The Battle of Neighborhood

COVID-19 Data Analysis and Forecasting

INTRODUCTION SECTION :

This section consists of the basic gist of the project I have taken up.
As we know that the current global scenario is such due to the outbreak of worldwide pandemic COVID-19 we are struggling to know the current count in a region.

This capstone project would help us know the COVID count in a searched place and also compare the situations of various states of the country.
Lastly, the project also focuses on a prediction to know the future count in a particular state in our country using Prophet framework.

DATA SECTION:

The data section includes the foursquare API to search for a particular place and inform us about the number of COVID positives in the state. I used the Four Square API through the venues channel. I used the near query to get venues in the cities.
Other data sets being used are also attached in the GitHub link additionally.

METHODOLOGY:

The main motive for this project to create something where people can find the COVID count of a particular place by searching for the venue using the Foursquare API and then was to assess the confirmed cases, deaths cases and the recovered cases in the whole country and the compare the results with the other 3 countries of the world which have seen a massive hike in their COVID count as per the data. It also uses folium is to visualise the spatial data in an interactive manner.
The capstone project shows worldwide cases and lastly, a prediction model has been implemented using Prophet framework. This also generates a week ahead forecast using Prophet, with 95% prediction interval by creating a base model with no

seasonality parameters (as Coronavirus is not having any seasonality) and additional regressors.

Prophet, a procedure for forecasting time-series data based on an additive model where non-linear trends are fit with yearly, weekly and daily seasonality. It is robust to outliers and missing data in prophet we need to give 2 inputs as it is a data frame with 2 columns.
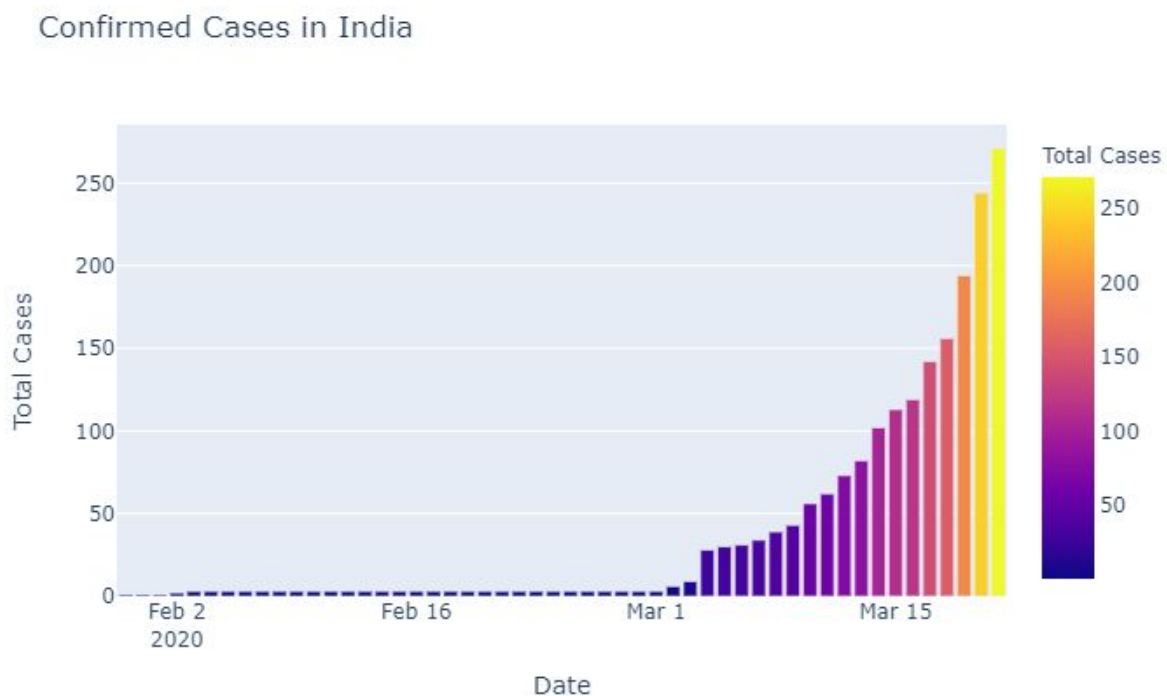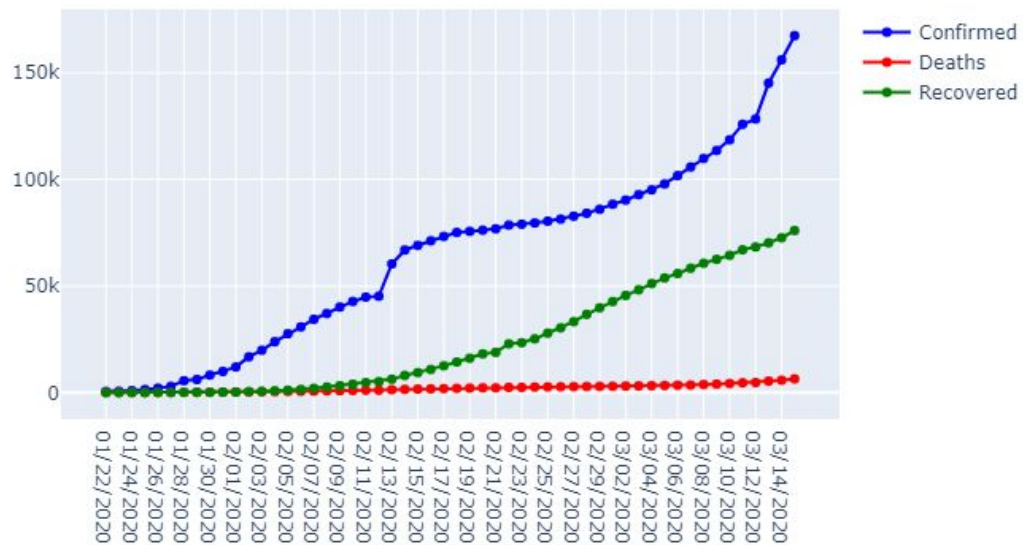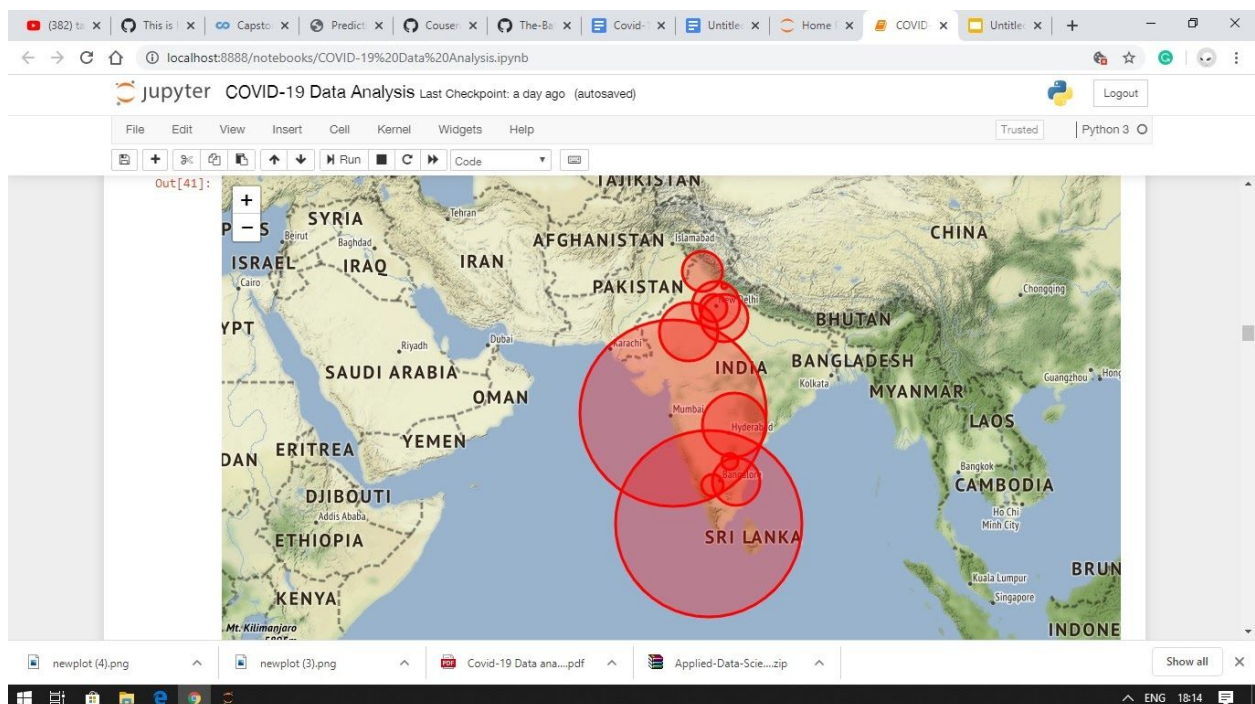
RESULTS:
The active cases depiction -

Active Cases in India
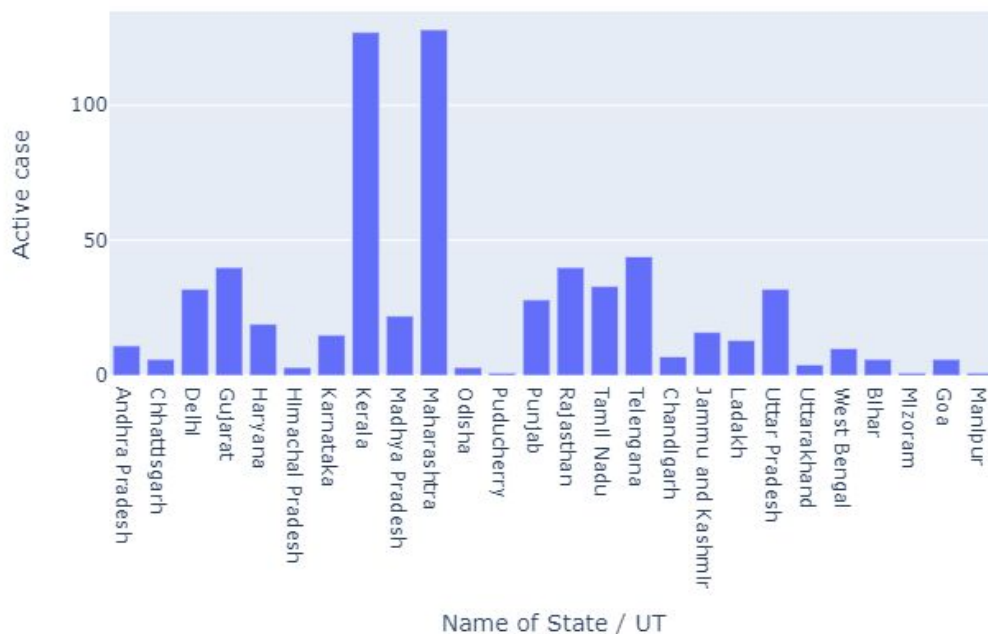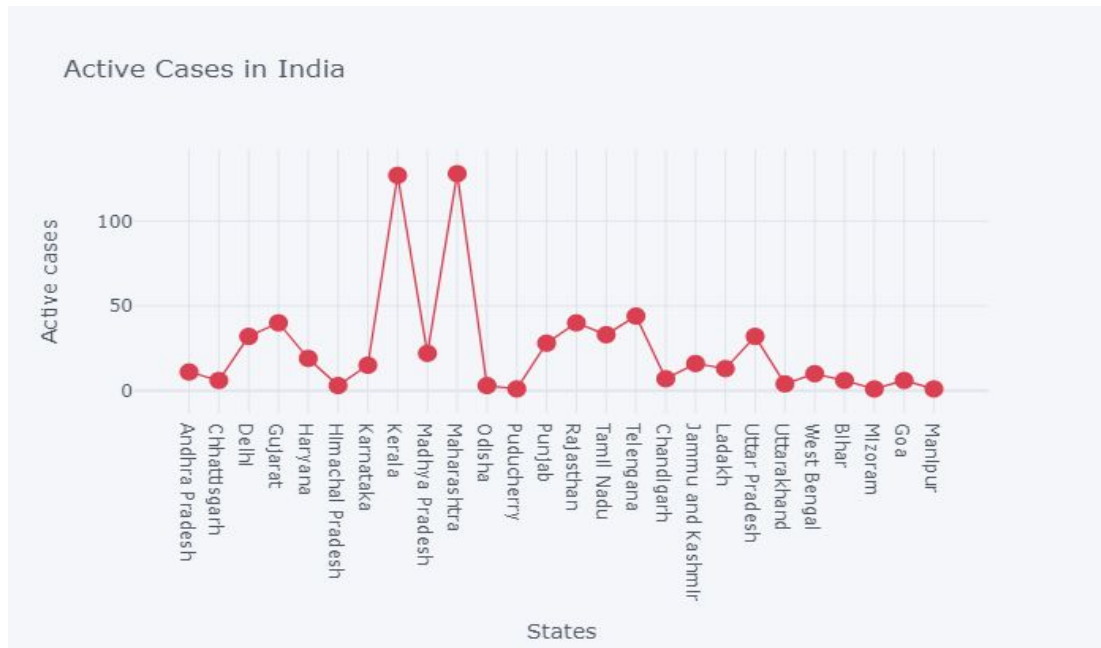
Confirmed cases in the country-

Confirmed Cases in India

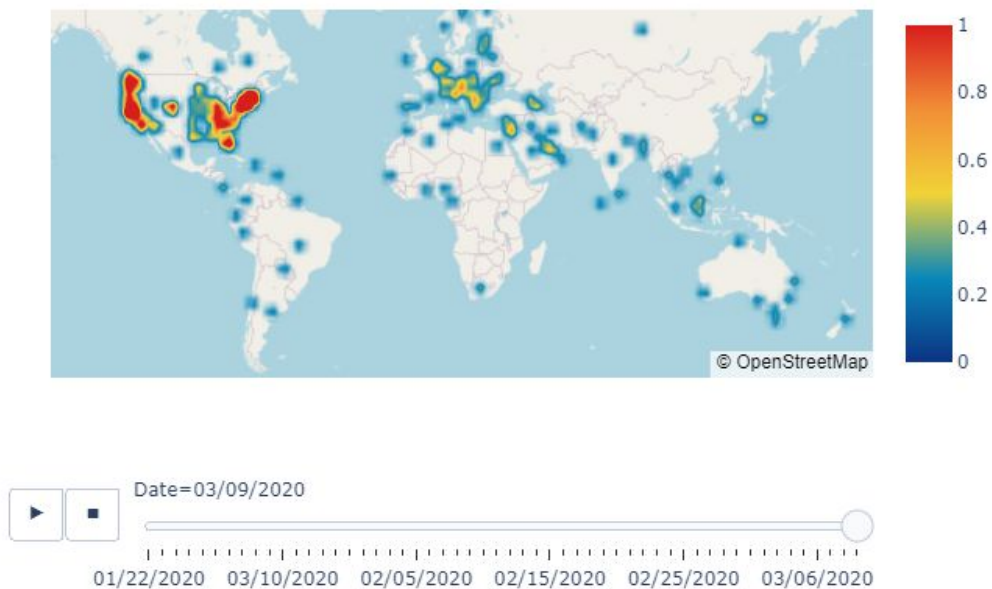Total Confirmed cases, Recovered Cases and deaths in the country -

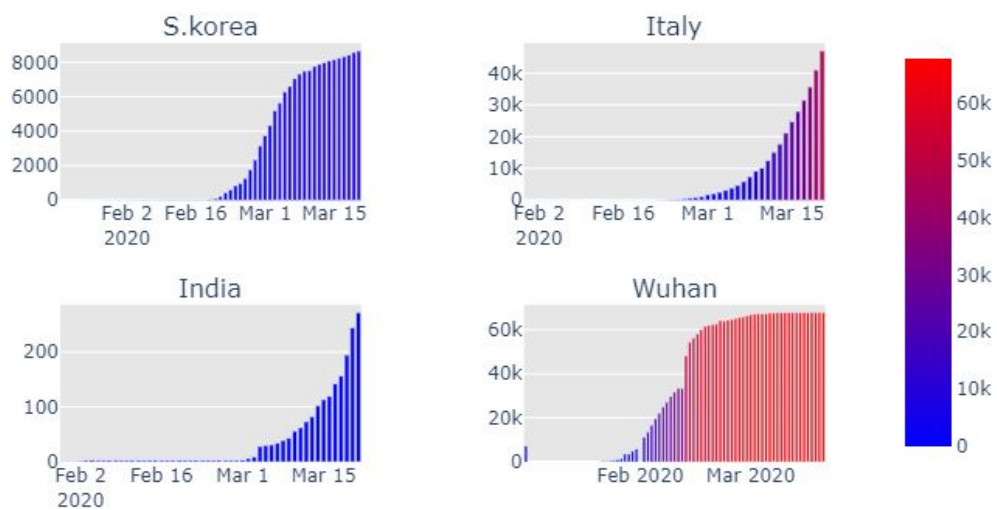Locality wise search and its COVID concentration in the country -

Worldwide Spread of COVID-19 -

Worldwide Spread of Corona Virus cases

Total Cases Comparision with other 4 countries -

Total Cases in these 4 Countries

CONCLUSION:

The conclusion we obtain is that Maharastra is the most infected state in our country and has a wider range of contribution to the country. So, before visiting any place we must check the COVID positive count there and also the relevant future predictions.

The forecasting is done with the help of Facebook framework called Prophet. Which provides a prediction for confirmed, recovered and deaths due to COVID-19.