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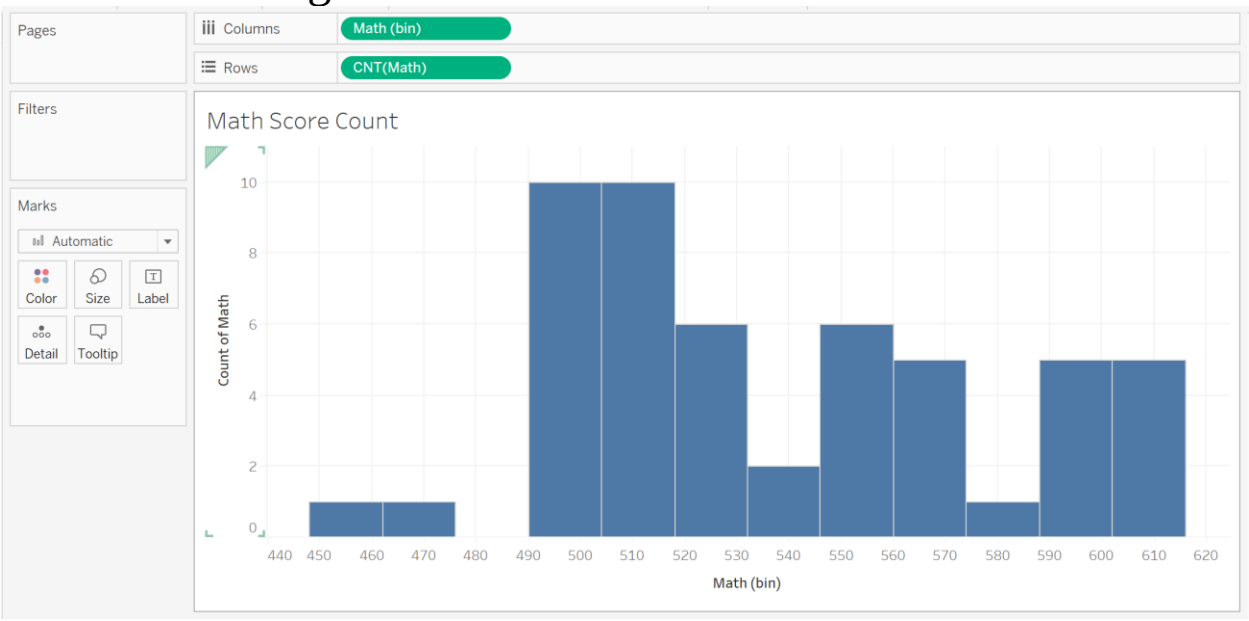
08/03/2022
DSC640-T301 2227-1

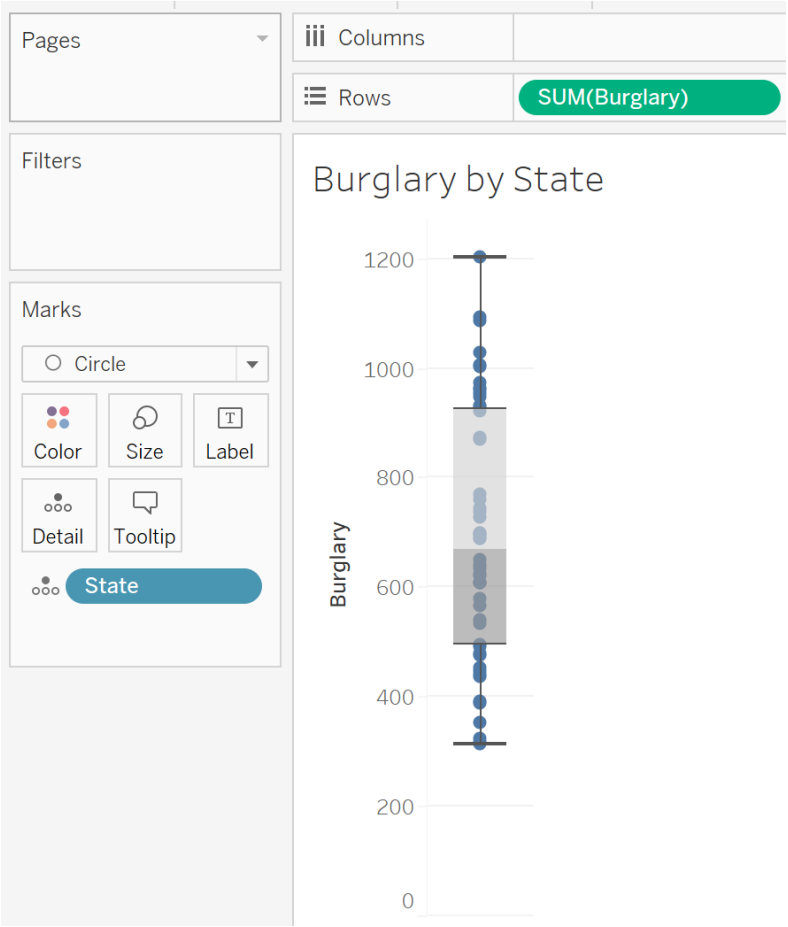
5.2 Exercise Charts

Tableau Charts

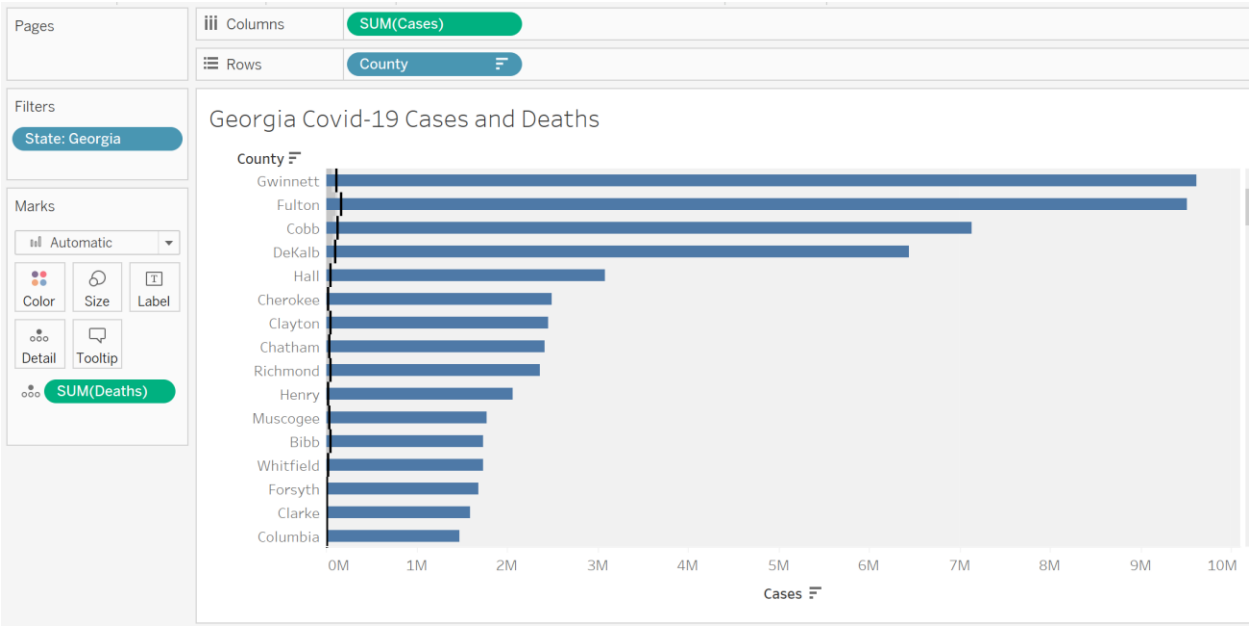
- Tableau – Histogram



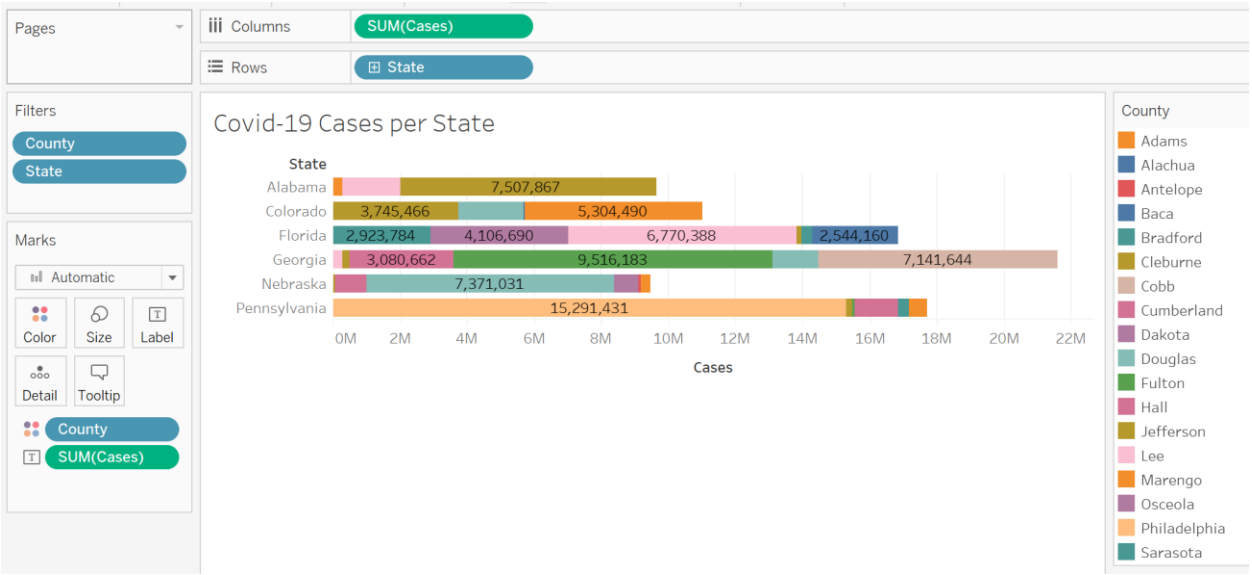
- Tableau – Box Plot



- Tableau – Bullet Chart



- Tableau – Stacked Horizontal Bar Plot

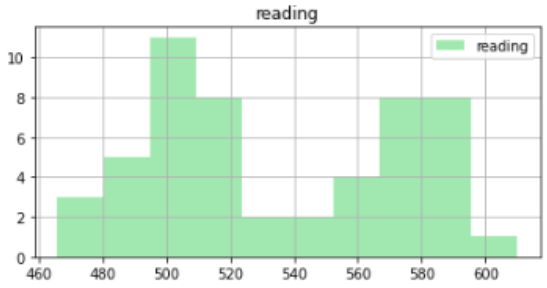


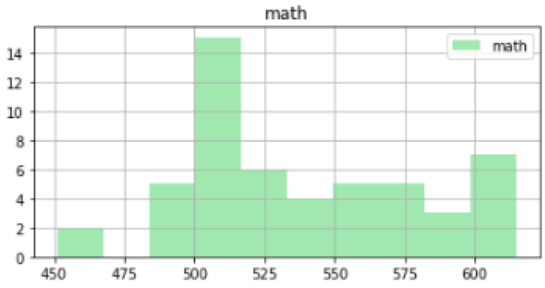
Python Charts

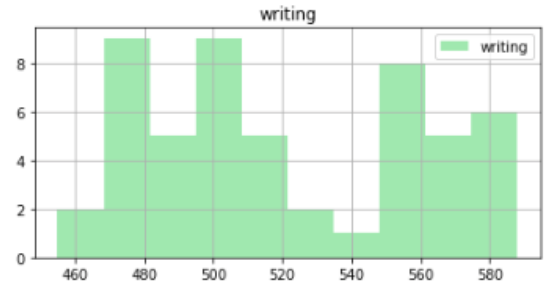
- Python – Histogram

```
# Create a histogram using hist for my reading, math, writing columns

education.hist(column=['reading','math','writing'], grid=True,
               figsize=(15, 7),legend=True,bins=10,color=['#A0E8AF']);
```



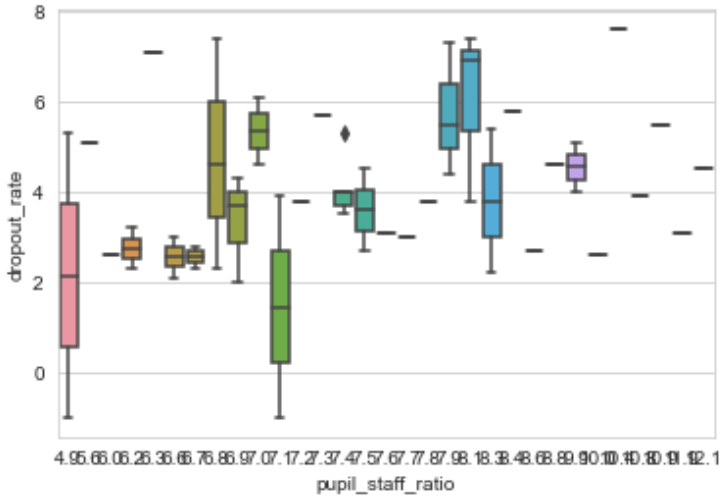




- Python - Box Plot

```
# I'll use seaborn to create a boxplot that shows the
# dropout_rate by the pupil_staff_ratio
sns.set_style("whitegrid")
sns.boxplot(x = 'pupil_staff_ratio', y = 'dropout_rate', data = education)
```

```
<AxesSubplot:xlabel='pupil_staff_ratio', ylabel='dropout_rate'>
```

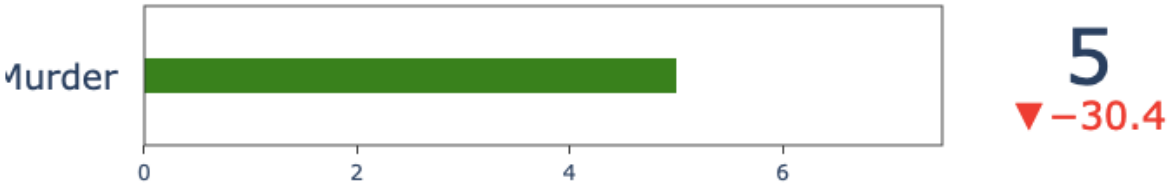


- Python – Bullet Chart

```
# I'll ue graph_objects to create a Bullet Chart that shows the murders for Florida
# against the largest numbers in the US

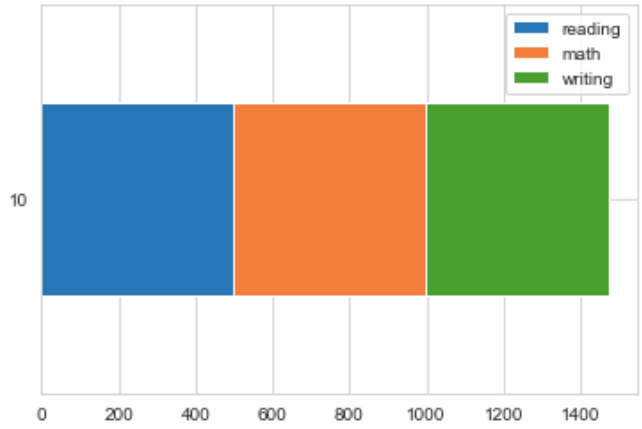
import plotly.graph_objects as go

fig = go.Figure(go.Indicator(
    mode = "number+gauge+delta",
    gauge = {'shape': "bullet"},
    value = 5,
    delta = {'reference': 35.4},
    domain = {'x': [0, 1], 'y': [0, 1]},
    title = {'text': "Murder"}))
fig.update_layout(height = 260)
fig.show()
```



- Python – Stacked Horizontal Bar Plot

```
# Create a Stacked Horizontal Bar Plot for florida for reading, math, and writing
education_update.plot.barh(stacked=True);
```

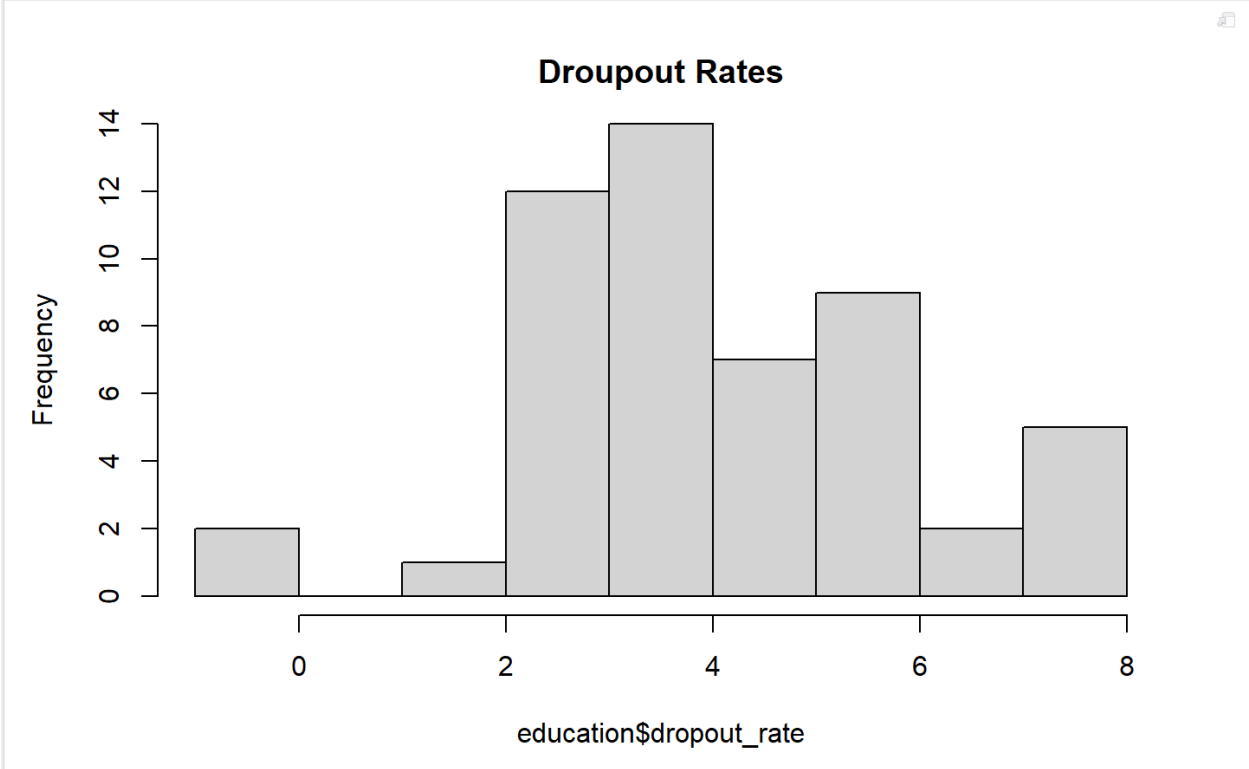


R Studios Charts

- R Studios – Histogram

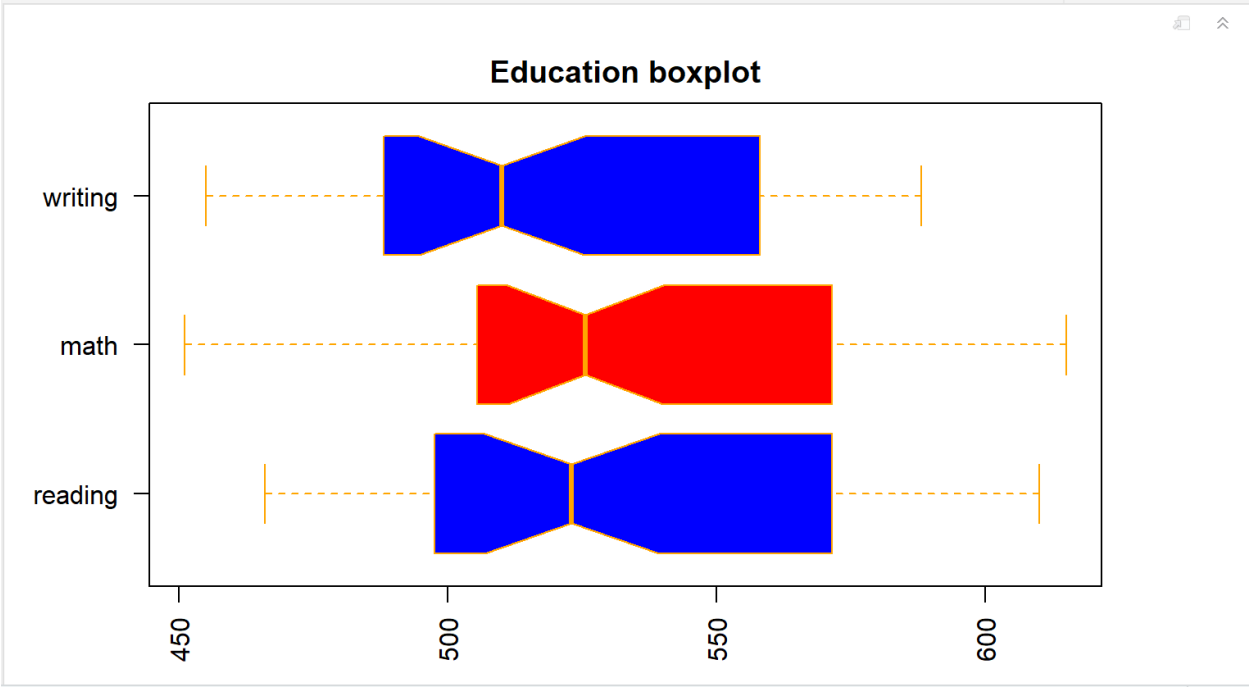
```
```{r histogram, include=TRUE}
# I will now use hist to create my histogram that shows the dropout_rate with ten breaks

hist(education$dropout_rate, breaks=10, main="Droupout Rates")
```
```



- R Studios - Box Plot

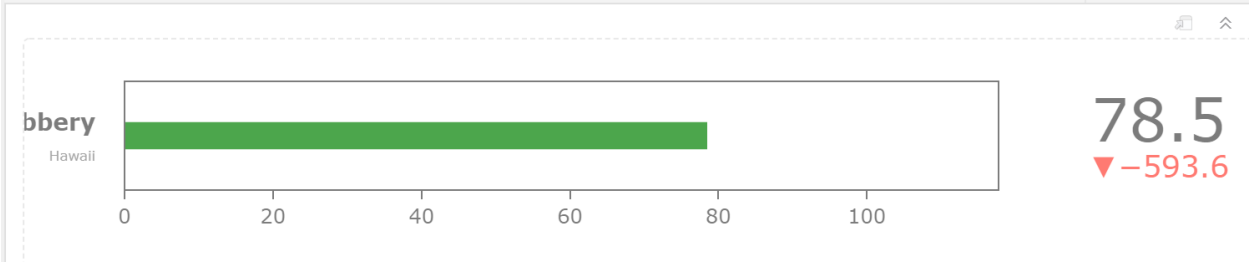
```r
# I will now use boxplot to create a box plot that shows the box plots for reading, math, and writing
boxplot(education$reading, education$math, education$writing,
main = "Education boxplot",
at = c(1,2,3),
names = c("reading", "math", "writing"),
las = 2,
col = c("blue","red"),
border = "orange",
horizontal = TRUE,
notch = TRUE
)
```

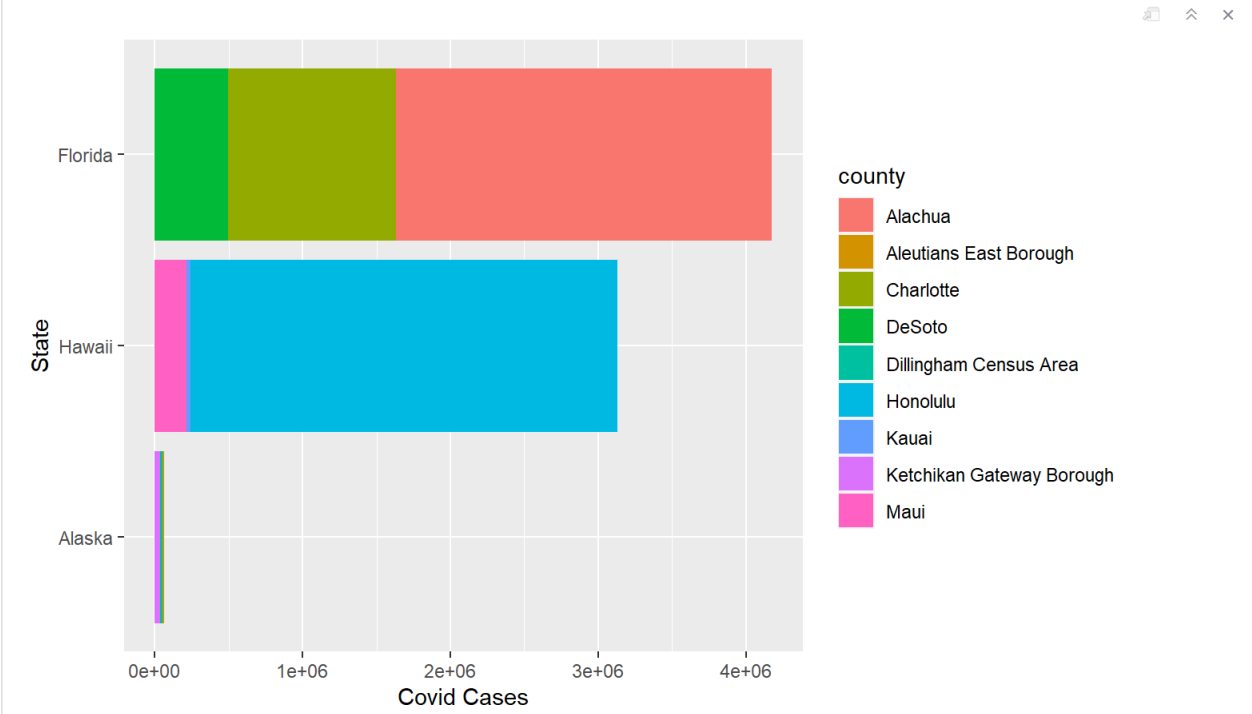


- R Studios – Bullet Chart

```r
```{r bullet chart, include=TRUE}
# I will use Plotly to create a bullet chart that shows the robbery for Hawaii
library(plotly)

fig <- plot_ly(
  type = "indicator", mode = "number+gauge+delta", gauge = list(shape = "bullet"), delta =
list(reference = 672.1), value = 78.5, domain = list(x = c(0, 1), y = c(0, 1)), title= list(
    text = "<b>Robbery</b><br><span style='color: gray; font-size:0.6em'>Hawaii</span>",
    font = list(size = 14)),
  height = 130)
fig
```
```



- R Studios – Stacked Horizontal Bar Plot

```r
```{r Stacked Horizontal Bar Plot, include=TRUE}
# I will use ggplot to create a Stacked Horizontal Bar Plot with my Counties_State data set
Counties_State %>%
  ggplot(aes(x=forcats::fct_reorder(state,cases),y=cases, fill=county)) +
  geom_col() +
  coord_flip() +
  labs(x="State", y="Covid Cases")
```
```