Data Visualization and Lock-Down Analysis Using Global Covid-19 Data

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Choropleth Maps

- Divides different geographical regions based on a statistical variable or data variable
- A type of thematic map where different regions are shaded according to the variable in consideration and the proportion of representation of the variable for a region
- Two important things:
    - Geo-spatial data with the geographic boundaries like geo json files
    - Variables or data points for the color coding

Folium (Library)

- Library in Python can be used to visualize geo-spacial data
- Helps to bind the data to create maps like choropleth and also enables marker features with MTML visualizations
- Interactive mode
- Different map projections are also available like orthographic, natural earth,etc.

Plotly (Library)

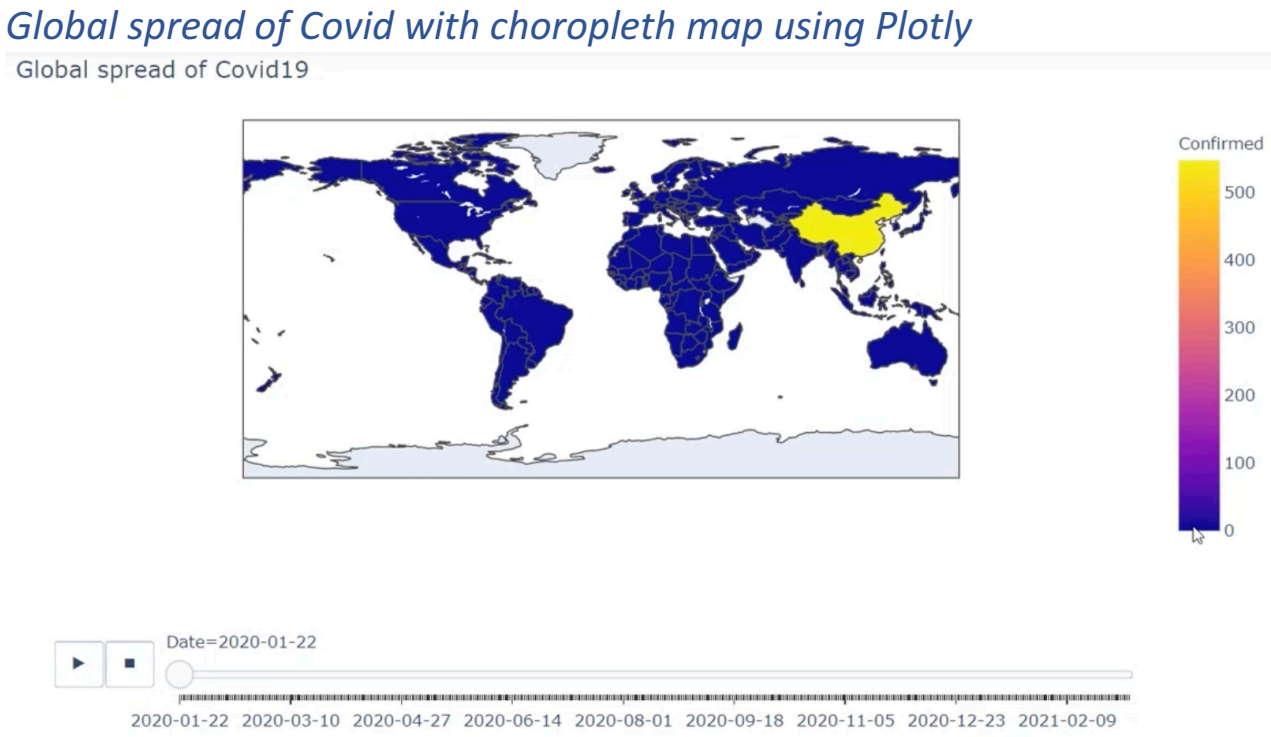
- Library for Python visualization
- Can be used to create html visualization with great animations
- Interactive mode
- Also compatible with dash which makes it easy to embed on blogs or other web applications
    - Dash: open-source framework for building analytical applications

Analysis of Covid-19 Data

Dataset: John Hopkins University, COVID-19 dataset (CSSEGISandData/COVID-19)

- Variables: Date, Country, Confirmed, Recovered, Deaths

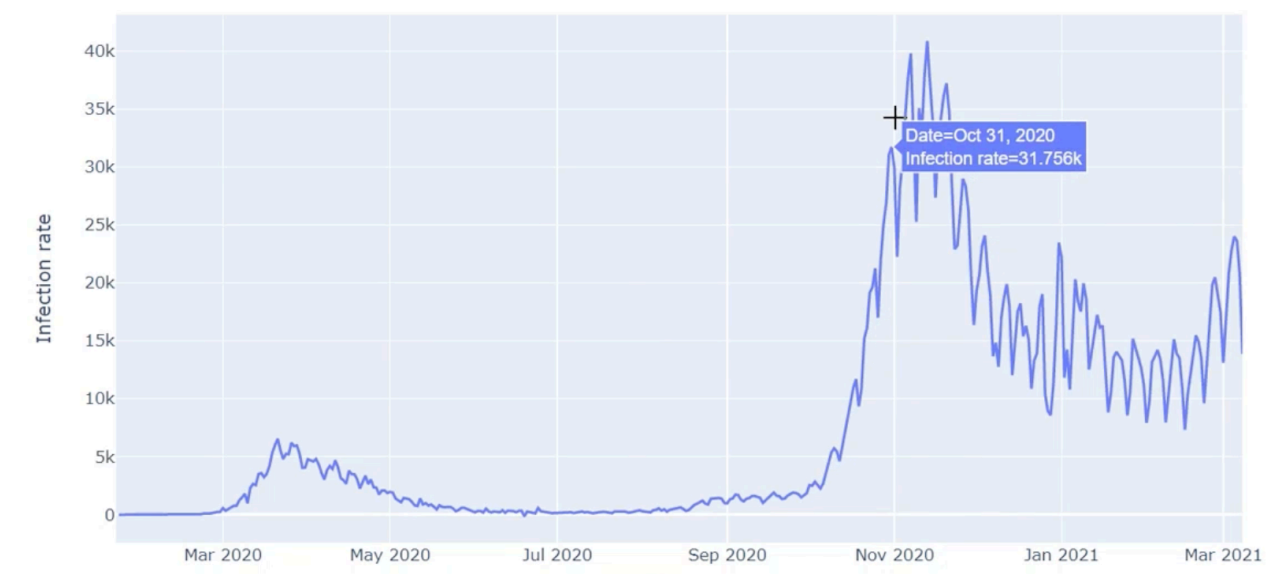
Global spread of Covid with choropleth map using Plotly



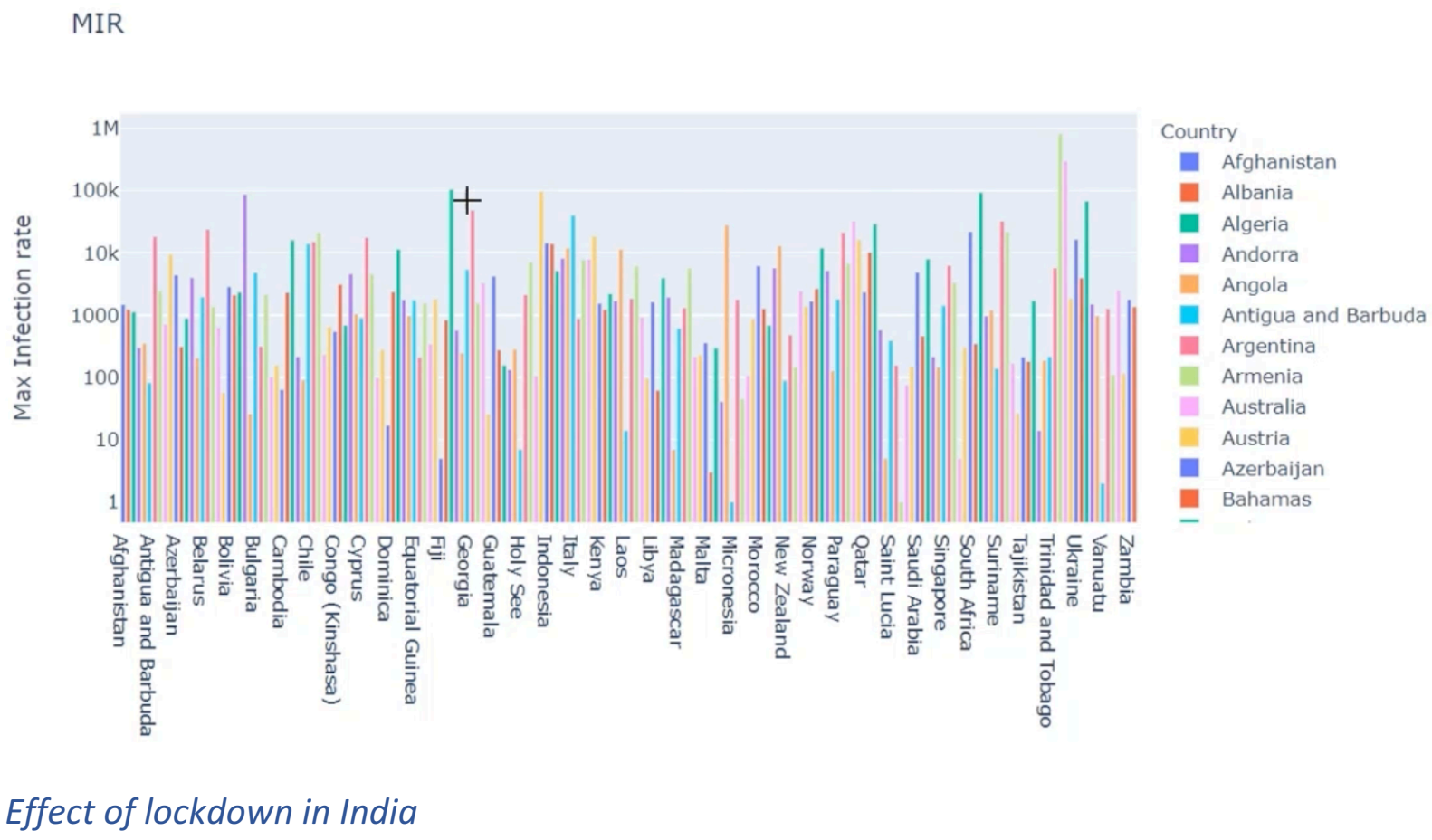
Infection rate by country

- Firstly need to calculate a new column "confirmed"

Visualization of Italy infection rate



For all countries:



Effect of lockdown in India

Before and after lockdown