A4_Common_Analysis (Visualization)

The Visualization is analysis on the Cid 19 Data. I have done my analysis on DuPage County in Illinois, the population of the place is 932877. The Analysis helped me to understand the trends in the cases in different scenarios like having Mask (Mask Required or Not Required).
In order to follow the Analysis, we need to consider the following datasets:

1. The RAW_us_confirmed_cases.csv file from the Kaggle repository of John Hopkins University COVID-19 data.
2. The CDC dataset of masking mandates by county.
3. The New York Times mask compliance survey data.

Steps:

1.Processes the Data for the Confirmed Cases:

I have taken the Raw_us Confirmed data set and then passed to a pandas df and pivoted the date columns and change the format of the date, renamed columns like state and country. After cleaning the data stored in a csv file name" number_of_daily_cases".
Then I have considered the data as x-axis and the Number of daily cases computed value from the data as y axis and plotted the graph.
Which is the image (illinois_daily_cases.png)

The Graph Infers:

The Trends of the Covid Confirmed cases data in Illions from 2/01/2020 to 10/15/2021.
The Graph tells us that during the period (2020-11 to 2021-01) the number of cases recorder daily were very high.

2. **CDC Mask Mandate in Illinois:**

In the next step I have considered the data from the Mask mandates by county dataset and filterd the data for the county I need and changed the date format, next I ahev merged the Illinois_cases data with the mask mandate data on the date column and then, divide the data based on the Face Mask required in Public Column and then plotted a graph for both the cumulative confirmed cases and daily confirmed cases.
The Total mergedData is in the file **: mergerd_data**
The two graphs are stored in the following images**:**
illinois_Cummulative_with_mask_on_Date.png
viz_mask_mandate.png

The Graphs Infers:
The Date on the x-axis and the Mask required and Not required as the legends, the cumulative Confirmed cases and Daily confirmed cases on Y-axis respectively.
The Graph tells us the places where the mask mandatory is there number of daily cases are more than places where mask is not required.

The Number of Daily Cases has different patterns like it increased and then decreased over a period of time.
The Cumulative Cases are increasing over a period of time irrespective of Mask.