

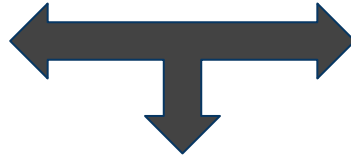
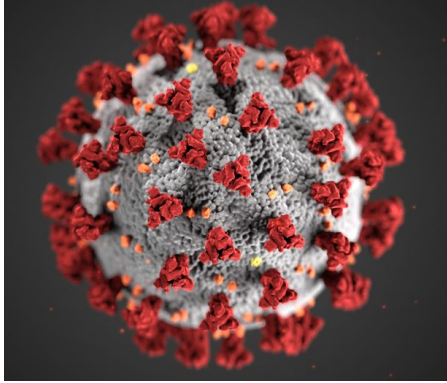
# COVID-19 and The 2020 Election



42 Elephants Ate Pie

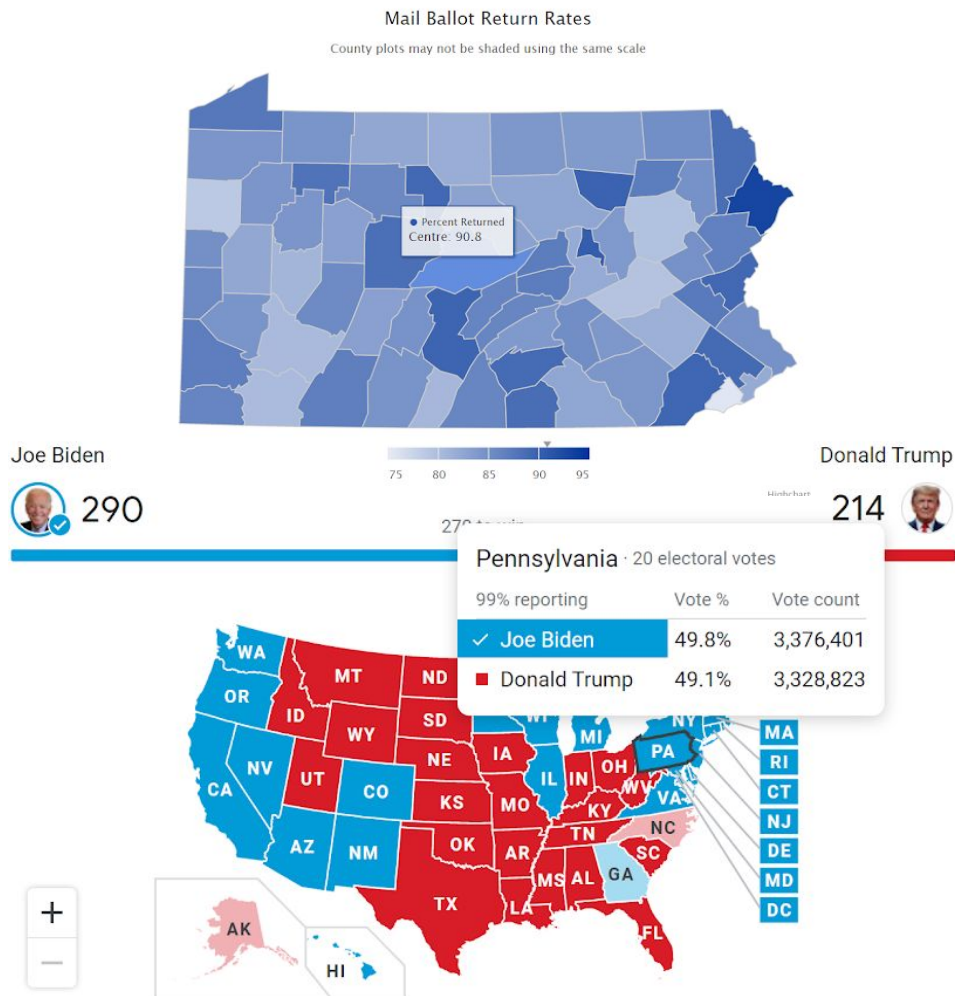
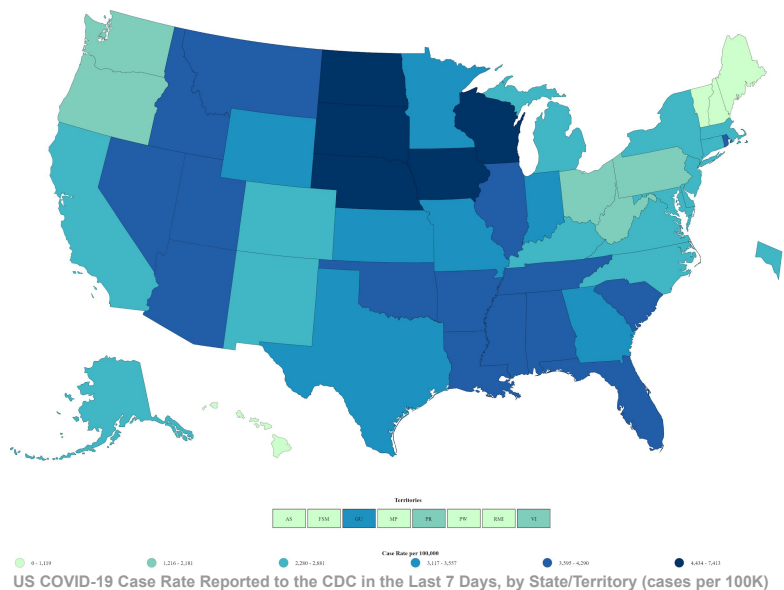
Lindsey Ulmer  
Chiaoya Chang  
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# Relationship between Covid Case Count, Voting Method, and Results



# Use Case...

- Informed Citizens
- News Channels



# Libraries We May Use.....



- Pros:
  - allows for statistical analysis
  - fully interactive
- Cons:
  - difficult to make complex and multi-field charts
  - lots of issues open (947/2190)



- Pros:
  - interactive version of Matplotlib
  - more issues closed (586/5654)
  - easy to link between plots
- Cons:
  - more difficult to learn
  - no 3D plots

Folium

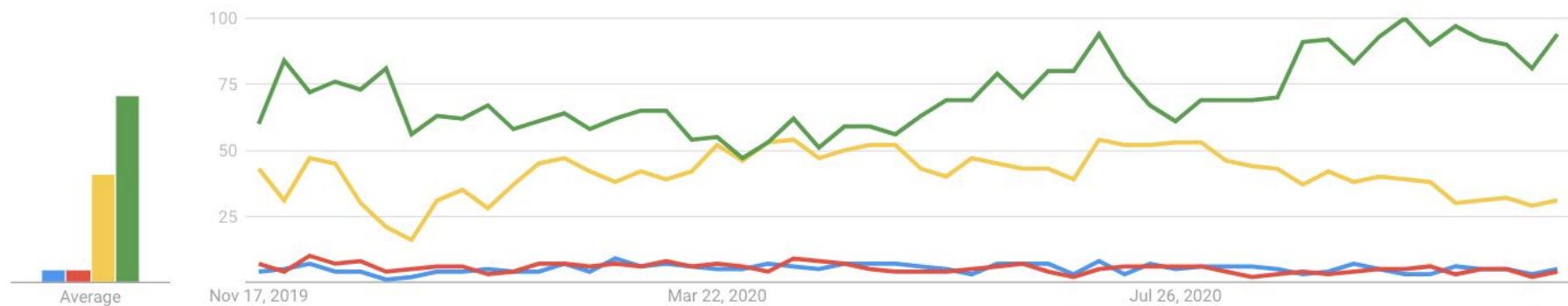


GeoPandas

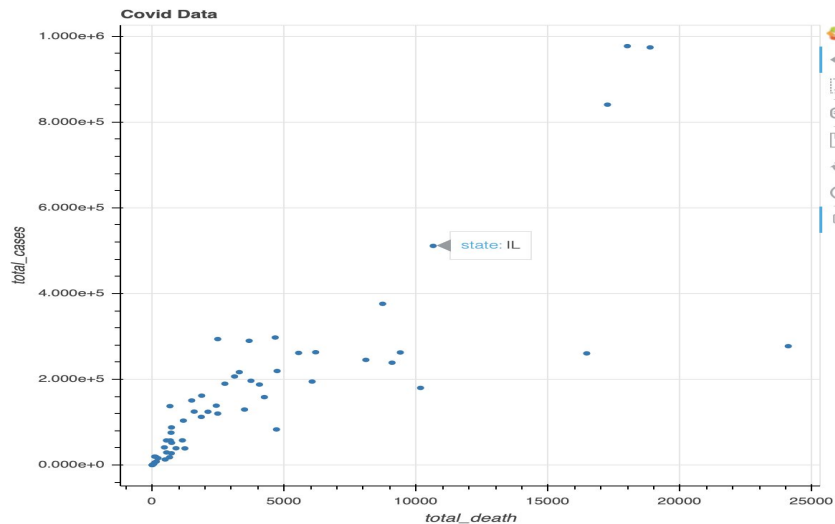
# Interest over time of plotly, bokeh, folium and geopandas

● geopandas ● folium ● plotly ● bokeh

Interest over time ?



# Comparison of Technology



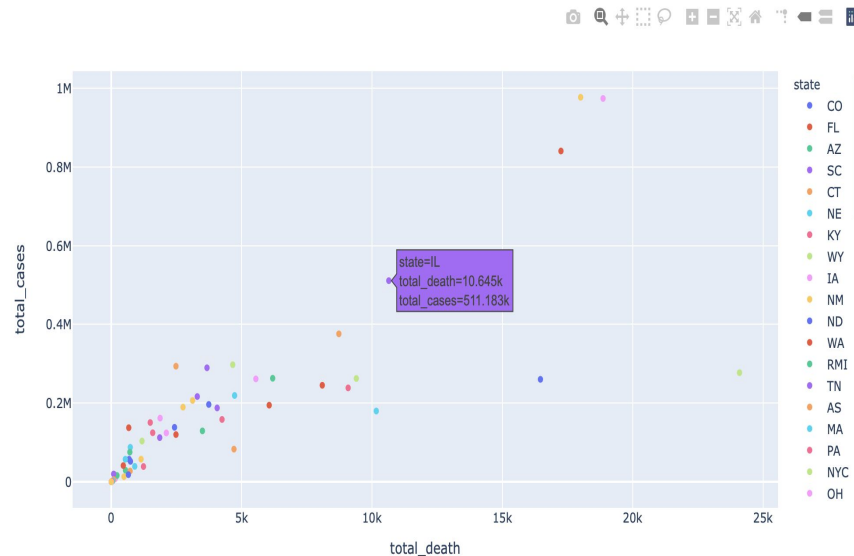
With **bokeh**

Creates a *curdoc* to which multiple python roots can be added, and each root is a figure or complex layout.

Uses *ColumnDataSource* that can be passed to multiple graphs, which results in a shared dataset, linked between all visualisations.

Can work with geographical data.

Hover tool, dropdown menu and sliders available.



With **plotly**

We see very similar functionalities in Bokeh and Plotly. We can add the hover tool that shows the information of specific state when moving cursor over the data point and having a hover label appear. Dropdown menu and sliders are also available, which makes changes to the plot based on user inputs.

visualization tools.

# Conclusion

- Interactive map to connect covid data and voting data
  - Bokeh
    - Better than Plotly for us because *ColumnDataSource* structure, more easily allows different plots from the same dataset
  - Geopandas
    - For map capability

