

# Covid19\_data\_demographics\_visualization.R

corn

2022-01-21

```
library(dplyr)
```

```
##  
## Attaching package: 'dplyr'  
  
## The following objects are masked from 'package:stats':  
##  
##   filter, lag  
  
## The following objects are masked from 'package:base':  
##  
##   intersect, setdiff, setequal, union
```

```
library(ggplot2)  
library(scales)  
  
setwd("C:/Users/dongj/Desktop/Covid_Cal/Statewide_case_statistics_and_demographics")  
  
data <- read.csv("./dataset/covid19casesdemographics_012122.csv")  
data_v1 <- read.csv("./dataset/covid19casesdemographics_012122.csv")  
  
unique(data_v1$demographic_category)
```

```
## [1] "Age Group"      "Gender"          "Race Ethnicity"
```

```
age_group_data <- data_v1[data_v1$demographic_category == 'Age Group',]  
head(age_group_data,3)
```

```
##   demographic_category demographic_value total_cases percent_cases deaths  
## 1      Age Group           0-17           855         2.3         0  
## 2      Age Group           0-17           936         2.4         0  
## 3      Age Group           0-17          1011         2.5         0  
##   percent_deaths percent_of_ca_population report_date  
## 1              0                22.5 2020-04-22  
## 2              0                22.5 2020-04-23  
## 3              0                22.5 2020-04-24
```

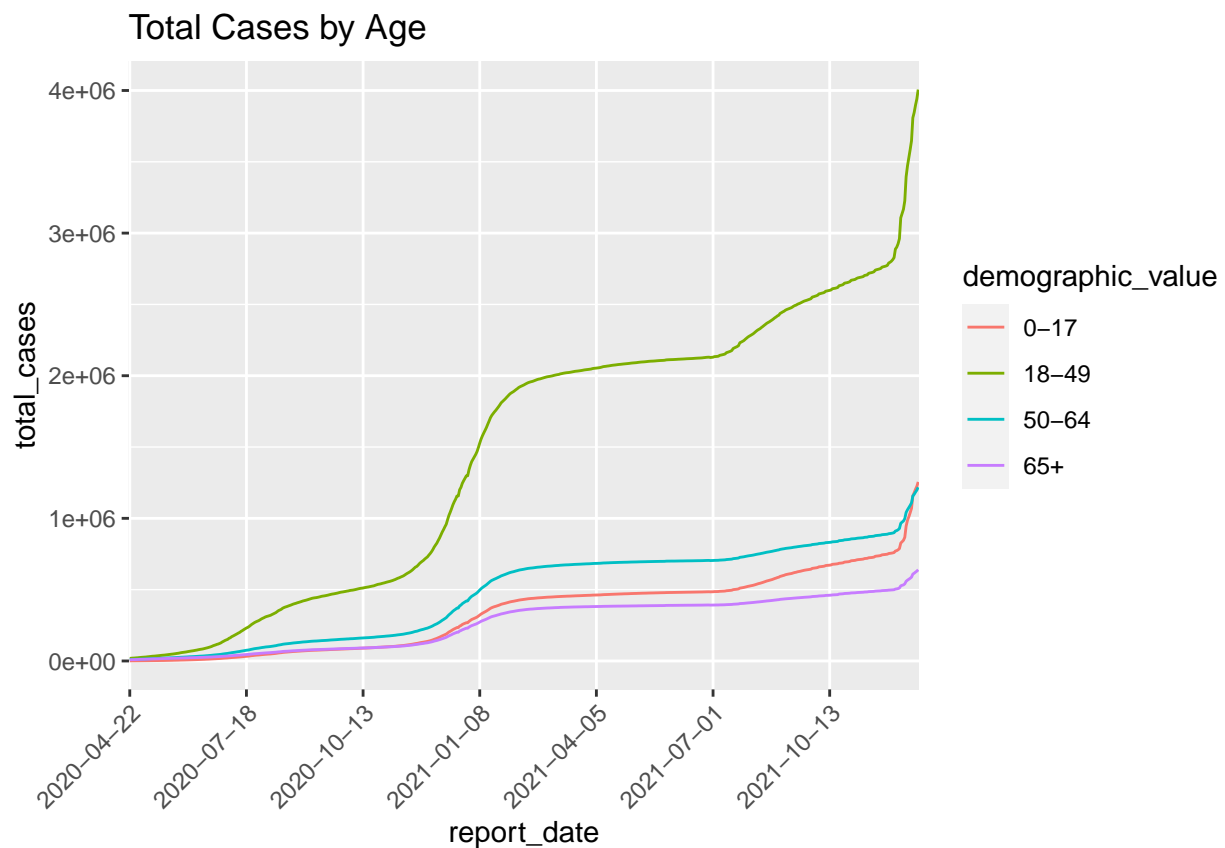
```

age_group_data <- filter(age_group_data,
                        !demographic_value %in% c('Missing', 'missing', 'Total'))

age_filter <- age_group_data %>%
  filter(demographic_value %in% c("0-17", "18-49", "50-64", "65+"))

age_filter %>%
  ggplot(aes(x=report_date, y=total_cases, group=demographic_value, color=demographic_value)) +
  geom_line() +
  scale_x_discrete(breaks = function(x) x[seq(1, length(x), by = 3*29)]) +
  labs(
    title="Total Cases by Age"
  ) +
  theme(axis.text.x = element_text(angle = 45, vjust = 1, hjust = 1))

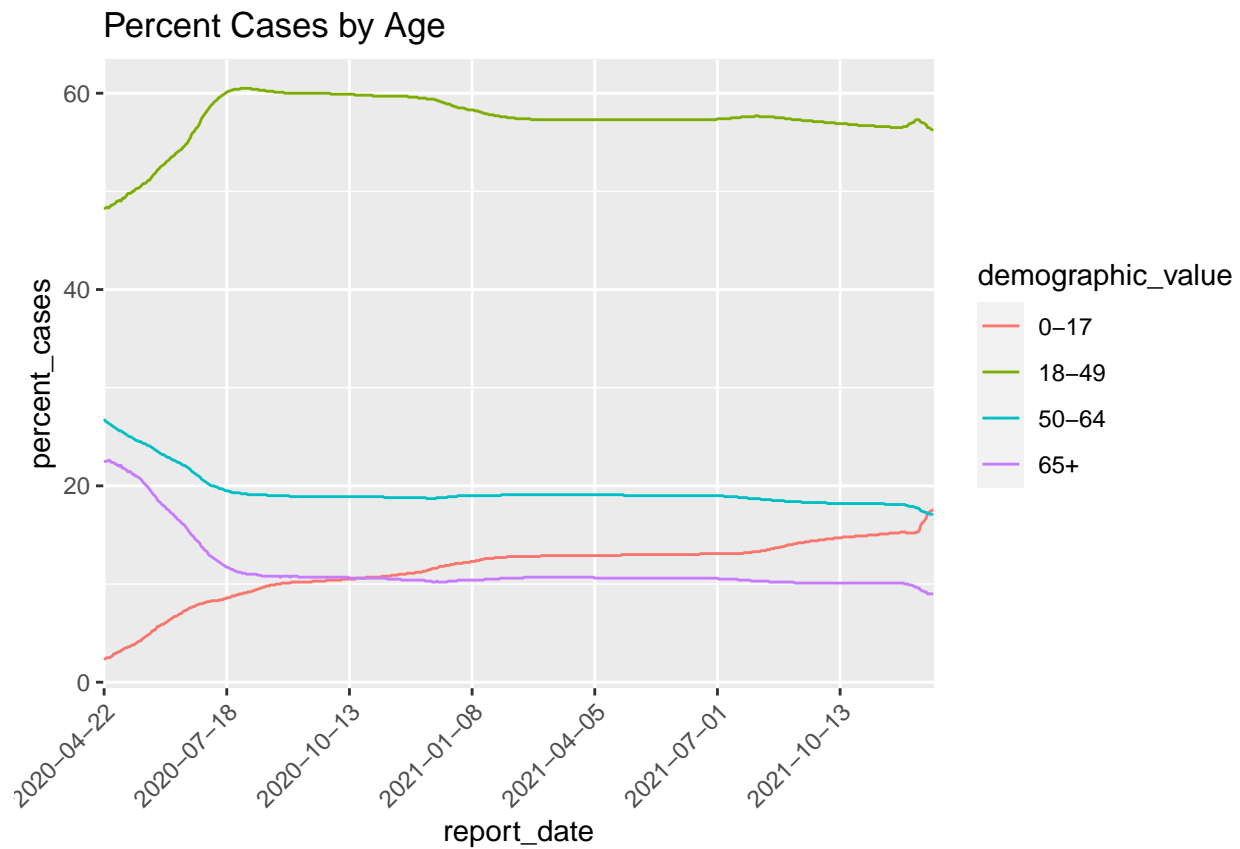
```



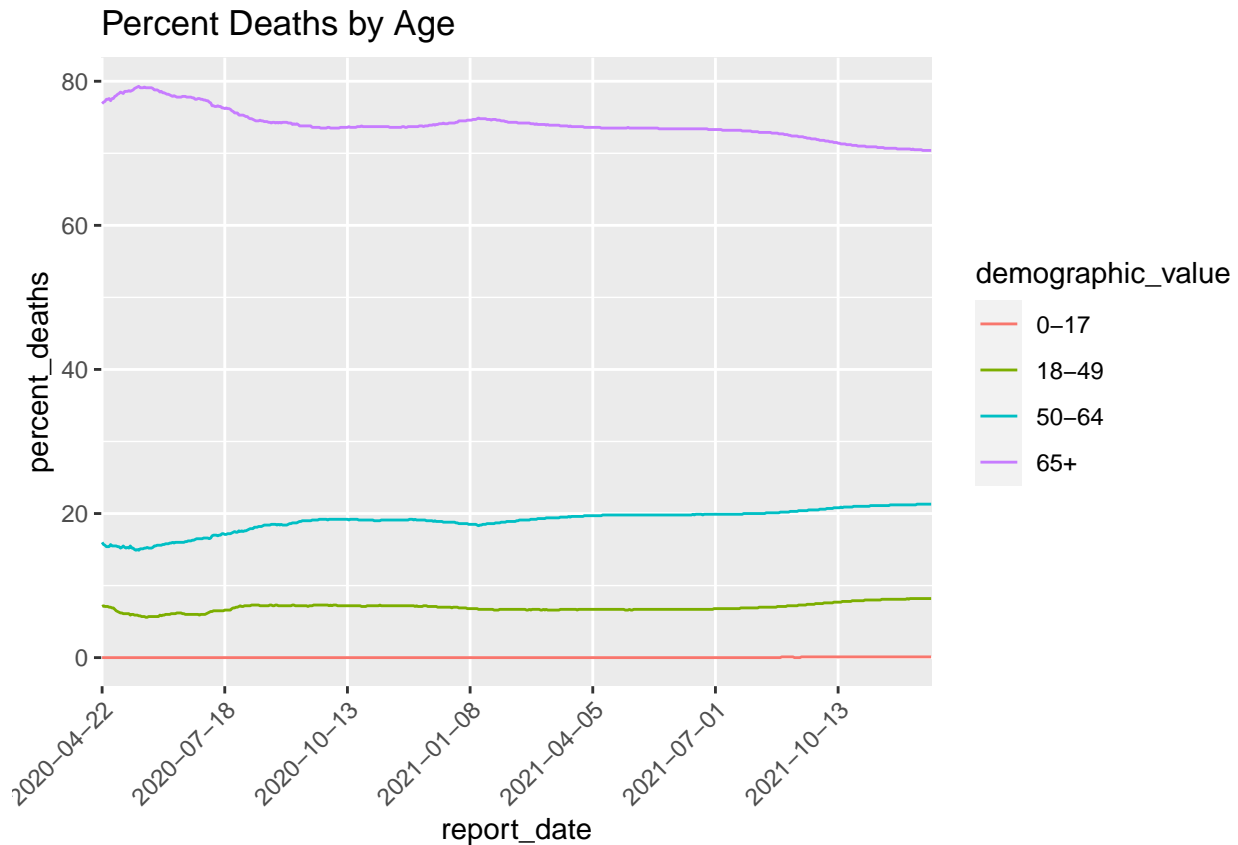
```

age_filter %>%
  ggplot(aes(x=report_date, y=percent_cases, group=demographic_value, color=demographic_value)) +
  geom_line() +
  scale_x_discrete(breaks = function(x) x[seq(1, length(x), by = 3*29)]) +
  labs(
    title="Percent Cases by Age"
  ) +
  theme(axis.text.x = element_text(angle = 45, vjust = 1, hjust = 1))

```



```
age_filter %>%
  ggplot( aes(x=report_date, y=percent_deaths, group=demographic_value, color=demographic_value)) +
  geom_line()+
  scale_x_discrete(breaks = function(x) x[seq(1, length(x), by = 3*29)])+
  labs(
    title="Percent Deaths by Age"
  )+
  theme(axis.text.x = element_text(angle = 45, vjust = 1, hjust = 1))
```



```
gender_group_data <- data_v1[data_v1$demographic_category == 'Gender',]
unique(gender_group_data$demographic_value )
```

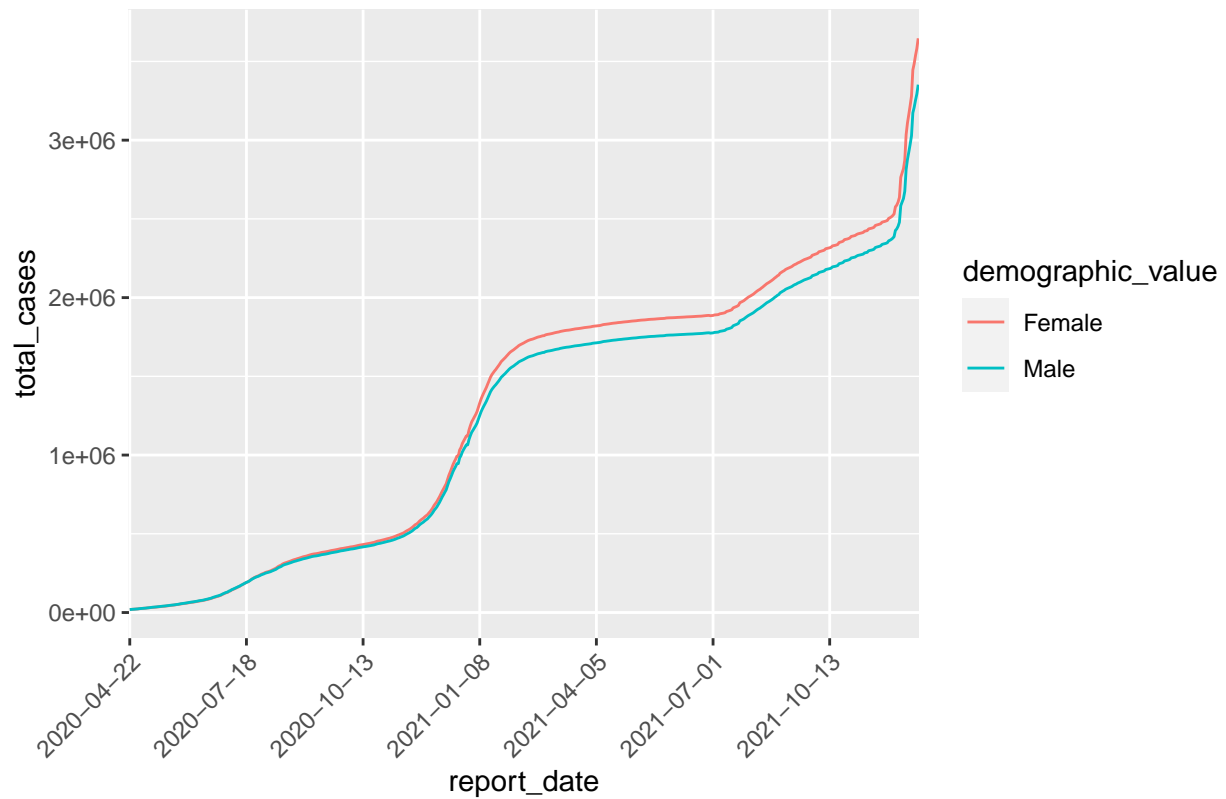
```
## [1] "Female" "Male" "Total" "Unknown"
```

```
gender_group_data <- filter(gender_group_data,
                             !demographic_value %in% c("Unknown", 'Total'))
```

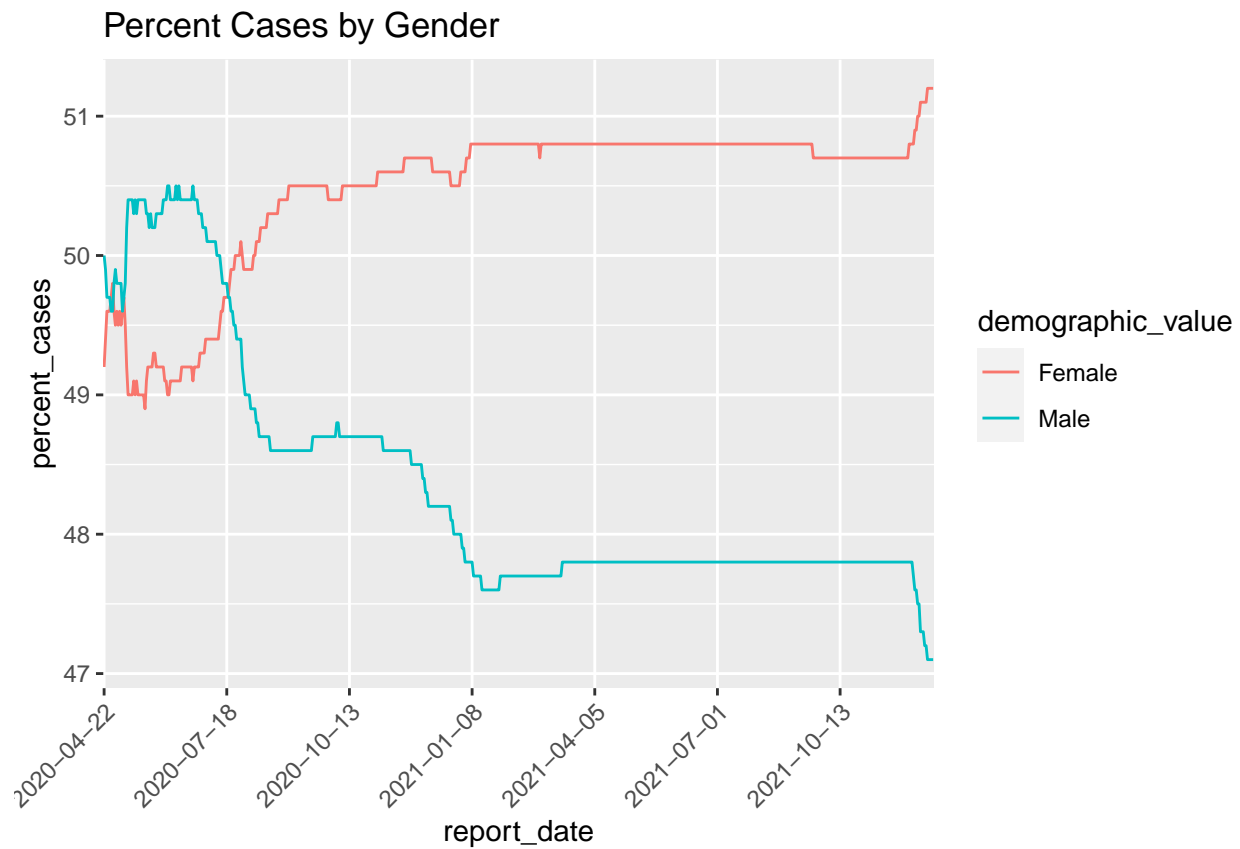
```
gender_filter<- gender_group_data %>%
  filter(demographic_value %in% c("Female", "Male"))
```

```
gender_filter %>%
  ggplot( aes(x=report_date, y=total_cases, group=demographic_value, color=demographic_value)) +
  geom_line()+
  scale_x_discrete(breaks = function(x) x[seq(1, length(x), by = 3*29)])+
  labs(
    title="Total Cases by Gender"
  )+
  theme(axis.text.x = element_text(angle = 45, vjust = 1, hjust = 1))
```

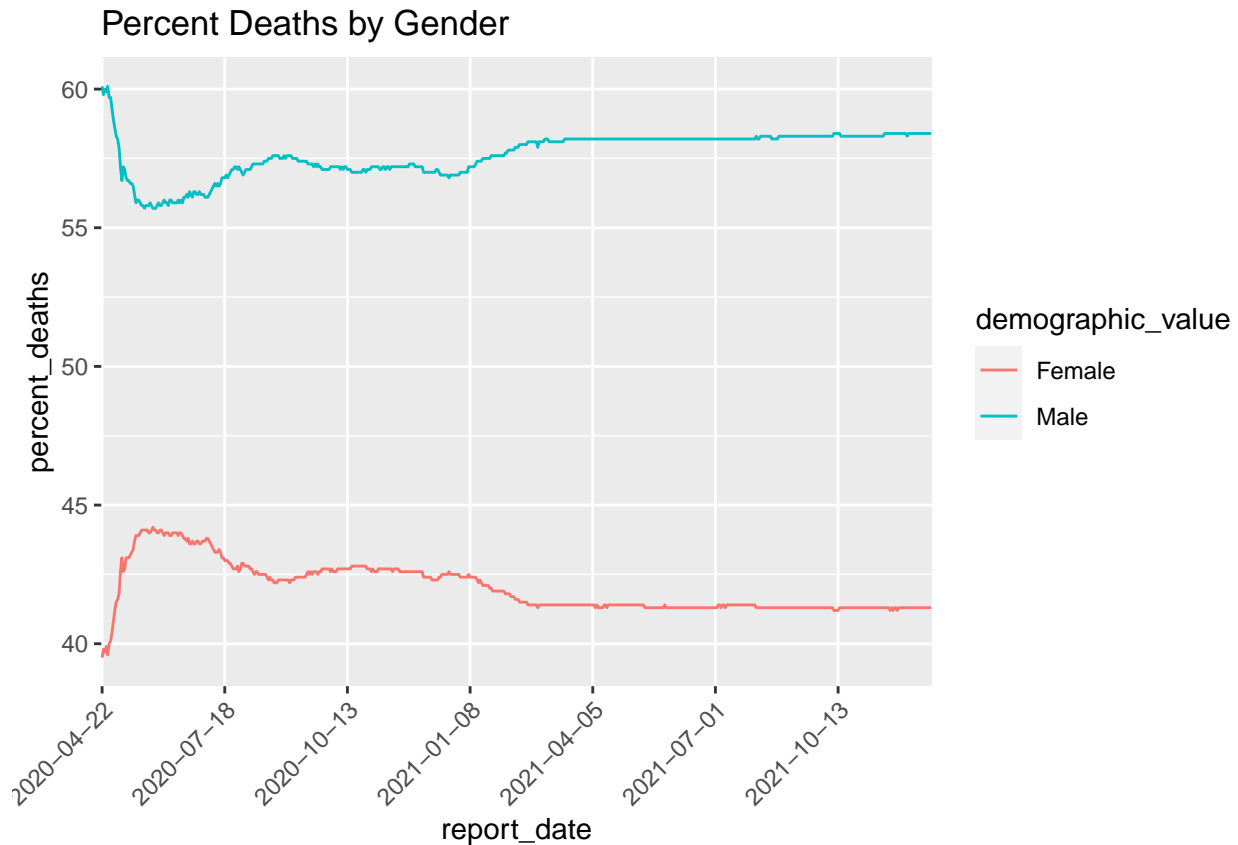
Total Cases by Gender



```
gender_filter %>%
  ggplot( aes(x=report_date, y=percent_cases, group=demographic_value, color=demographic_value)) +
  geom_line()+
  scale_x_discrete(breaks = function(x) x[seq(1, length(x), by = 3*29)]) +
  labs(
    title="Percent Cases by Gender"
  ) +
  theme(axis.text.x = element_text(angle = 45, vjust = 1, hjust = 1))
```



```
gender_filter %>%
  ggplot( aes(x=report_date, y=percent_deaths, group=demographic_value, color=demographic_value)) +
  geom_line()+
  scale_x_discrete(breaks = function(x) x[seq(1, length(x), by = 3*29)])+
  labs(
    title="Percent Deaths by Gender"
  )+
  theme(axis.text.x = element_text(angle = 45, vjust = 1, hjust = 1))
```



```
race_group_data <- data_v1[data_v1$demographic_category == 'Race Ethnicity',]
unique(race_group_data$demographic_value )
```

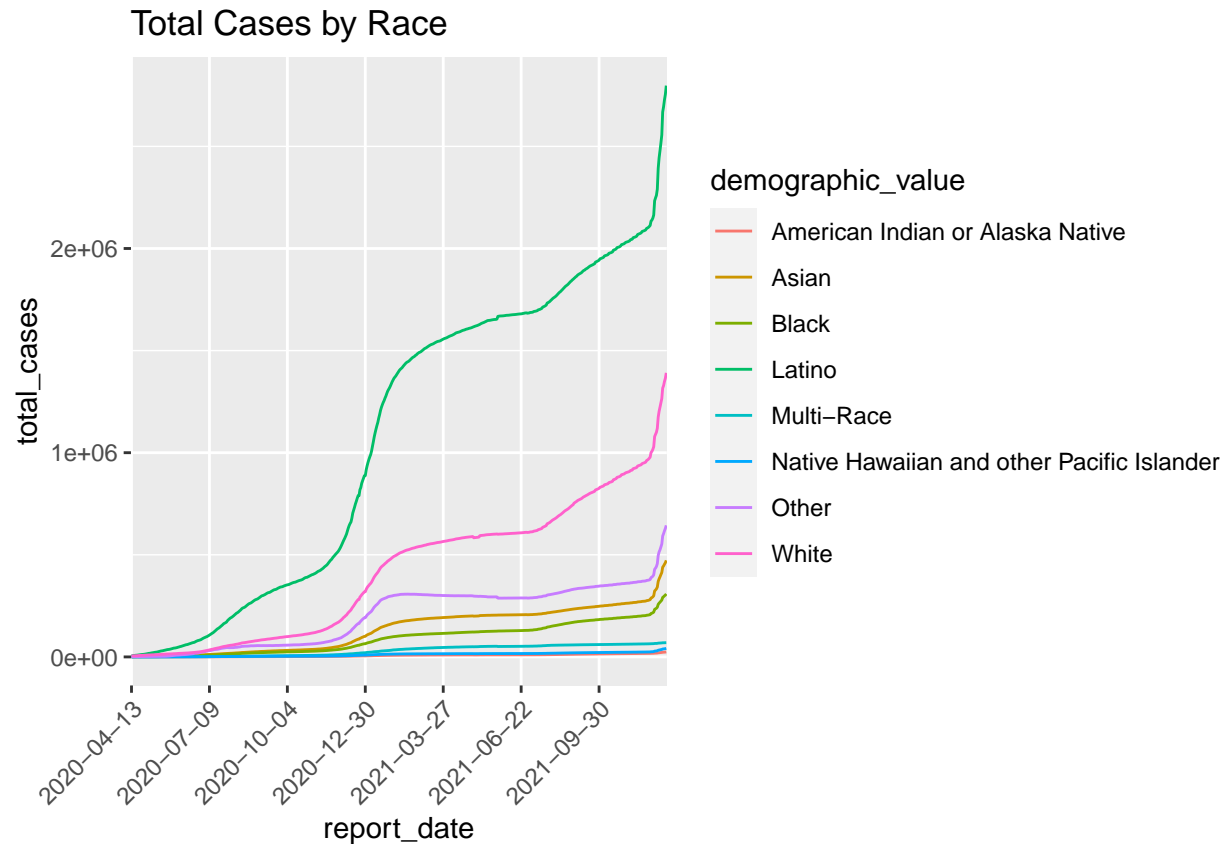
```
## [1] "American Indian or Alaska Native"
## [2] "Asian"
## [3] "Black"
## [4] "Latino"
## [5] "Multi-Race"
## [6] "Native Hawaiian and other Pacific Islander"
## [7] "Other"
## [8] "Total"
## [9] "White"
```

```
race_group_data <- filter(race_group_data,
                          !demographic_value %in% c('Total'))
```

```
race_filter<- race_group_data %>%
  filter(demographic_value %in% c("American Indian or Alaska Native", "Asian", "Black",
                                   "Latino", "Multi-Race",
                                   "Native Hawaiian and other Pacific Islander",
                                   "Other", "White"))
```

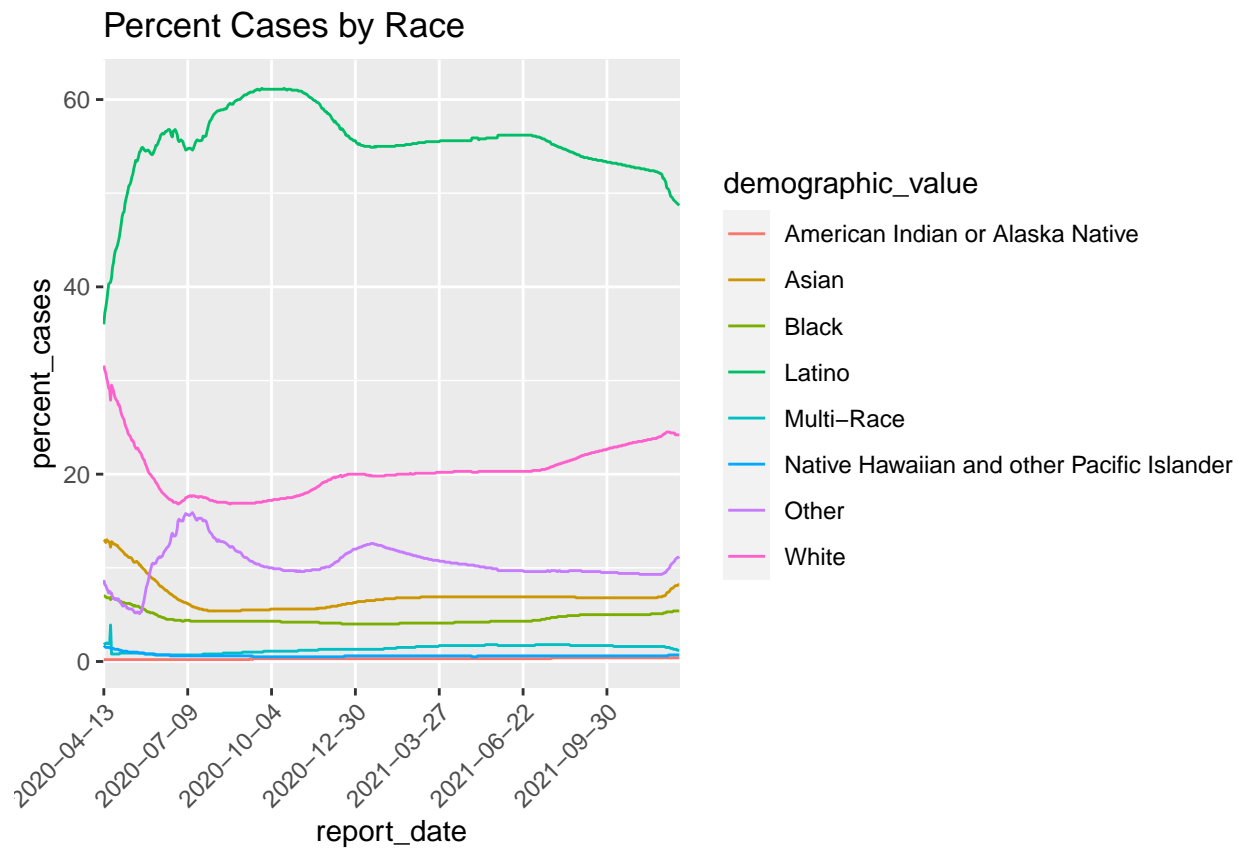
```
race_filter %>%
  ggplot( aes(x=report_date, y=total_cases, group=demographic_value, color=demographic_value)) +
  geom_line()+
```

```
scale_x_discrete(breaks = function(x) x[seq(1, length(x), by = 3*29)]) +
labs(
  title="Total Cases by Race"
)+
theme(axis.text.x = element_text(angle = 45, vjust = 1, hjust = 1))
```



```
race_filter %>%
ggplot( aes(x=report_date, y=percent_cases, group=demographic_value, color=demographic_value)) +
geom_line()+
scale_x_discrete(breaks = function(x) x[seq(1, length(x), by = 3*29)]) +
labs(
  title="Percent Cases by Race"
)+
theme(axis.text.x = element_text(angle = 45, vjust = 1, hjust = 1))
```





```
race_filter %>%
  ggplot( aes(x=report_date, y=percent_deaths, group=demographic_value, color=demographic_value)) +
  geom_line()+
  scale_x_discrete(breaks = function(x) x[seq(1, length(x), by = 3*29)])+
  labs(
    title="Percent Deaths by Race"
  )+
  theme(axis.text.x = element_text(angle = 45, vjust = 1, hjust = 1))
```

