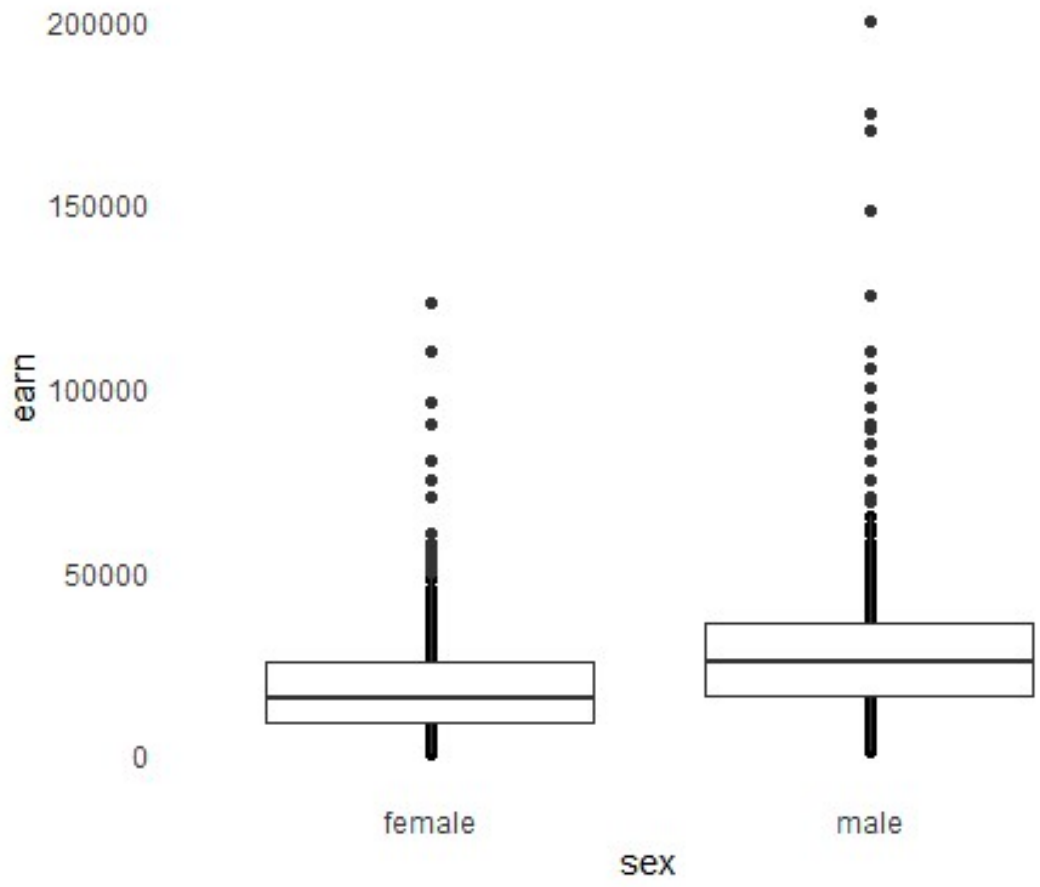
assignment_04_LastnameFirstname.R

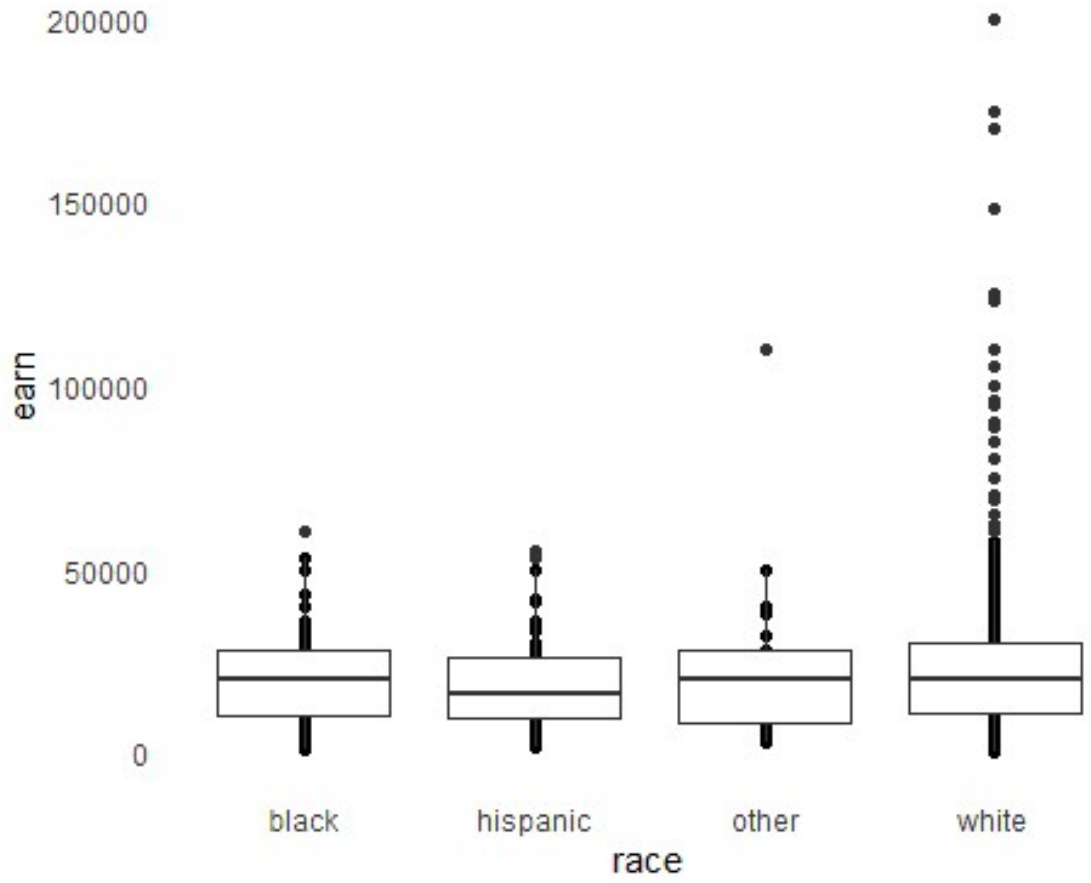
chitro

2023-01-23

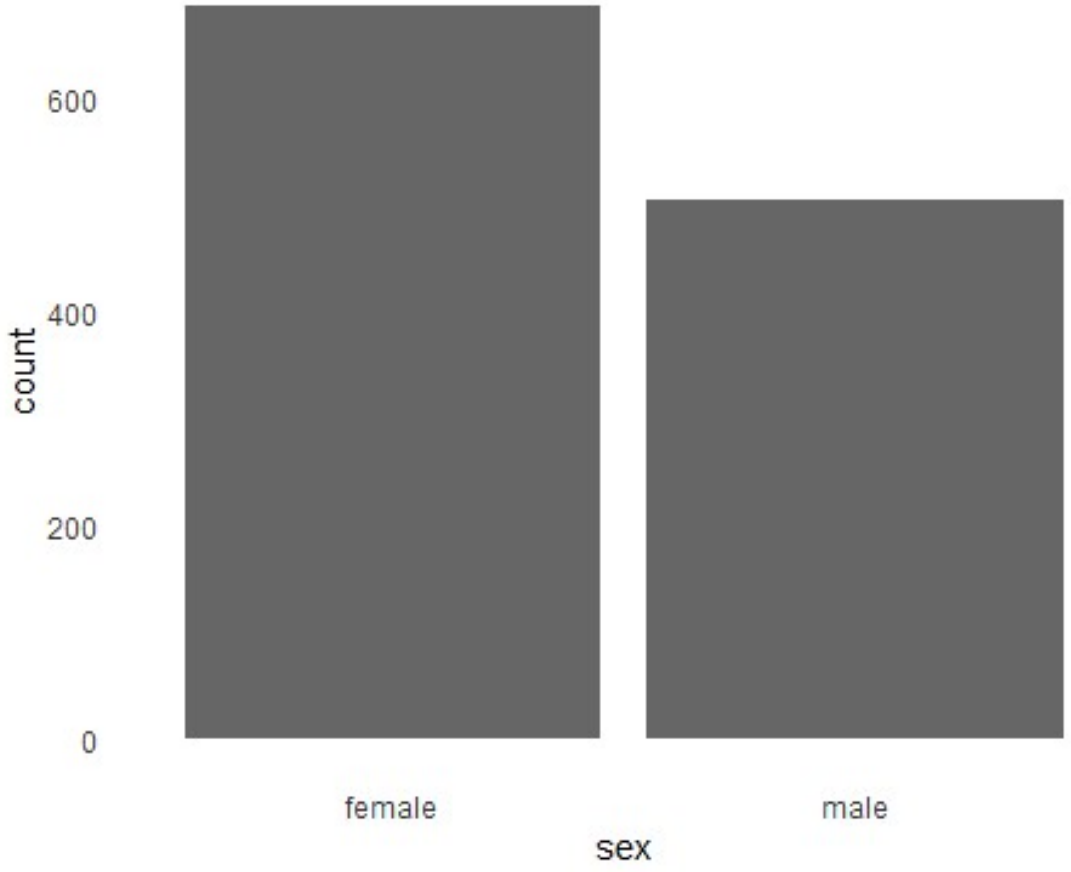
```
# Assignment: ASSIGNMENT 4
# Name: Lastname, Firstname
# Date: 2010-02-14

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

## Set the working directory to the root of your DSC 520 directory
setwd("C:/Users/chitro/Desktop/dsc520-fork-chitro")

## 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()
```



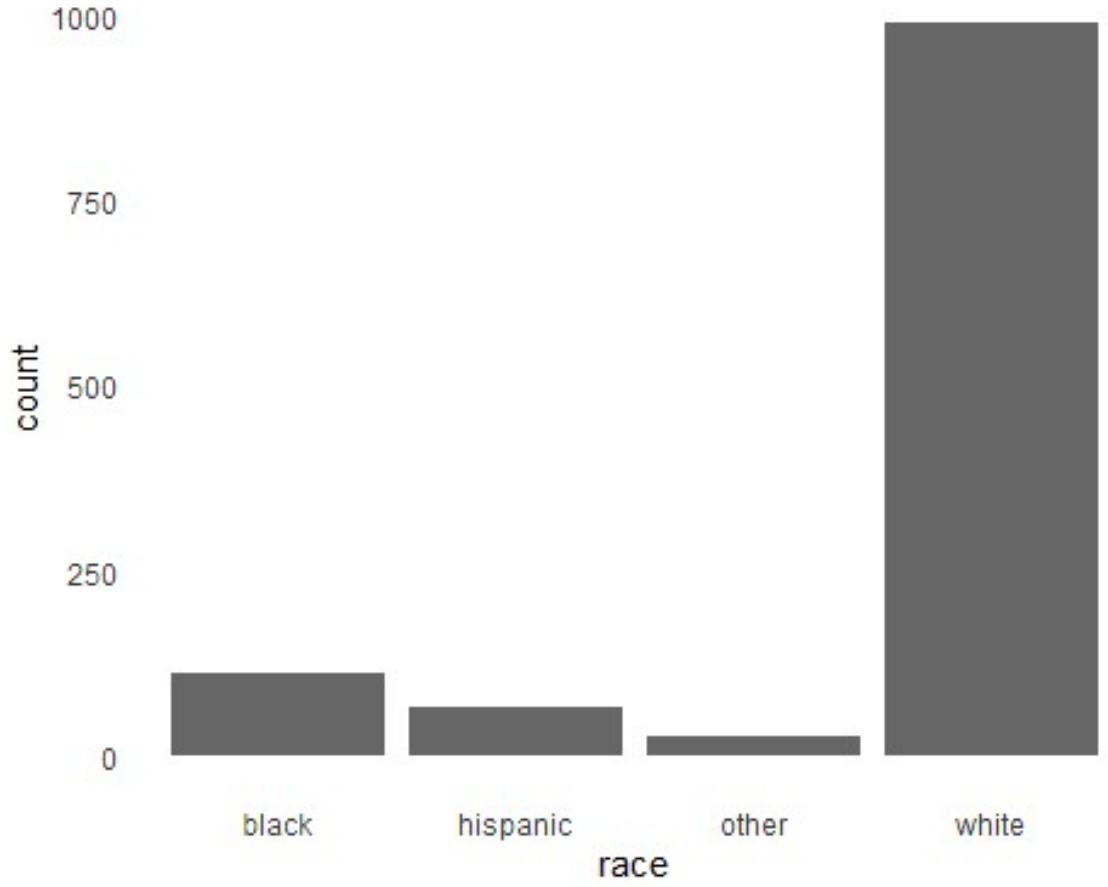

```
## race vs. earn
ggplot(heights_df, aes(x=race, y=earn)) + geom_point()+ geom_boxplot()
```



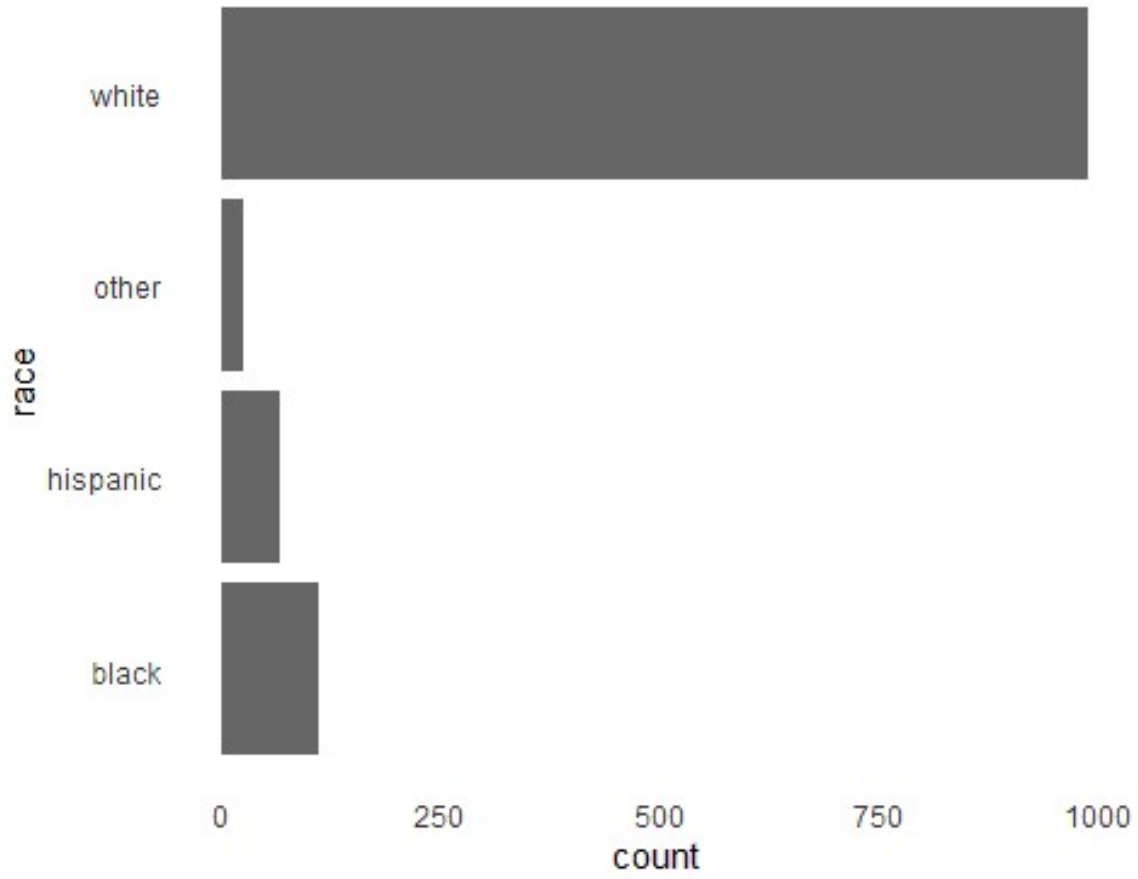

```
# https://ggplot2.tidyverse.org/reference/geom_bar.html
## Using `geom_bar()` plot a bar chart of the number of records for each `sex`
ggplot(heights_df, aes(sex)) + geom_bar()
```



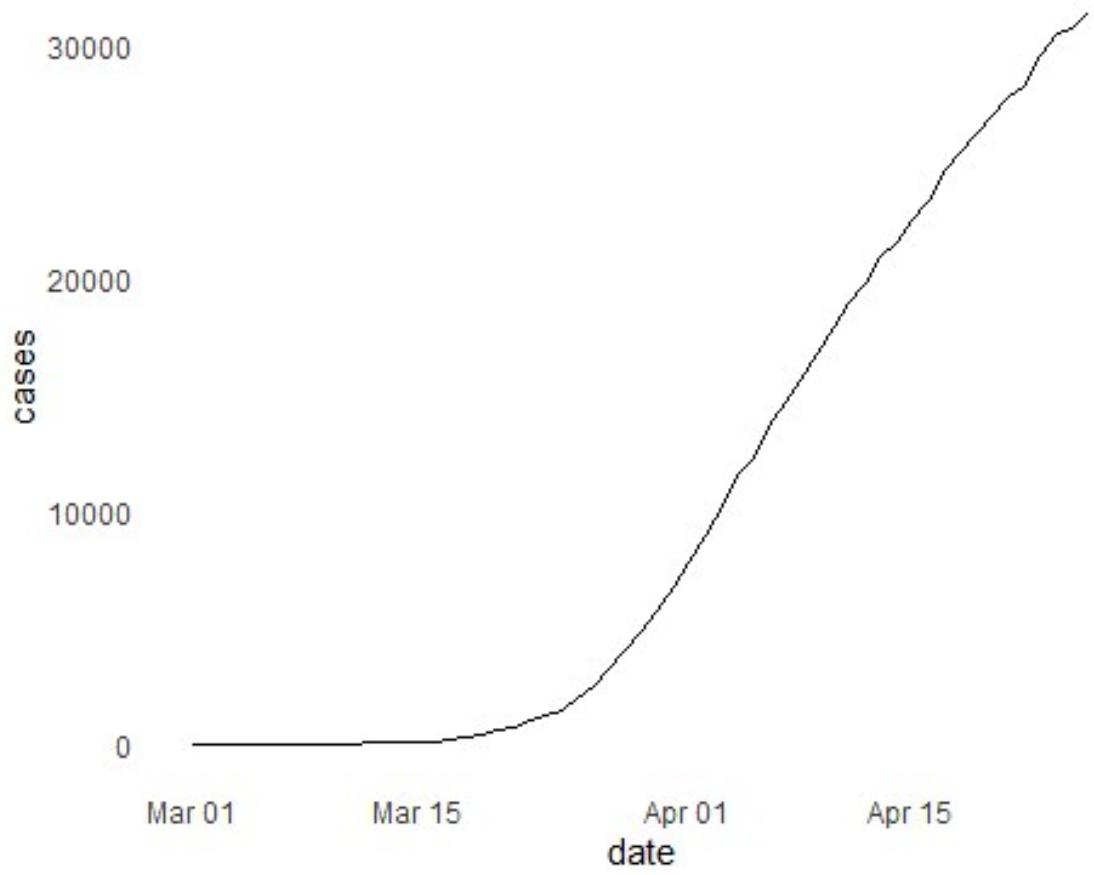

```
## Using `geom_bar()` plot a bar chart of the number of records for
each race
ggplot(heights_df, aes(race)) + geom_bar()
```



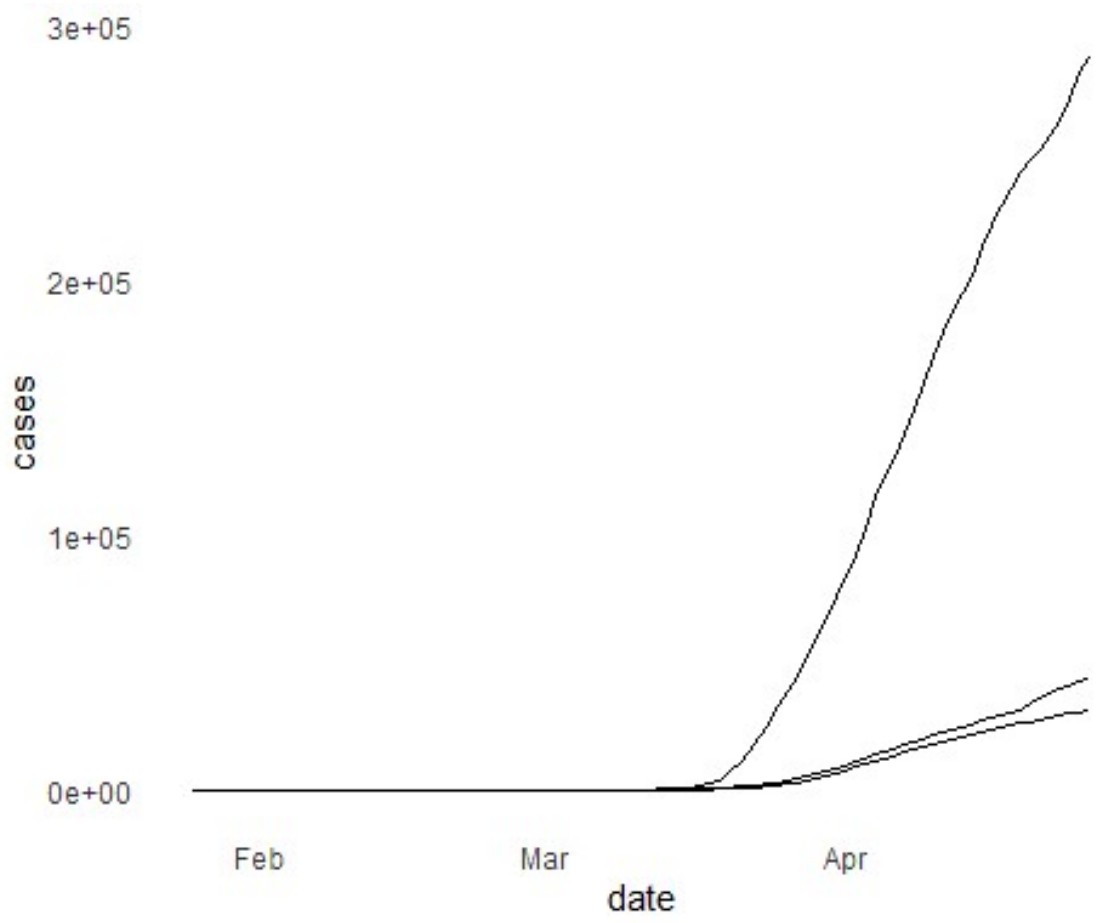

```
## Create a horizontal bar chart by adding `coord_flip()` to the
previous plot
ggplot(heights_df, aes(race)) + geom_bar() + coord_flip()
```



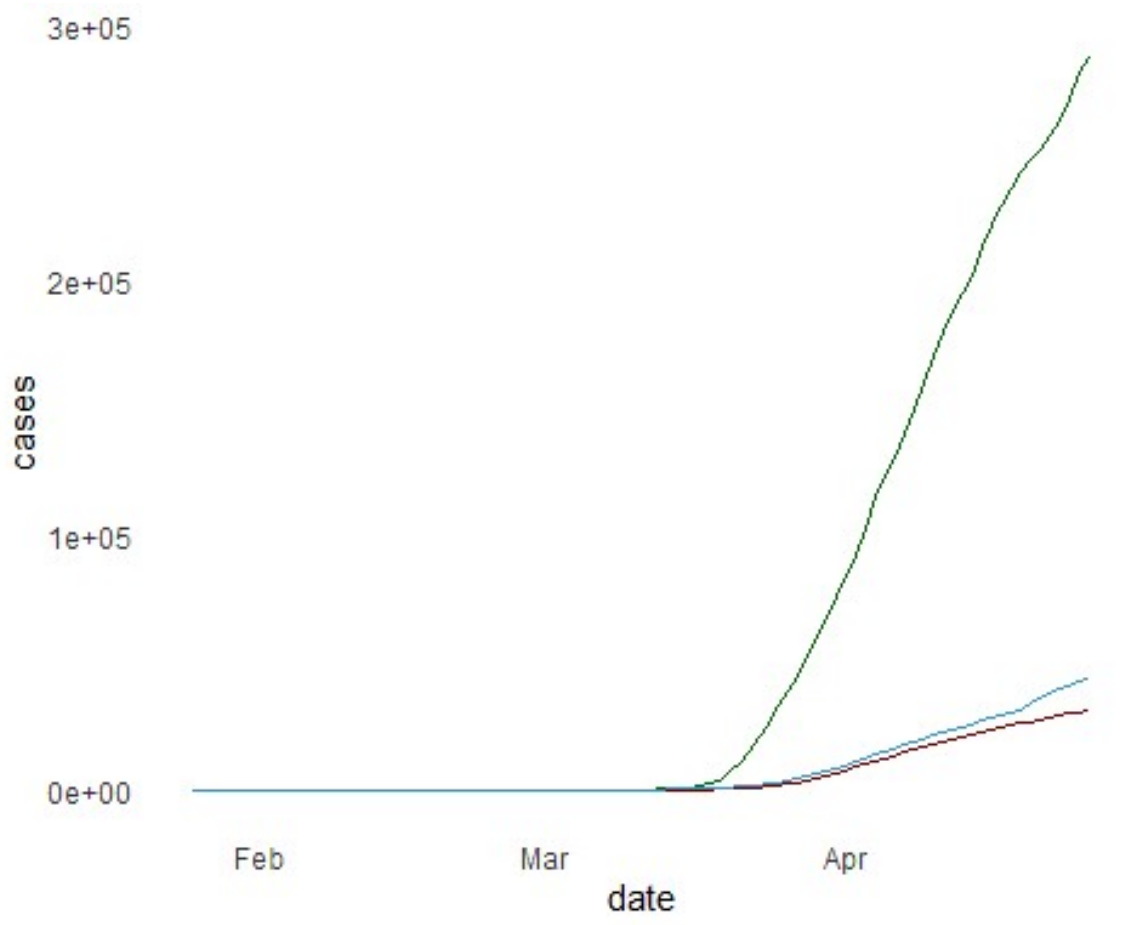

```
# https://www.rdocumentation.org/packages/ggplot2/versions/3.3.0/topics/geom_path
## Load the file `"data/nytimes/covid-19-data/us-states.csv"` and
## assign it to the `covid_df` dataframe
covid_df <- read.csv("data/nytimes/covid-19-data/us-states.csv")

## 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()
```



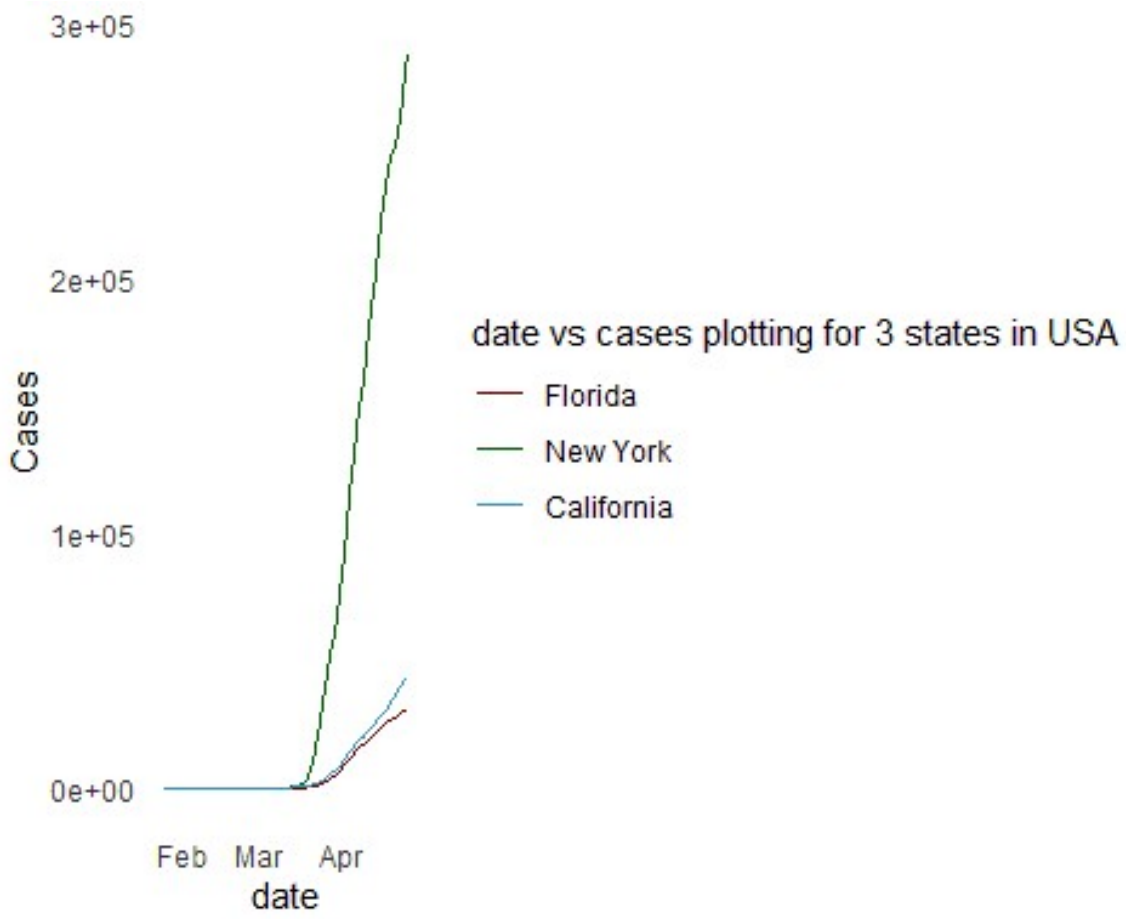

```
## Add lines for New York and California to the plot
ggplot(data=florida_df, aes(x=date, group=1)) +
  geom_line(aes(y = cases)) +
  geom_line(data=ny_df, aes(y = cases)) +
  geom_line(data=california_df, aes(y = cases))
```



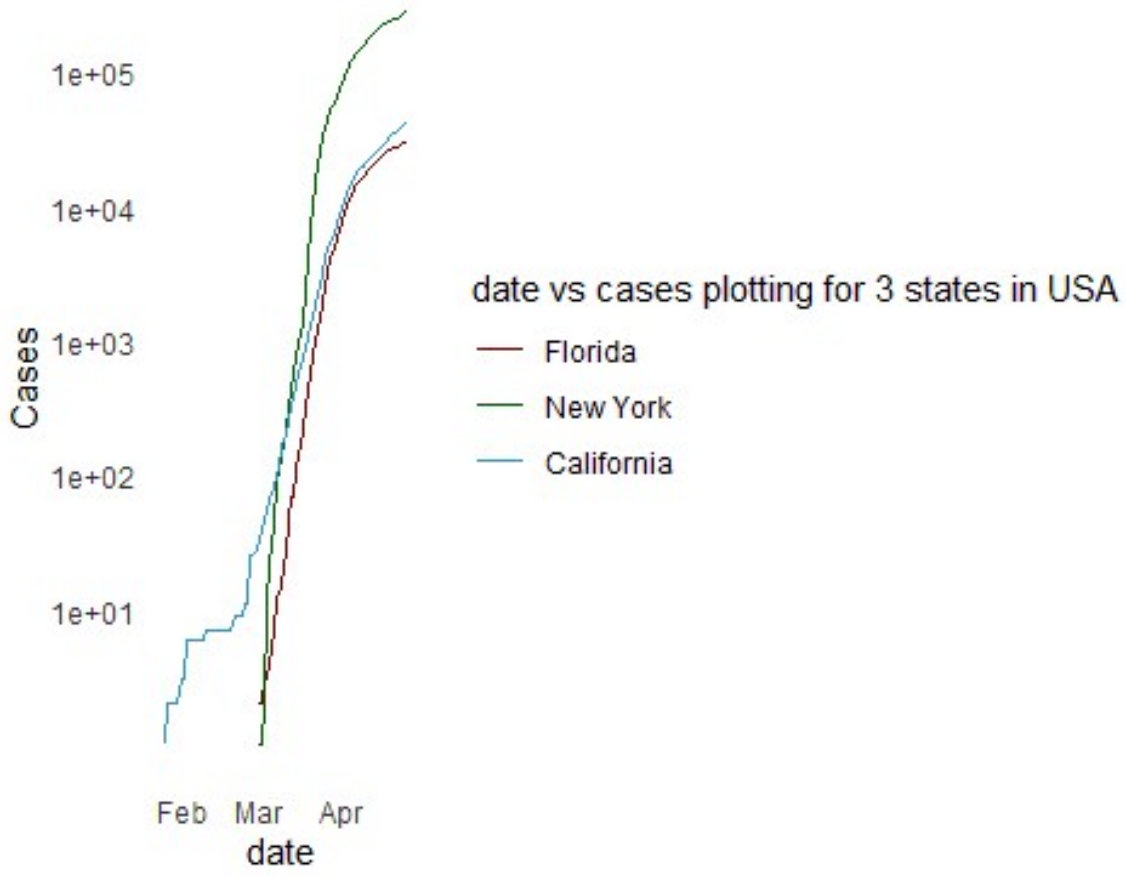

```
## Use the colors "darkred", "darkgreen", and "steelblue" for Florida,
New York, and California
ggplot(data=florida_df, aes(x=date, group=1)) +
  geom_line(aes(y = cases), color = "darkred") +
  geom_line(data=ny_df, aes(y = cases), color="darkgreen") +
  geom_line(data=california_df, aes(y = cases), 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("date vs cases plotting for 3 states in USA",
                      breaks = c('Florida', 'New York', 'California'),
                      values = c('Florida'='darkred', 'New
York'='darkgreen', 'California'='steelblue')) +
  xlab("date") + 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("date vs cases plotting for 3 states in USA",
                      breaks = c('Florida', 'New York', 'California'),
                      values = c('Florida'='darkred', 'New
York'='darkgreen', 'California'='steelblue')) +
  xlab("date ") + ylab("Cases") + scale_y_log10(  breaks =
c(10,100,1000,10000,100000))
```


1e+05
1e+04
1e+03
1e+02
1e+01
Cases
Feb
Mar
Apr
date
date vs cases plotting for 3 states in USA
Florida
New York
California