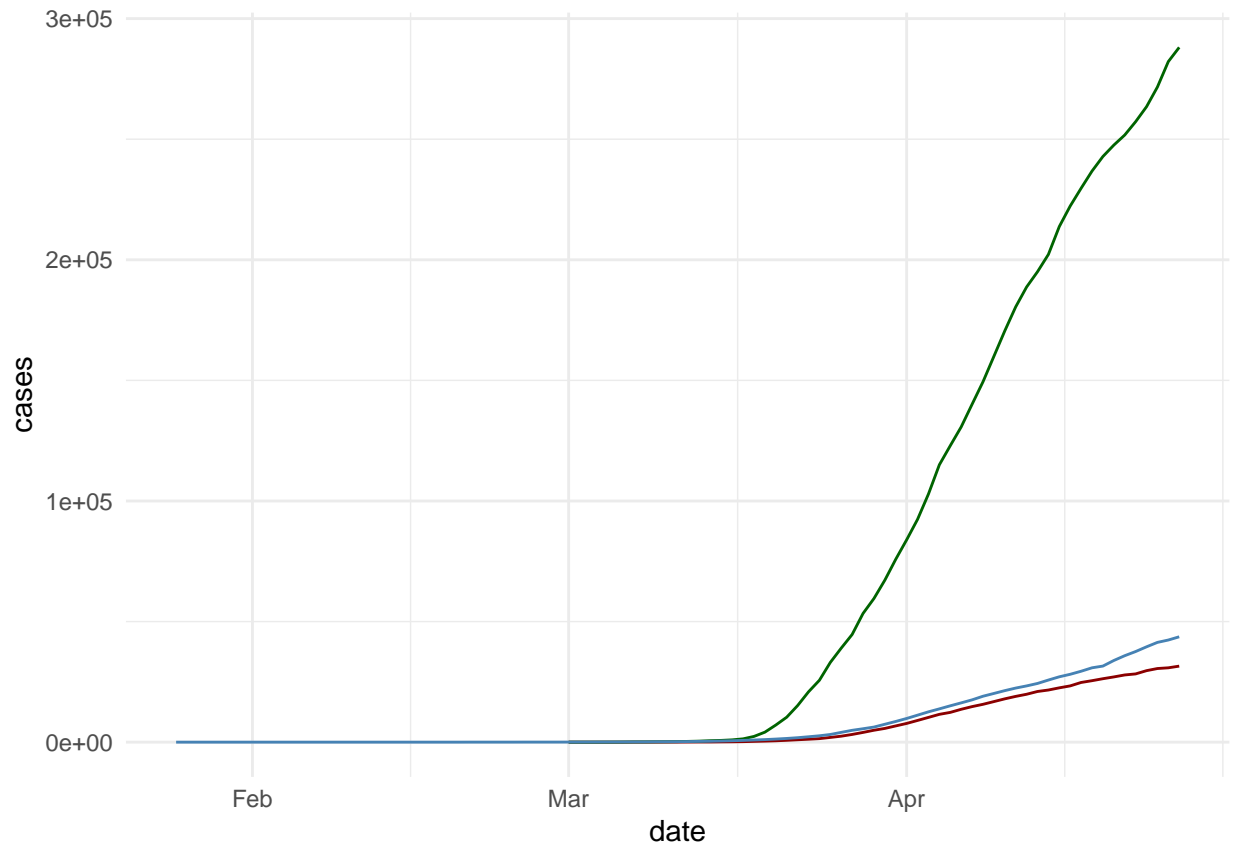
## Plot the number of cases in Florida using `geom_line()`
ggplot(data=florida_df, aes(x=date, y=cases, group=1)) + geom_line()
```



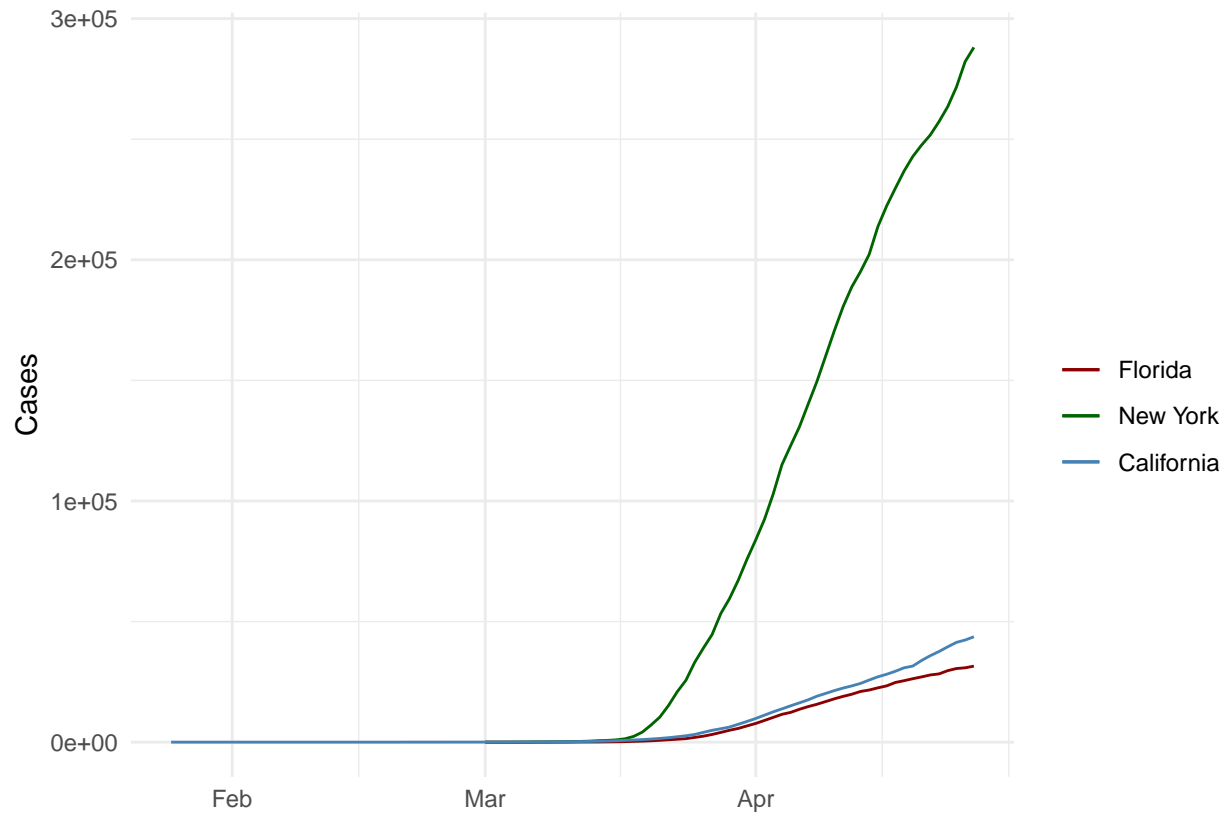
```
## Add lines for New York and California to the plot
ggplot(data=florida_df, aes(x=date, group=1)) +
  geom_line(aes(y = cases)) +
  geom_line(data=california_df, aes(y = cases)) +
  geom_line(data=ny_df, aes(y = cases))
```



```
## Use the colors "darkred", "darkgreen", and "steelblue" for Florida, New York, and California
ggplot(data=florida_df, aes(x=date, group=1)) +
  geom_line(aes(y = cases), color = 'darkred') +
  geom_line(data=ny_df, aes(y = cases), color='darkgreen') +
  geom_line(data=california_df, aes(y = cases), color='steelblue')
```

```
## Add a legend to the plot using `scale_colour_manual`  
## Add a blank (" ") label to the x-axis and the label "Cases" to the y axis  
ggplot(data=florida_df, aes(x=date, group=1)) +  
  geom_line(aes(y = cases, colour = "Florida")) +  
  geom_line(data=ny_df, aes(y = cases, colour="New York")) +  
  geom_line(data=california_df, aes(y = cases, colour="California")) +  
  scale_colour_manual("",  
                      breaks = c('Florida', 'New York', 'California'),  
                      values = c('Florida' = 'darkred', 'New York' = 'darkgreen', 'California' = 'steelblue'))  
xlab(" ") + ylab("Cases")
```



```
## Scale the y axis using `scale_y_log10()`
ggplot(data=florida_df, aes(x=date, group=1)) +
  geom_line(aes(y = cases, colour = "Florida")) +
  geom_line(data=ny_df, aes(y = cases, colour="New York")) +
  geom_line(data=california_df, aes(y = cases, colour="California")) +
  scale_colour_manual("",
    breaks = c('Florida', 'New York', 'California'),
    values = c('Florida' = 'darkred', 'New York' = 'darkgreen', 'California' = 'steelblue')
  ) +
  xlab(" ") + ylab("Cases") + scale_y_log10()
```

