Coronavirus Visualization

Sahar Saber

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Introduction

Today, I found a dataset about coronavirus updated daily and because there is so much interest in this topic, I thought I would create some data visualizations using ggplot2!

ggplot2 is a library in R used to create interactive and dynamic data visualizations.

Note: All images were created by myself using ggplot2.

Load Required Data

As mentioned above, I used a dataset about coronavirus found at ourworldindata

```
head(march_29)
```

```
## # A tibble: 6 x 3
##   location      total_cases total_deaths
##   <chr>               <dbl>        <dbl>
## 1 World              657140        30451
## 2 United States      124665         2191
## 3 Italy               92472        10023
## 4 China               82342         3306
## 5 Spain               72248         5690
## 6 Germany             52547          389
```

Also, a dataframe contains the information required to create Choropleth Maps.

```
world <- map_data("world")
head(world)
```

```
##        long      lat group order region subregion
## 1 -69.89912 12.45200     1     1  Aruba      <NA>
## 2 -69.89571 12.42300     1     2  Aruba      <NA>
## 3 -69.94219 12.43853     1     3  Aruba      <NA>
## 4 -70.00415 12.50049     1     4  Aruba      <NA>
## 5 -70.06612 12.54697     1     5  Aruba      <NA>
## 6 -70.05088 12.59707     1     6  Aruba      <NA>
```

Data Manipulation

- A left join was made

```
world_corona <- world %>% left_join(march_29_countries, by = c("region" = "location"))  %>% arrange(desc(total_cases))
```

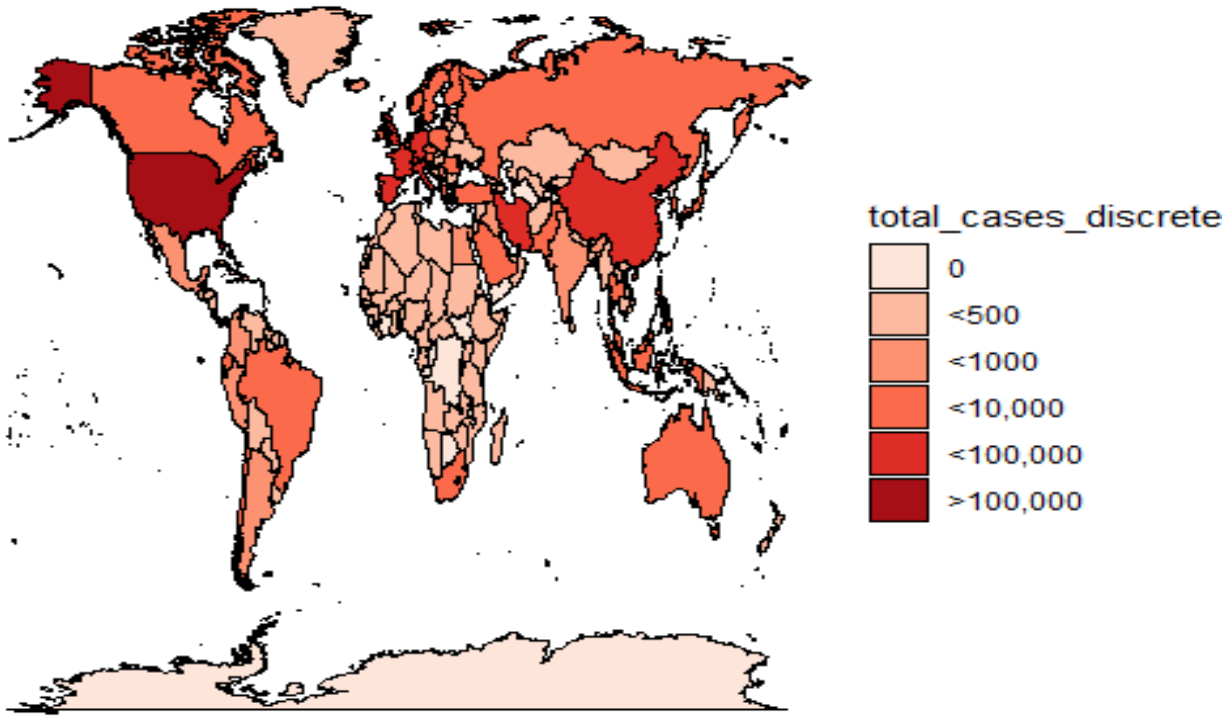
- Changing the continuous variables *total_cases* and *total_deaths* into discrete variables

```
world_corona_tidied <- world_corona_tidied %>% mutate(total_cases_discrete =
cut(world_corona_tidied$total_cases,

breaks=c(-Inf,0,500, 1000, 10000,100000, Inf),

labels=c("0","<500", "<1000","<10,000","<100,000", ">100,000")))

world_corona_tidied <- world_corona_tidied %>% mutate(total_deaths_discrete =
cut(world_corona_tidied$total_deaths,

breaks=c(-Inf,0,500, 1000, 2000,3000, Inf),

labels=c("0","<500", "<1000","<2000","<3000", ">3000")))
```

Choropleth Maps

And Finally, Choropleth Maps shows the spread of the Coronavirus Globally.

```
ggplot(world_corona_tidied, aes(x = long, y = lat, group = group, fill =total
_cases_discrete )) +
  geom_polygon(col = "#000000") +
  scale_fill_brewer(palette = "Reds")+
  theme_void()
```




```
ggplot(world_corona_tidied, aes(x = long, y = lat, group = group, fill =total
_deaths_discrete )) +
```

```
  geom_polygon(col = "#000000") +
  scale_fill_brewer(palette = "Reds")+
  theme_void()
```