**CAPSTONE PROJECT**

**Covid-19 Forecasting**

**SUBMITTED**

**BY**

**DHINESH S R**

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1. **Problem Statement**

Given data about COVID-19 patients, write code to visualize the impact and analyse the trend of rate of infection and recovery as well as make predictions about the number of cases expected a week in future based on the current trends.

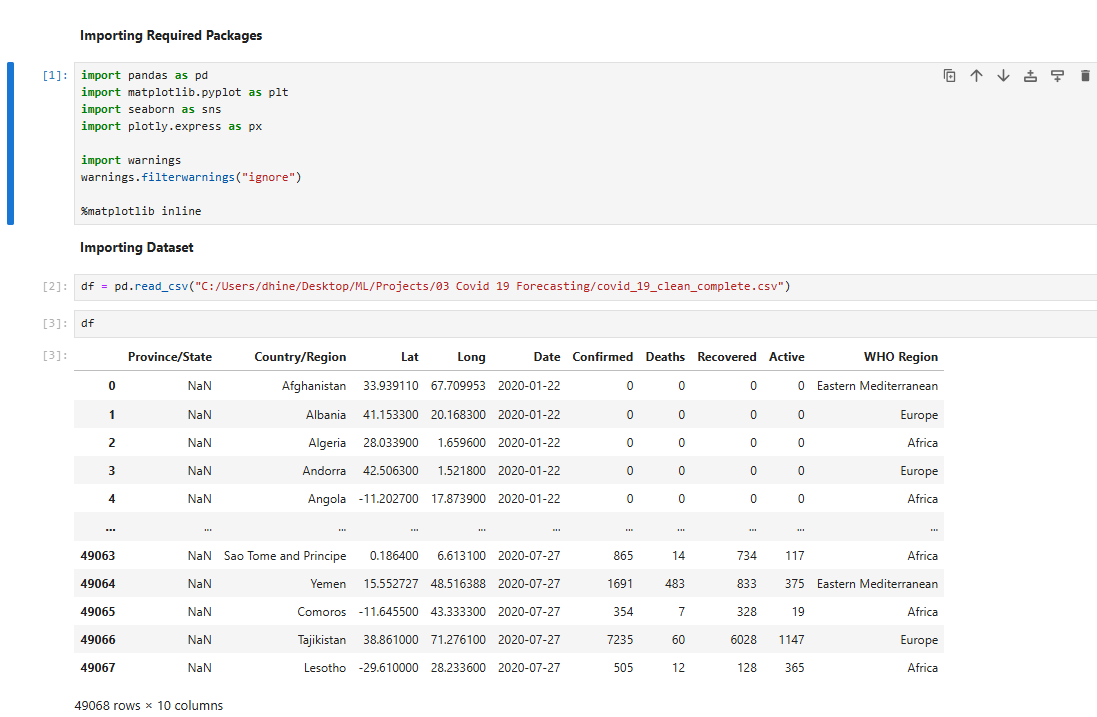
1. **Project Objective**

* Use pandas to accumulate data from multiple data files.
* Use plotly (visualization library) to create interactive visualizations.
* Use Facebook prophet library to make time series models.
* Visualize the prediction by combining these technologies.

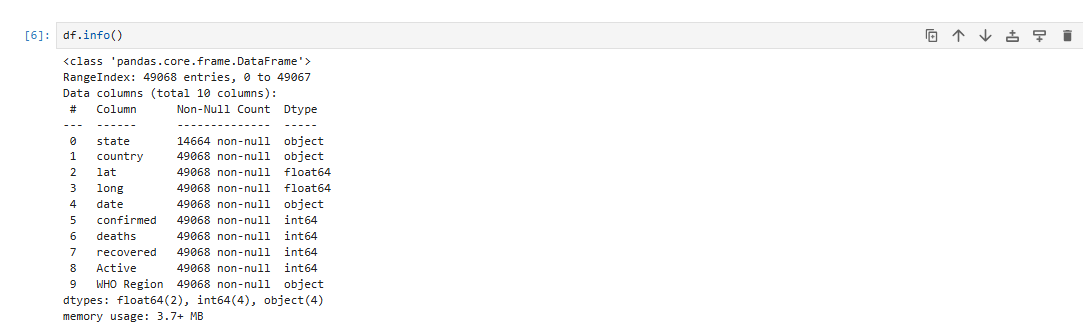
1. **Data Description**

CSV and Excel files containing data about the number of COVID-19 confirmed deaths and recovered patients both around the world and in India.

**Loading Dataset**

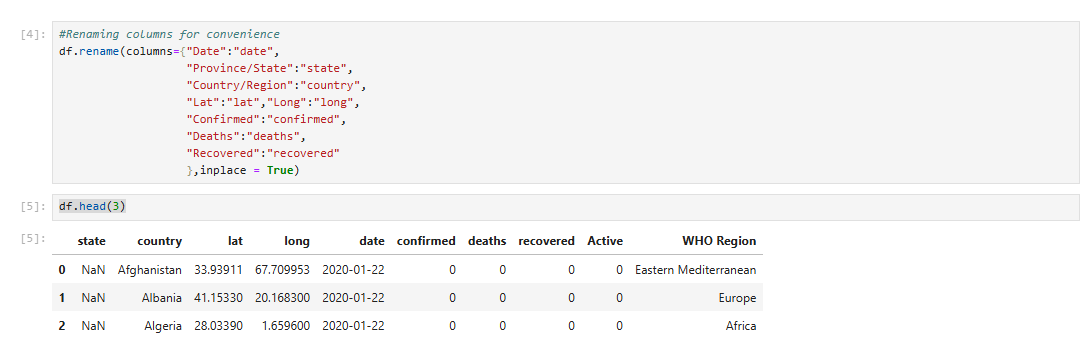


**Dataset Info**

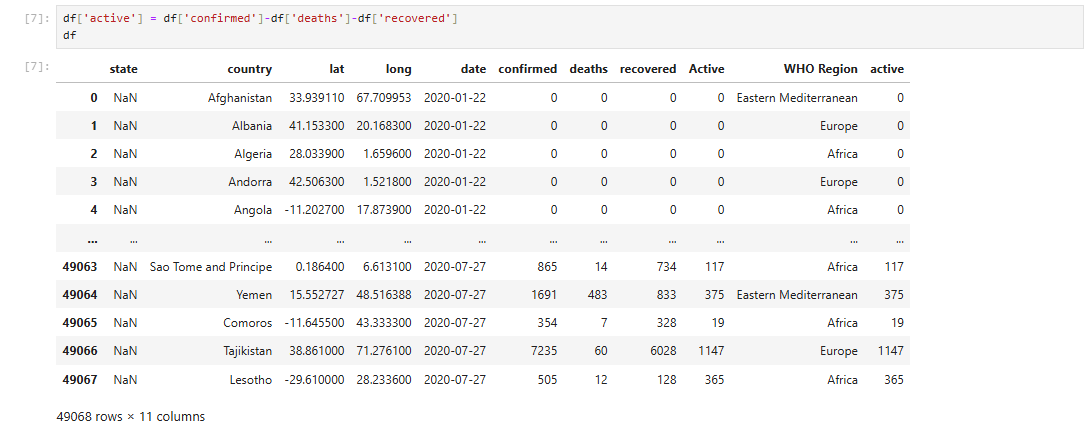


1. **Data Pre-processing Steps and Inspiration**

**Change Column Name as Easy to Access**

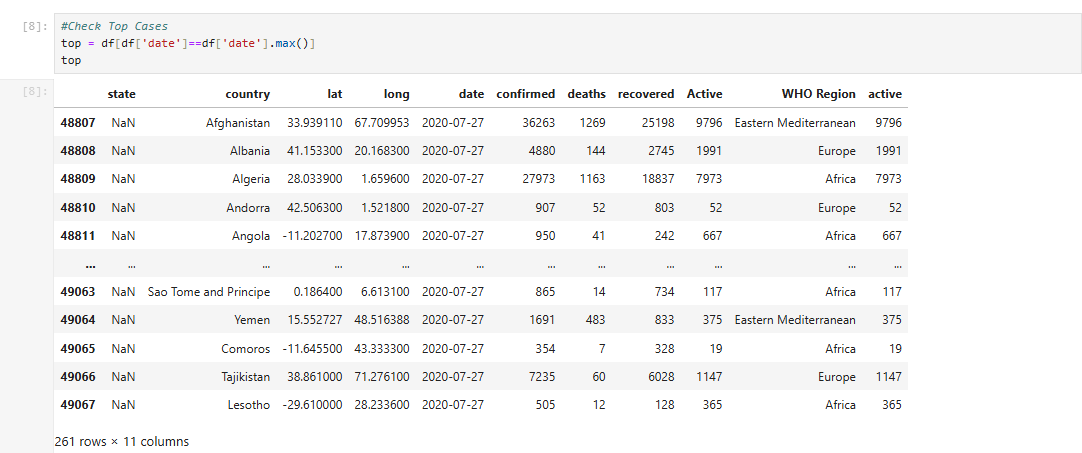


**Check Active Cases Are Correct**

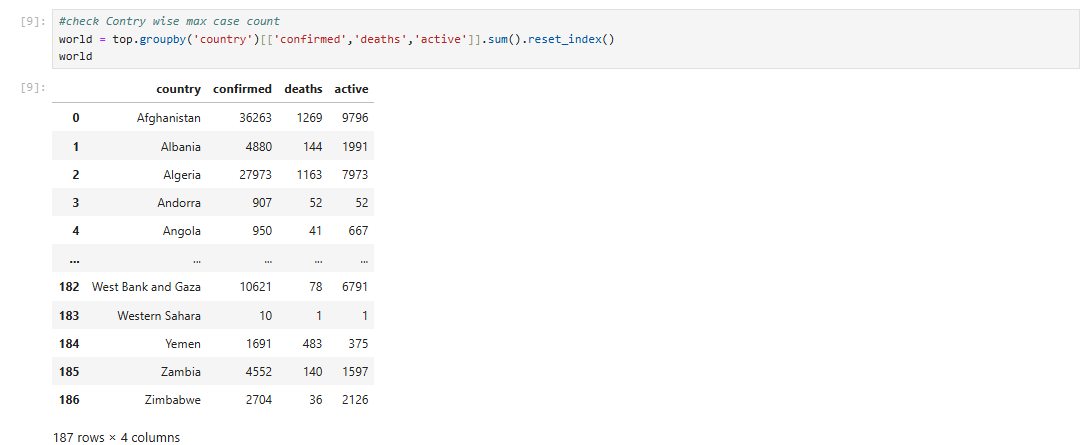


1. **EDA Results**

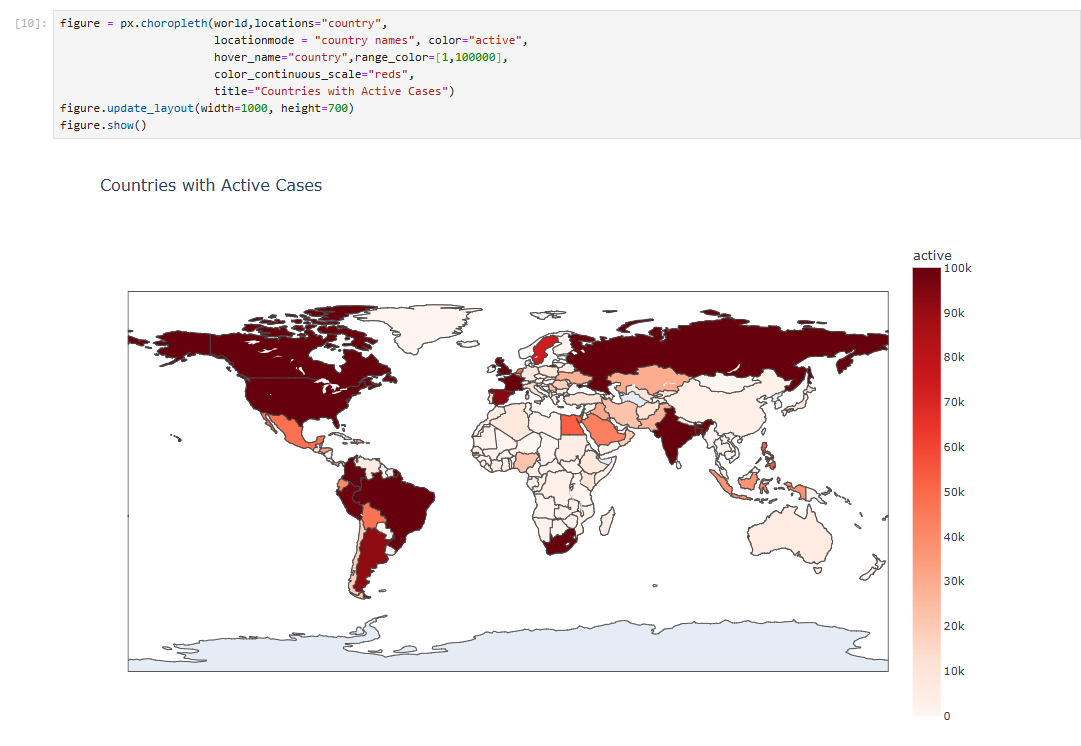
**EDA To Check Maximum Case**

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**Country wise Case List**

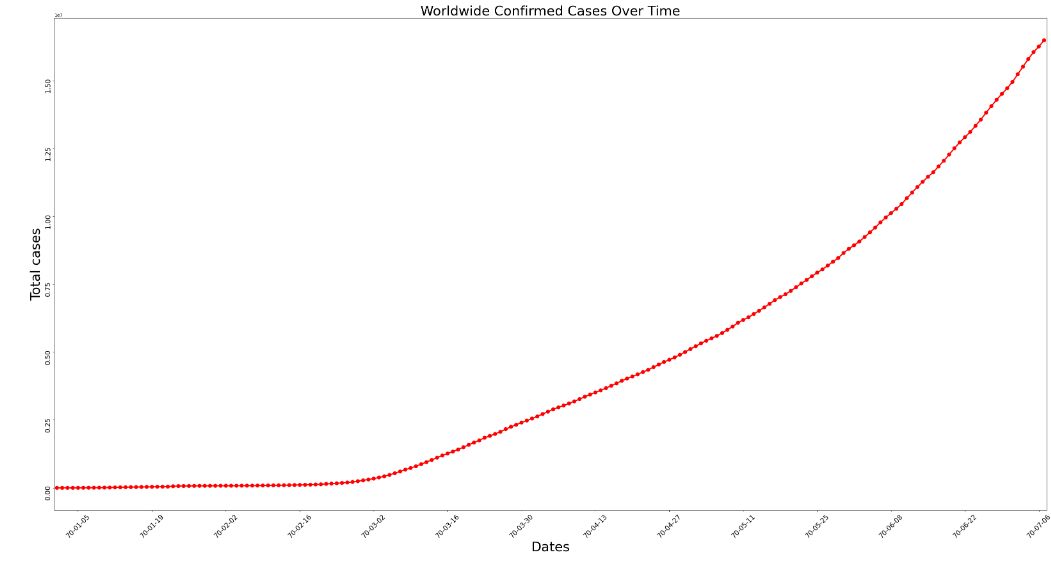


**Country Wise Case Using choropleth Plotly Visualization**



**Covid Trend on World Wise**

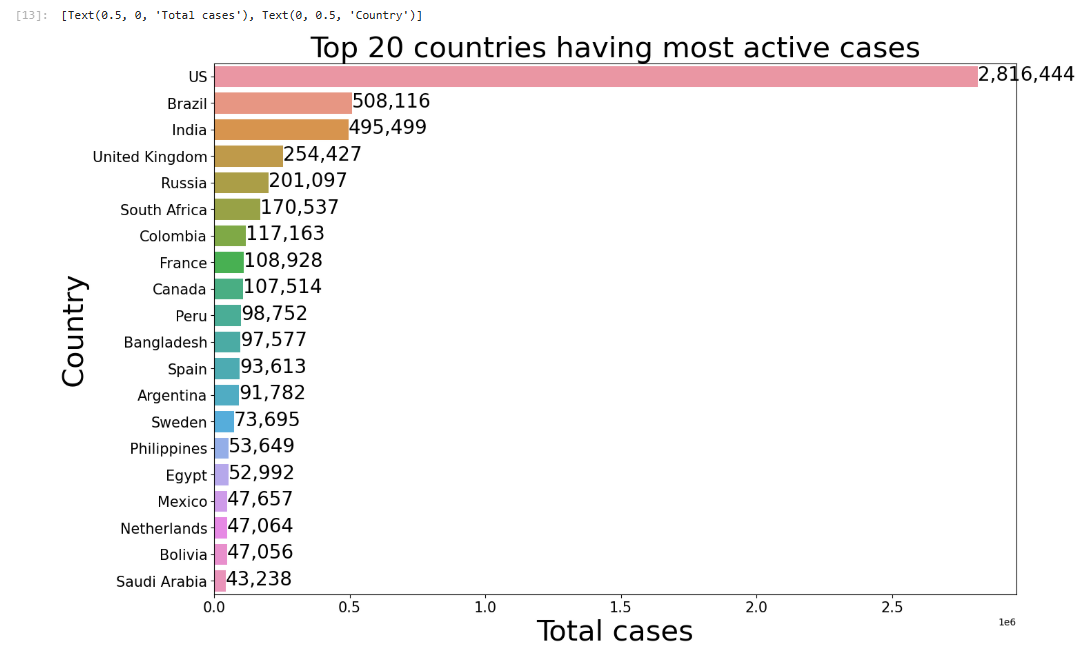
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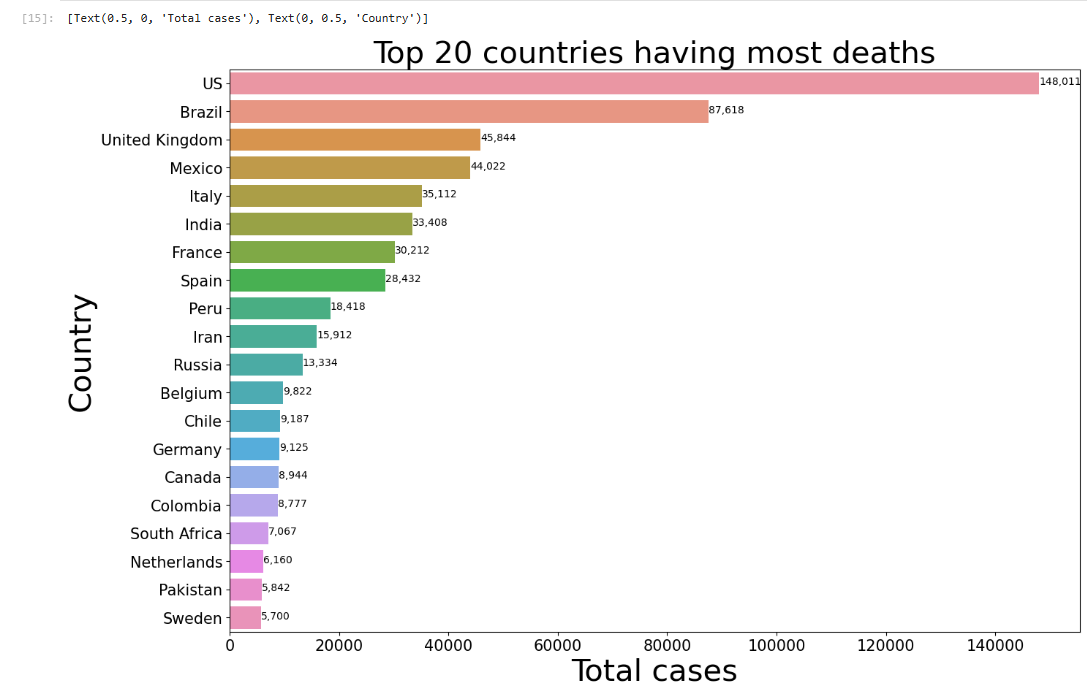
**Most Active Case in top 20 Country**

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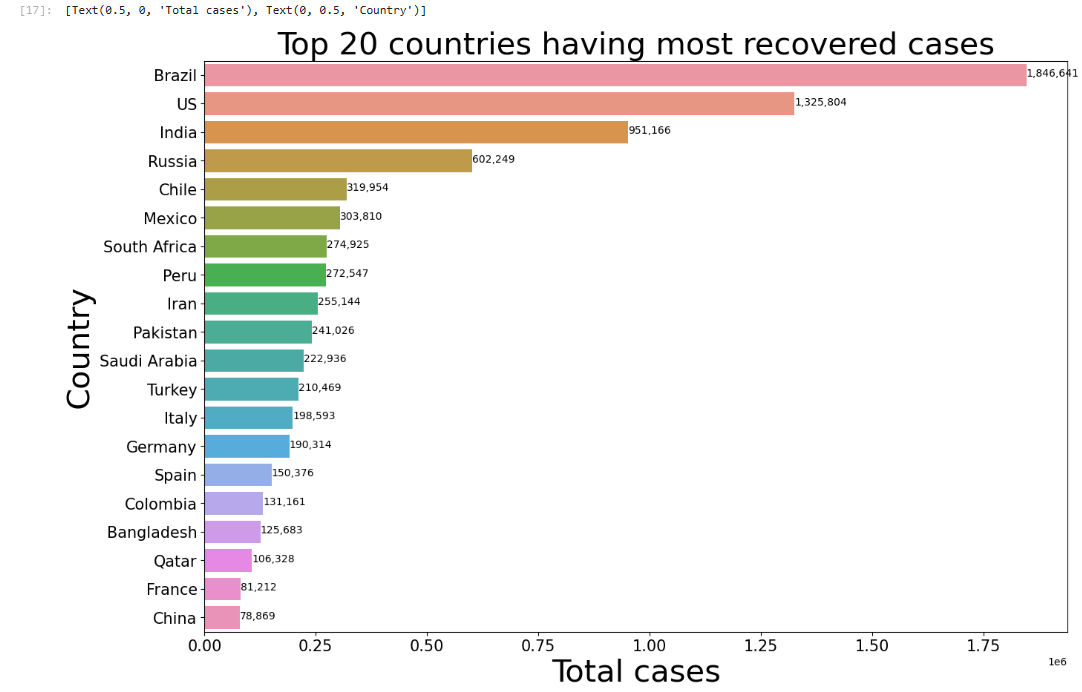
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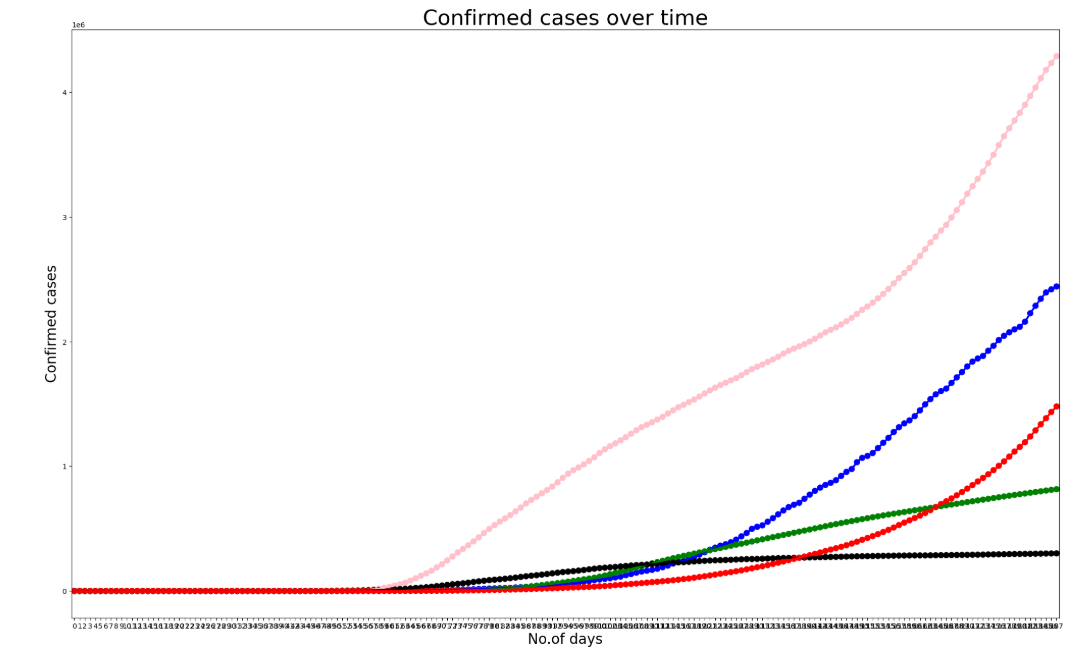
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**Confirmed cases over time**





1. **Choosing the Algorithm for the Project**

Using Prophet Library for Forecasting

from prophet import Prophet

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#change column name for prophet library require

# ds = datetime

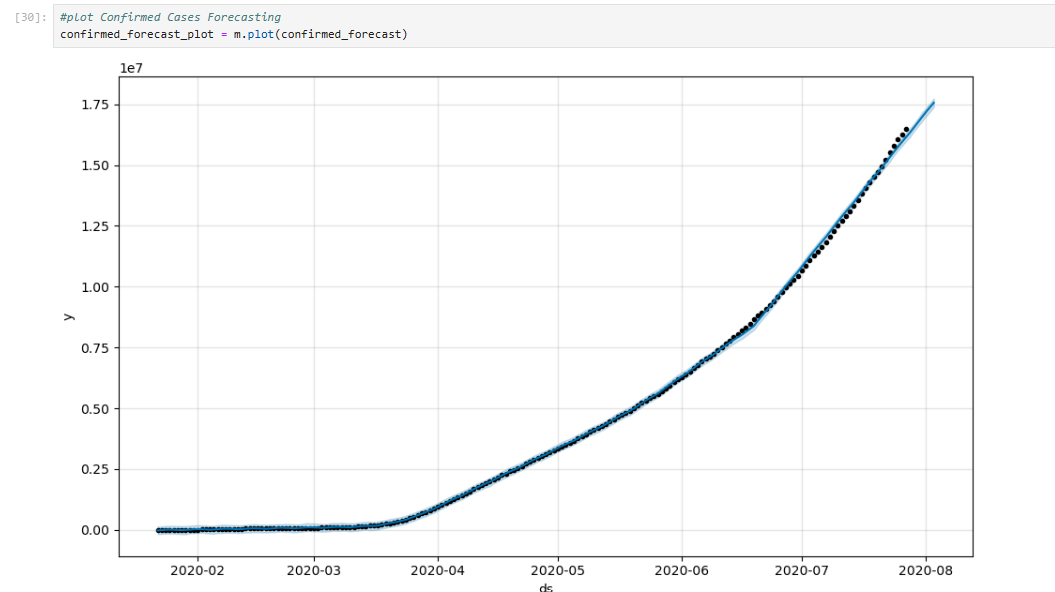
#y target value

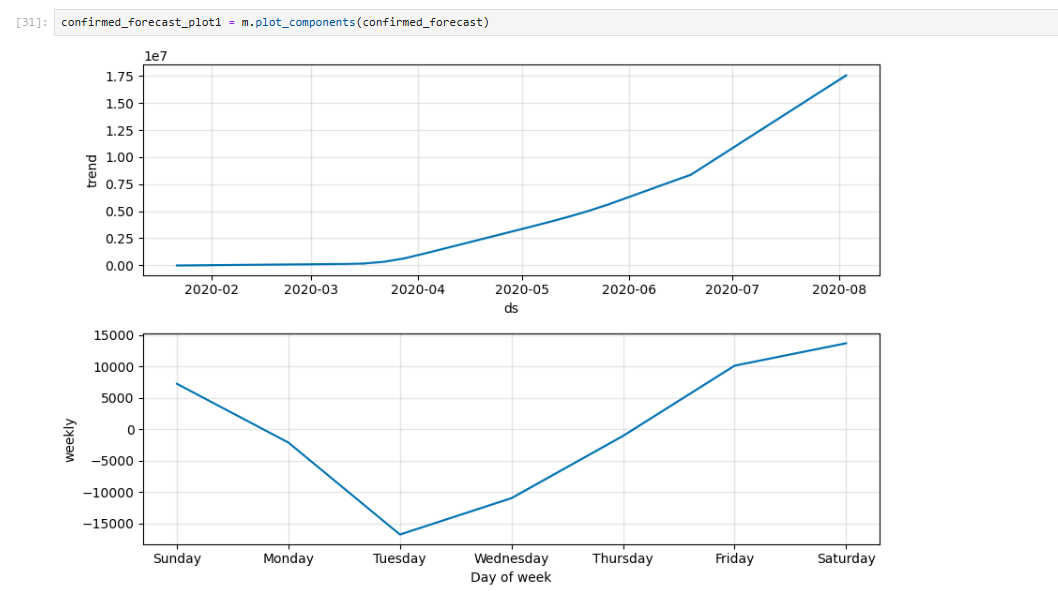
confirmed.columns = ['ds','y']

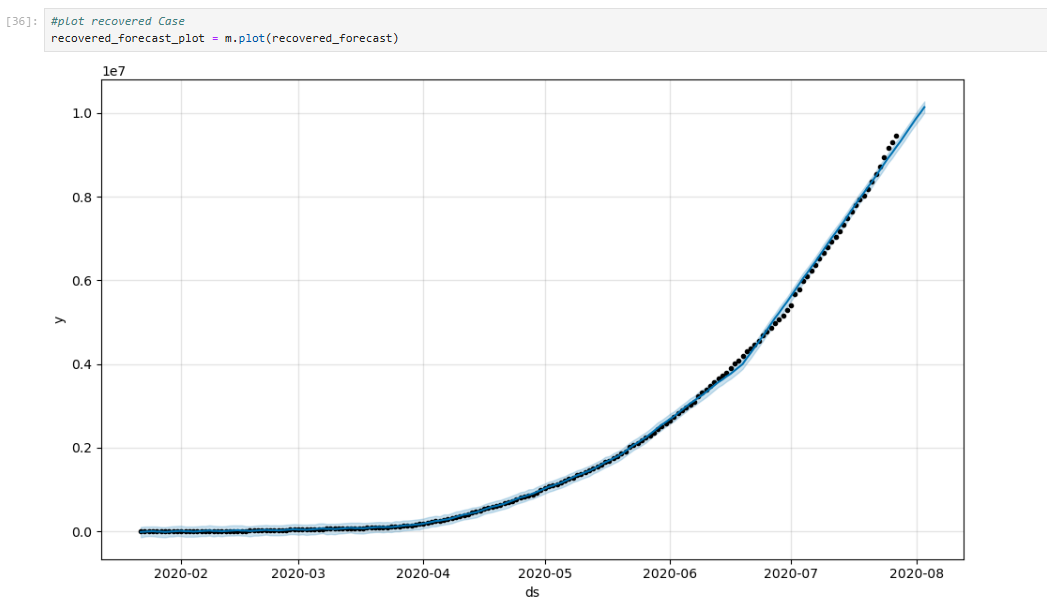
confirmed ['ds']=pd.to\_datetime(confirmed['ds'])

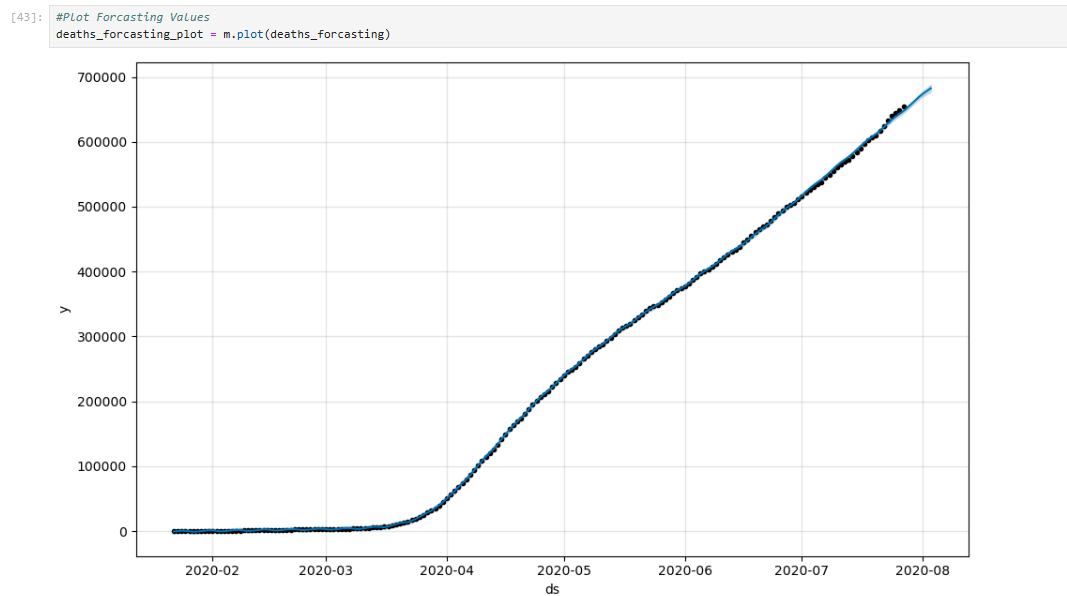
**7 Model Evaluation and Techniques**

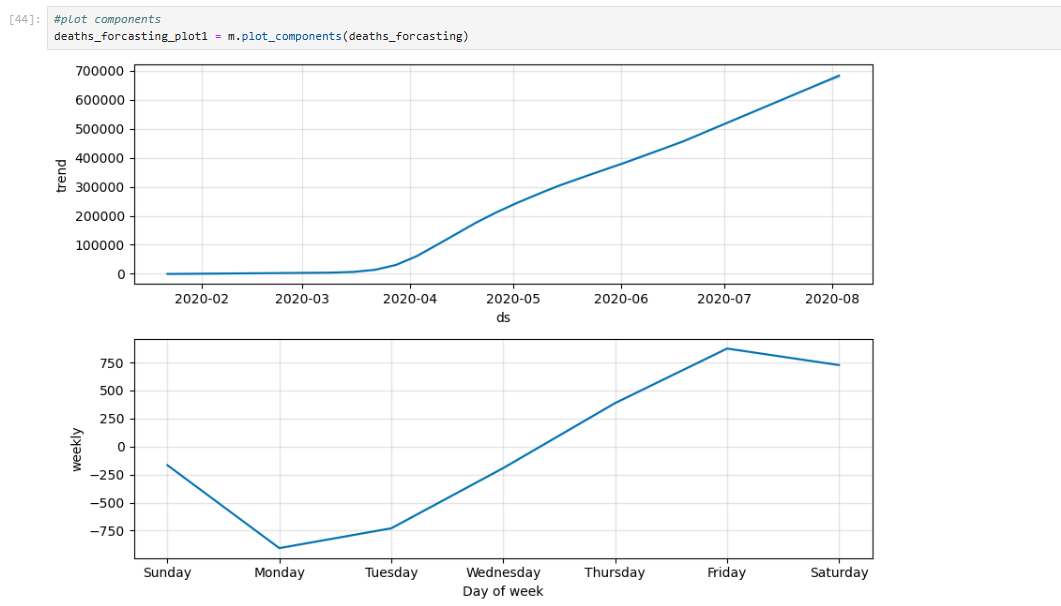
Plotting Forecasting Confirmed Cases

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**8 Conclusion**

Prophet forecasting Model Gives better Results

**9. References**

* Intellipaat Session Live Class (For Forecasting)
* Chat GPT
* Kaggle