Assignment 25

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Libraries

```
# Libraries
library(ggplot2)
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
```

Set data

```
# Load dataset from csv

setwd("~/Desktop/Assignment25") #set working directory

df <- read.csv(file = 'corona.csv') #read csv and store in dataframe

# Changing Year and Month columns as factors
df$Year <- as.factor(df$Year)
df$Month <- as.factor(df$Month)

# Calling the dataframe
df
```

```
##    Year Month NumberOfCases
## 1  2019   Jan          6831
## 2  2019   Feb          7170
## 3  2019   Mar         11227
## 4  2019   Apr         18691
## 5  2019   May         30657
## 6  2020   Jan          6974
## 7  2020   Feb          7167
## 8  2020   Mar          5892
## 9  2020   Apr           307
## 10 2020   May           208
```

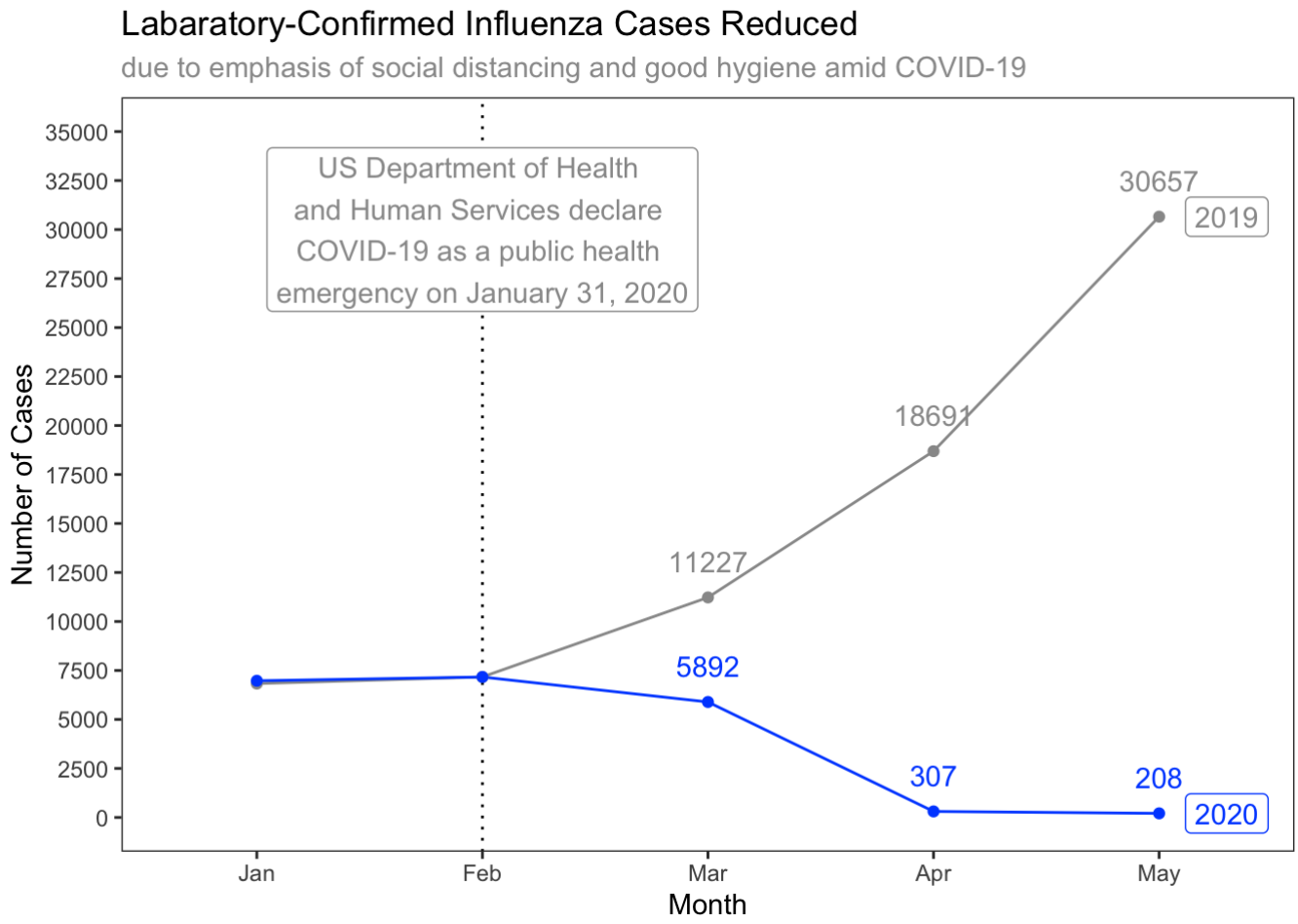
Visualization

```
# Reordering months so they are NOT alphabetical
df$Month <- factor(df$Month,levels = c("Jan", "Feb", "Mar", "Apr", "May"))

# Final Visualization
finalVis <- ggplot(data = df, aes(Month, NumberOfCases, colour = Year, group = Year) ) +
  geom_line(show.legend = FALSE) +
  geom_vline(xintercept=c("Feb"), linetype="dotted") + #dotted line through Jan 31, to s
how when covid was declared emergency
  geom_point(show.legend = FALSE) +
  scale_y_continuous(limits = c(0, 35000), breaks = seq(0, 35000, by = 2500)) +
  labs(y= "Number of Cases",
       title = "Labaratory-Confirmed Influenza Cases Reduced",
       subtitle = "due to emphasis of social distancing and good hygiene amid COVID-19")
+
  scale_color_manual(values=c('#999999','#0051ff')) + #changes colors of lines
  theme_bw() +
  theme(panel.grid.major = element_blank(), # removing grid lines
        panel.grid.minor = element_blank(),
        plot.caption = element_text(color = '#999999'),
        plot.subtitle = element_text(color = '#999999')) +
  geom_text(data = df[ which(df$Month=='Mar' | df$Month=='Apr' | df$Month=='May'),], #on
ly show data labels for these months
            aes(label = NumberOfCases), vjust = -1.25, show_guide = FALSE) +
  annotate("label", x = 5.3, y = 30657, label = "2019", color = '#999999') +
  annotate("label", x = 5.3, y = 208, label = "2020", color = '#0051ff') +
  annotate("label", x = 2, y = 30000, label = "US Department of Health \nand Human Servi
ces declare \nCOVID-19 as a public health \nemergency on January 31, 2020", color = '#99
9999')
```

```
## Warning: `show_guide` has been deprecated. Please use `show.legend` instead.
```

```
# Calling the Final Visualization
finalVis
```


Labaratory-Confirmed Influenza Cases Reduced
due to emphasis of social distancing and good hygiene amid COVID-19
US Department of Health and Human Services declare COVID-19 as a public health emergency on January 31, 2020
30657
2019
18691
11227
5892
307
208
2020
Number of Cases
35000
32500
30000
27500
25000
22500
20000
17500
15000
12500
10000
7500
5000
2500
0
Jan
Feb
Mar
Apr
May
Month