**CAPSTONE PROJECT**

**Covid-19 Forecasting Using Prophet**

**SUBMITTED BY**

**PADMANABAN S**

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**1 Problem Statement**

Given data about COVID-19 patients, write code to visualize the impact and analyze 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.

**2 Project Objective**

● Use pandas to accumulate data from multiple data files.

● Use plotly (visualization library) to create interactive visualizations.

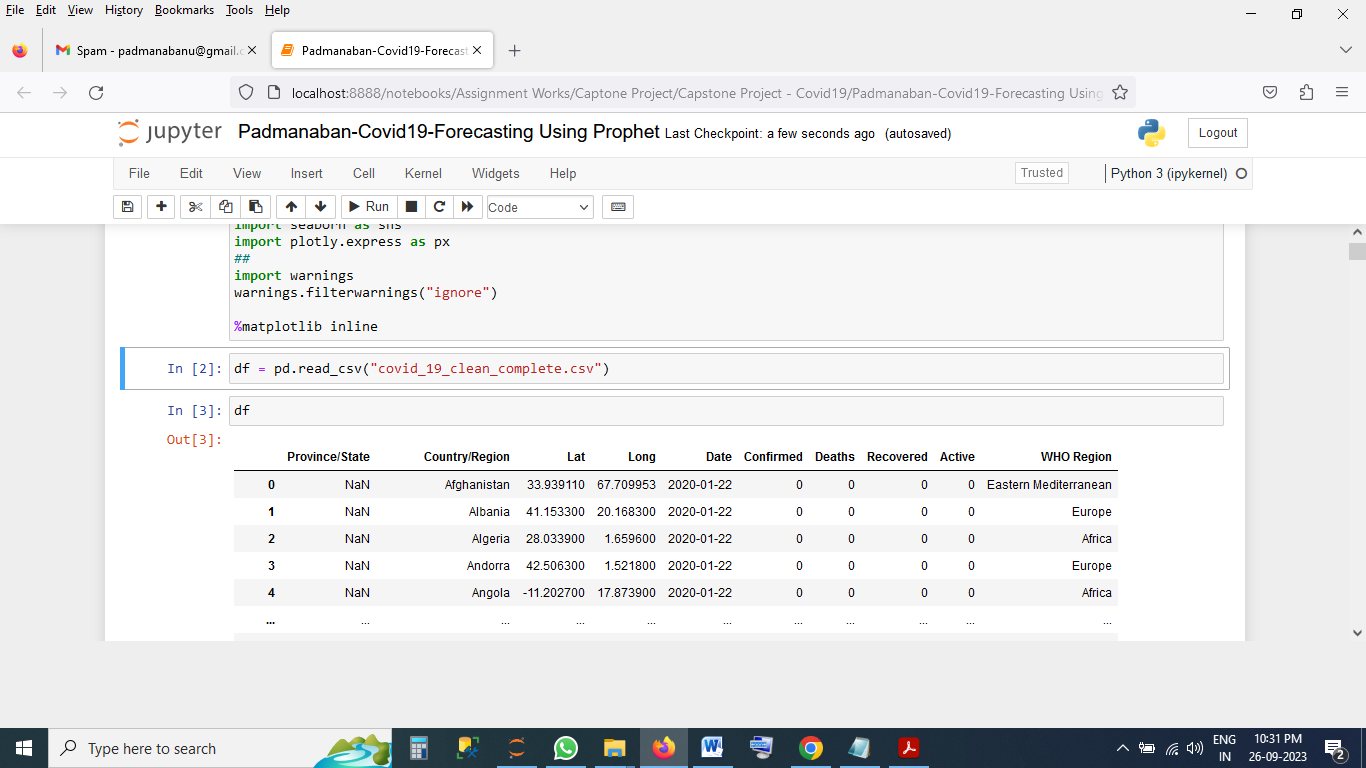
● Use Facebook prophet library to make time series models.

● Visualize the prediction by combining these technologies.

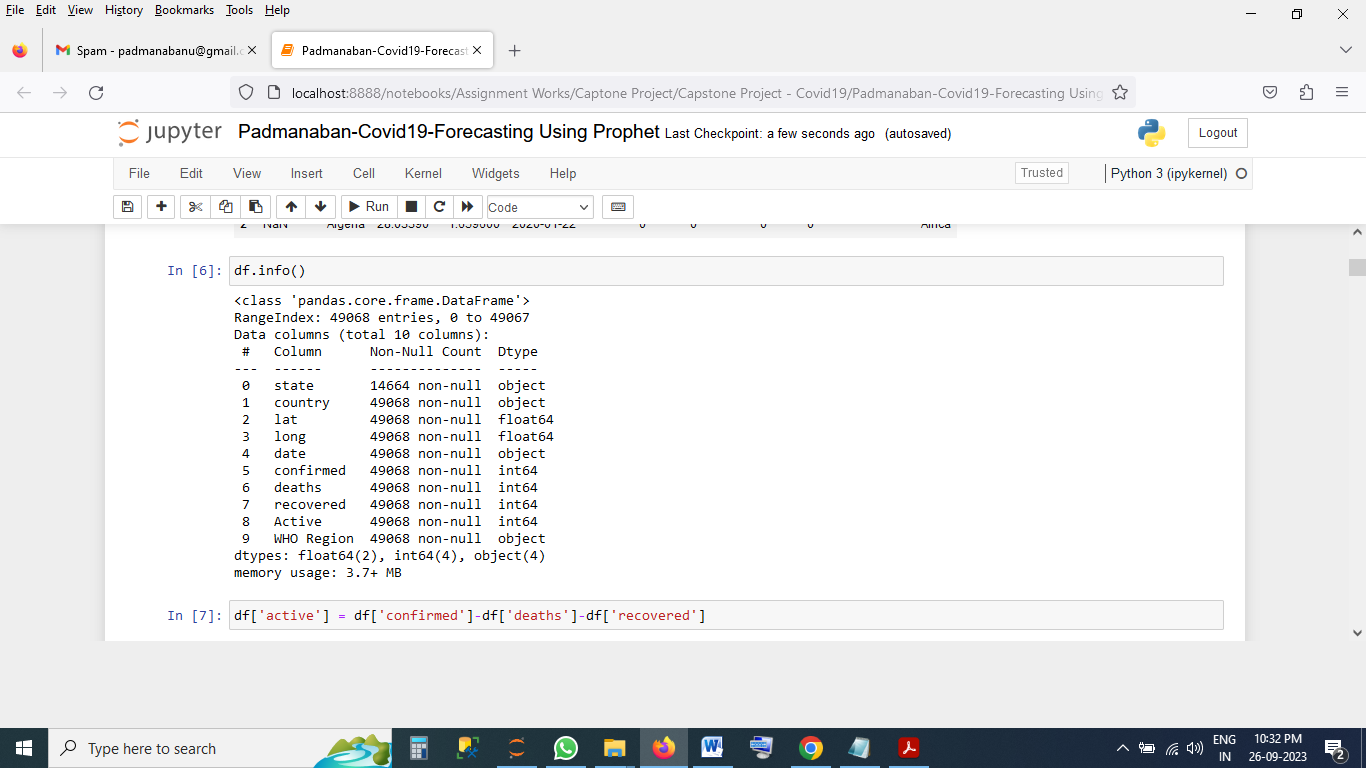
**3 Data Description**

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

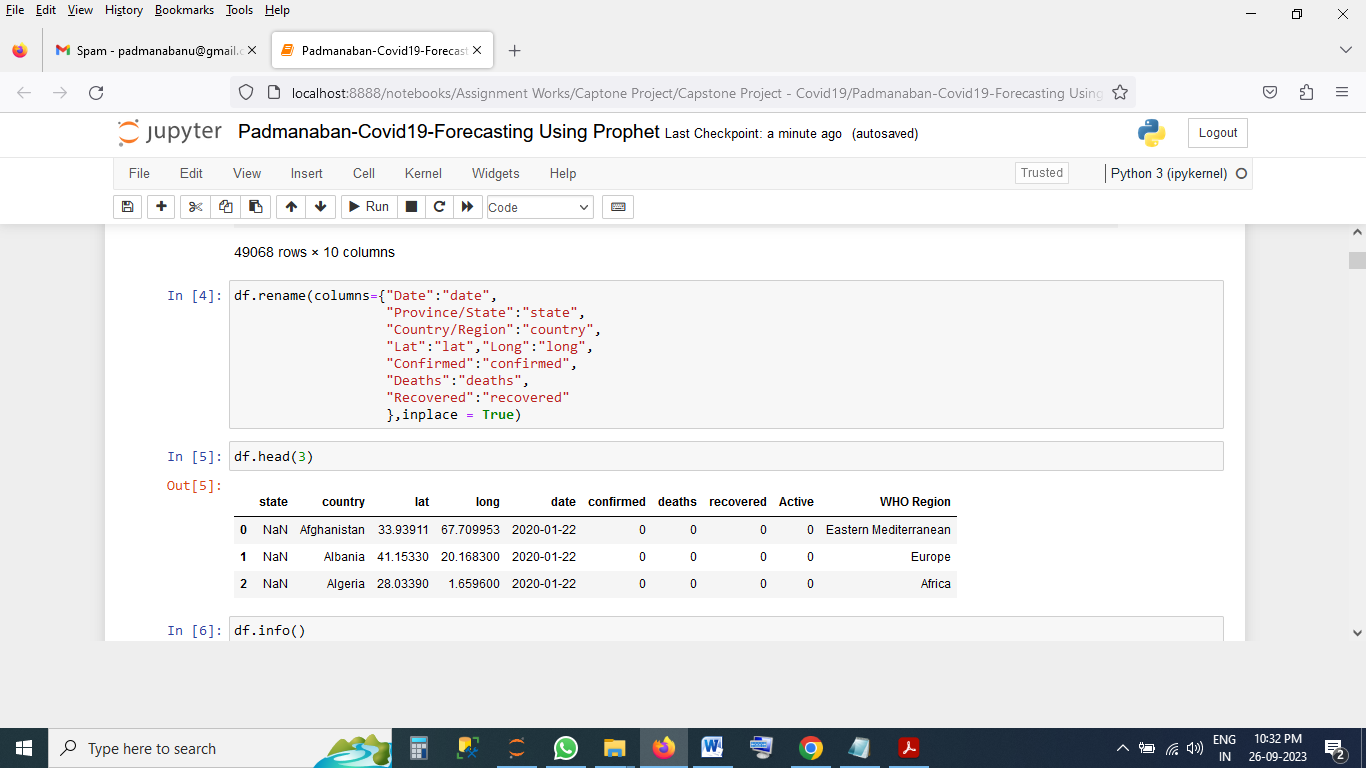


Dataset Info

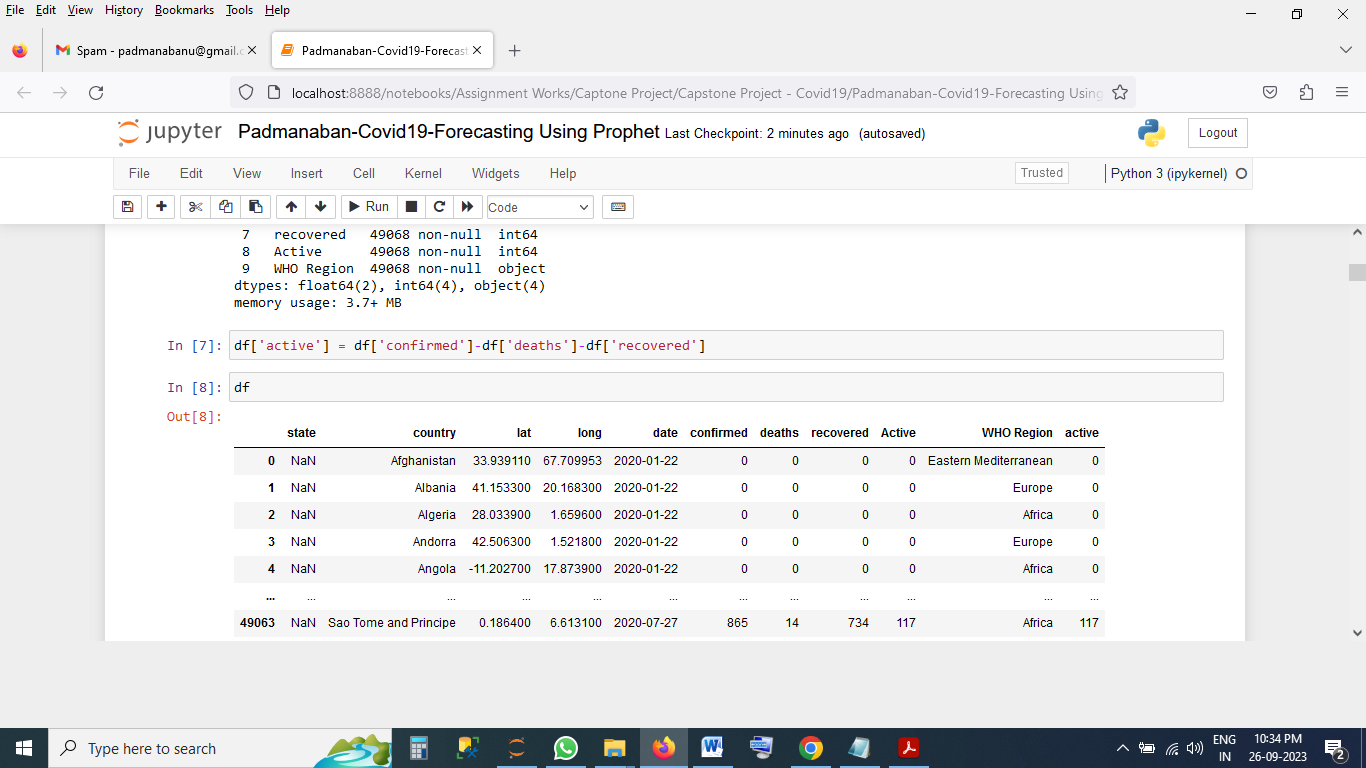


**4. Data Pre-processing Steps and Inspiration**

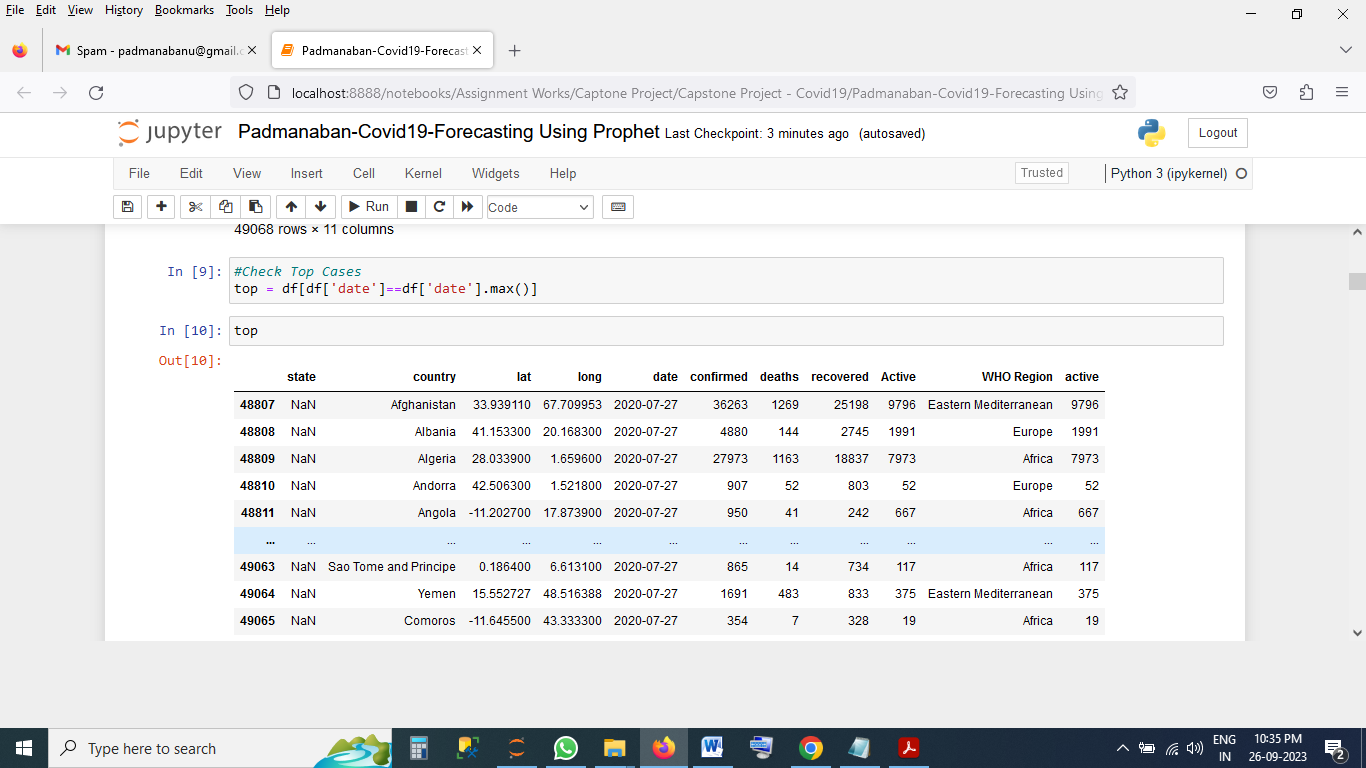
Change Column Name as Easy to Access



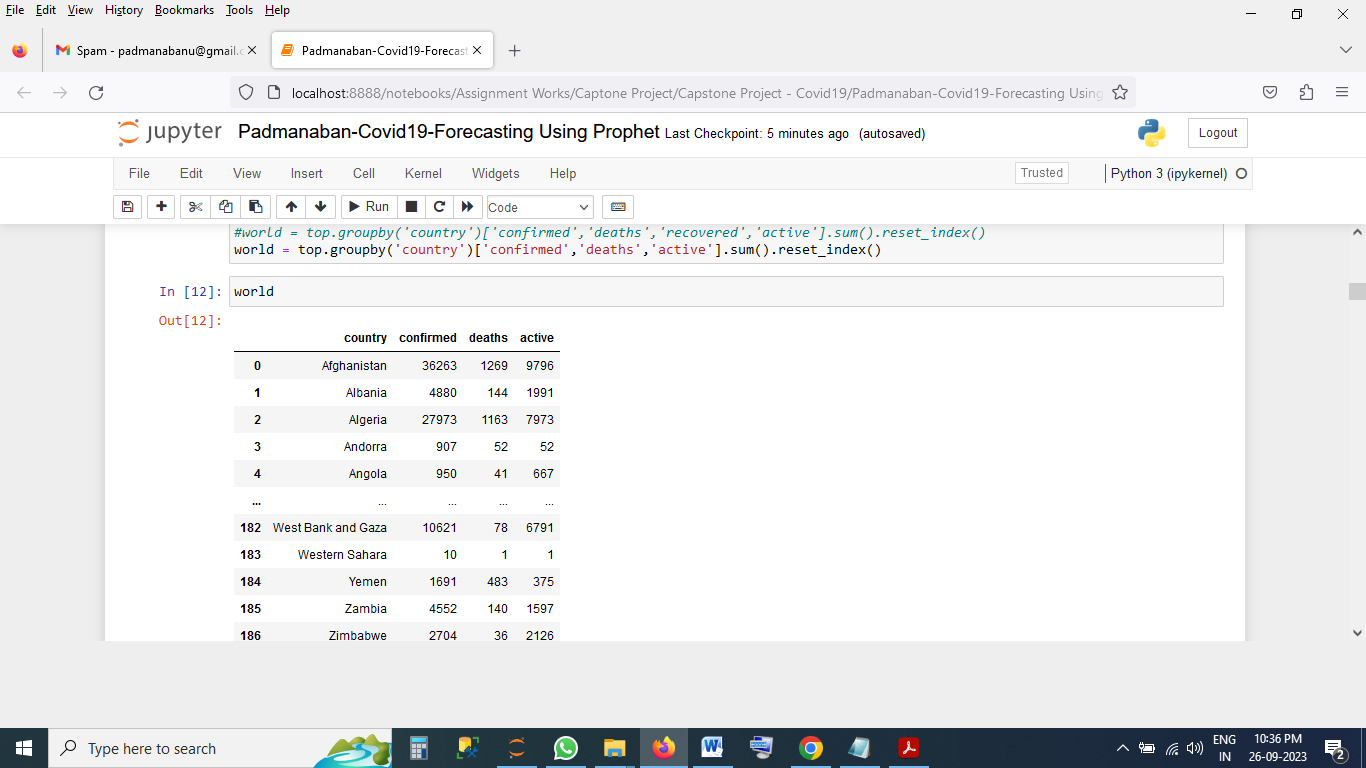
Check Active Cases Are Correct



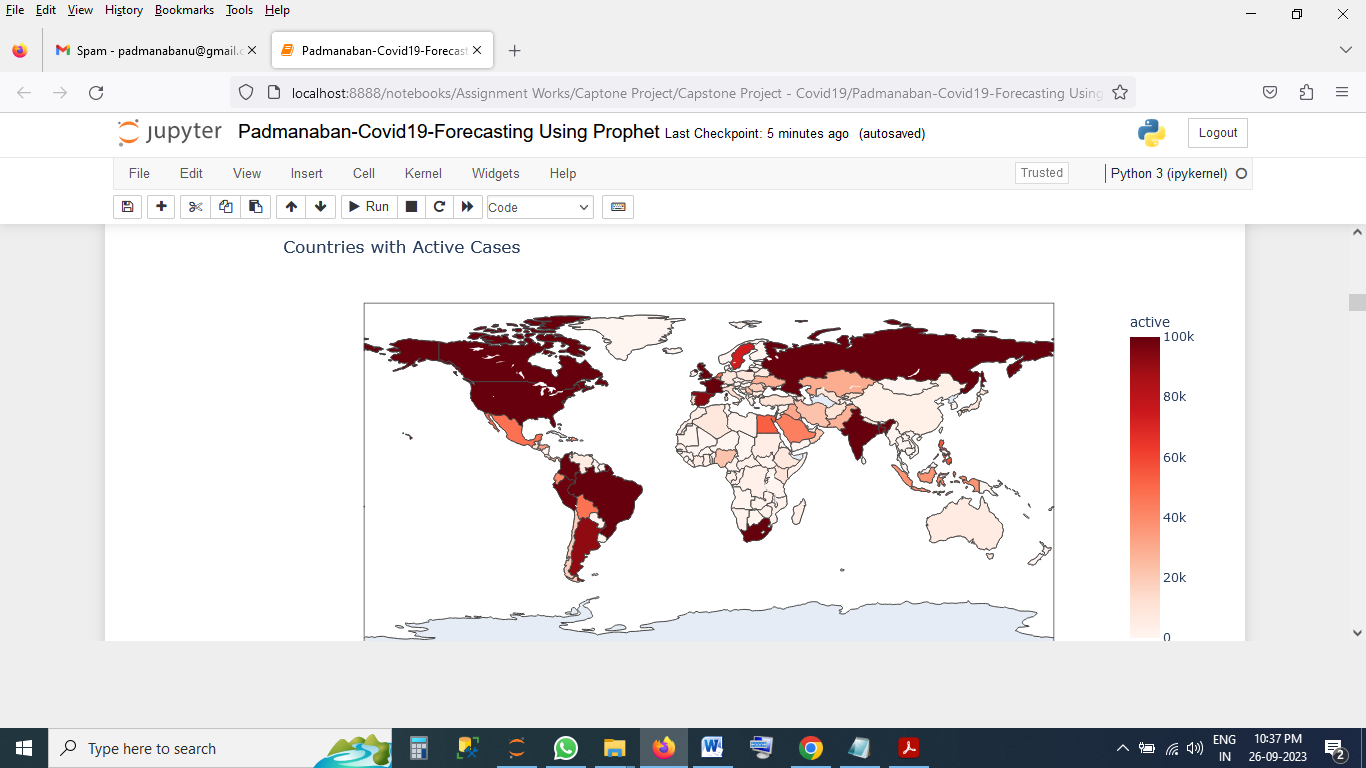
**5 EDA Results**

EDA To Check Maximum Case 

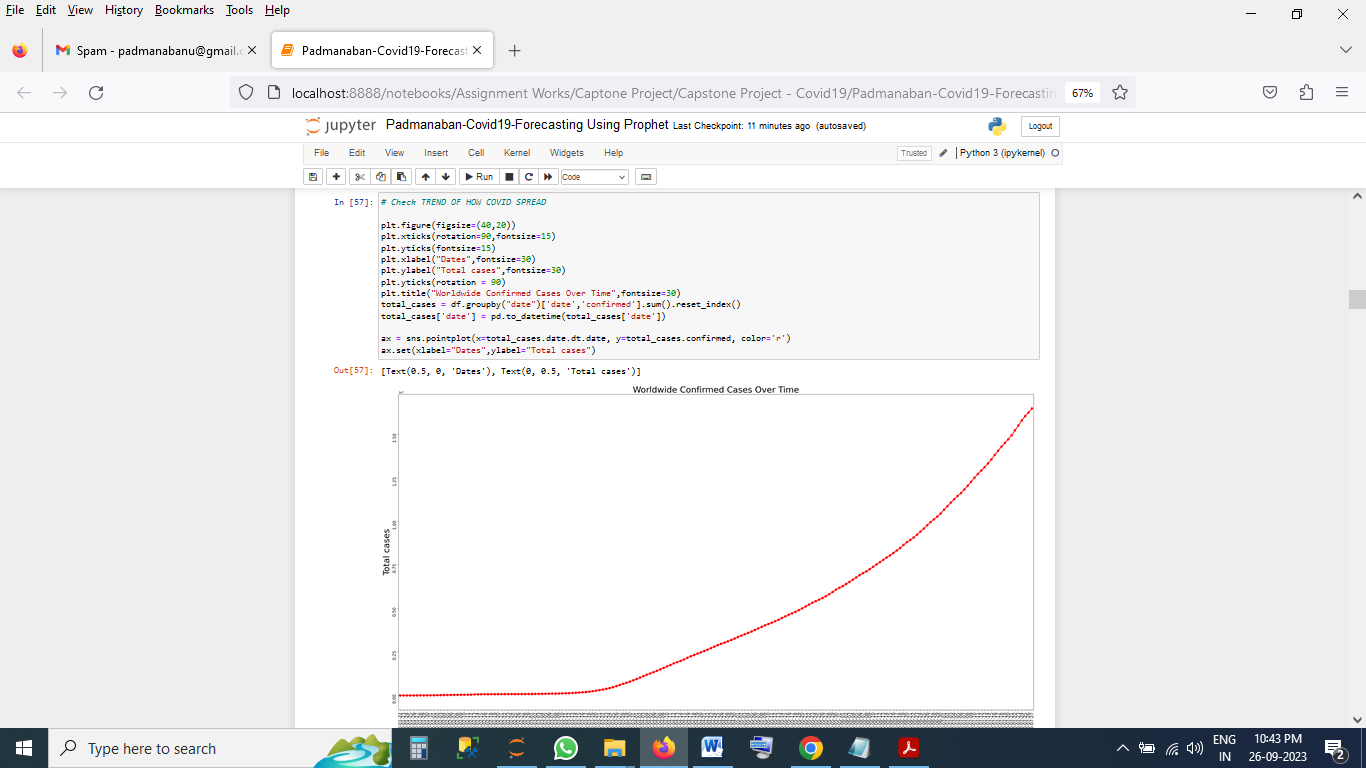
**Country wise Case List**



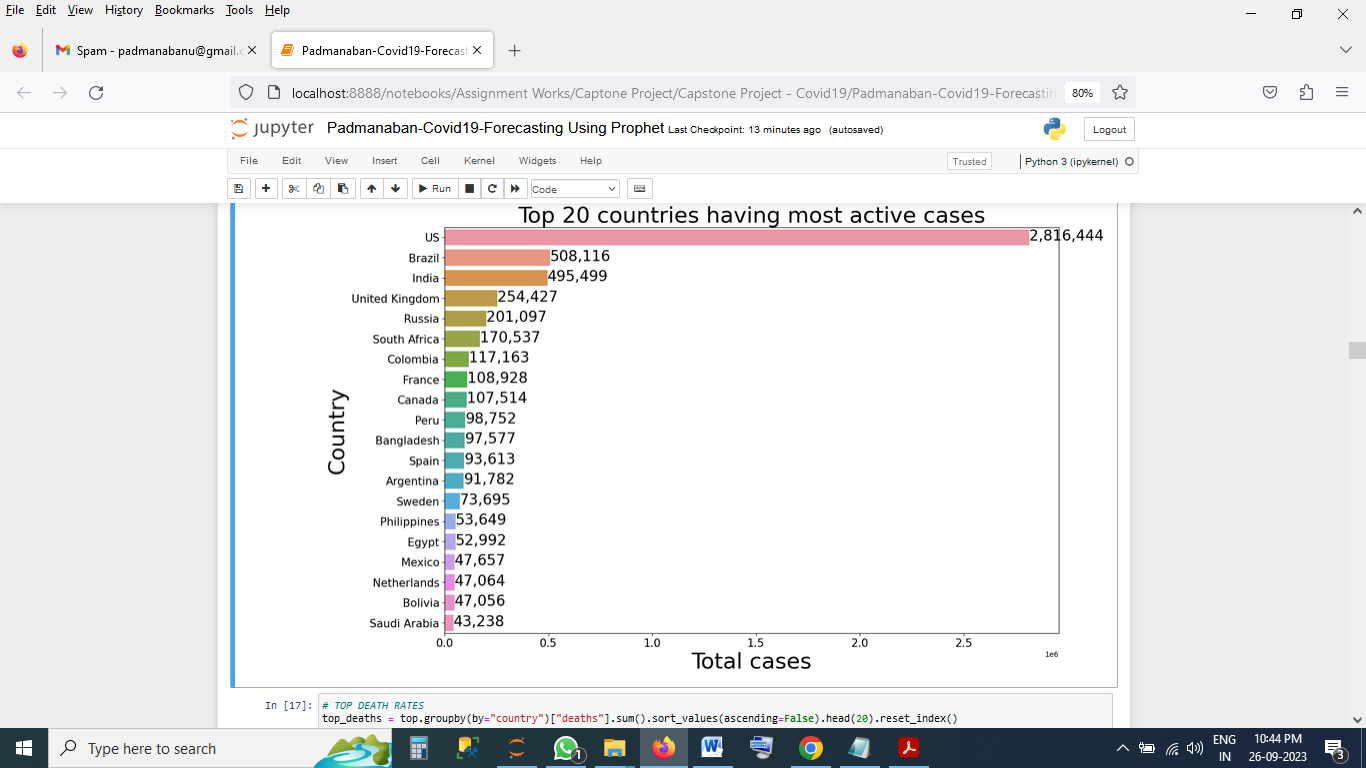
**Country Wise Case Using choropleth Plotly Visualization**

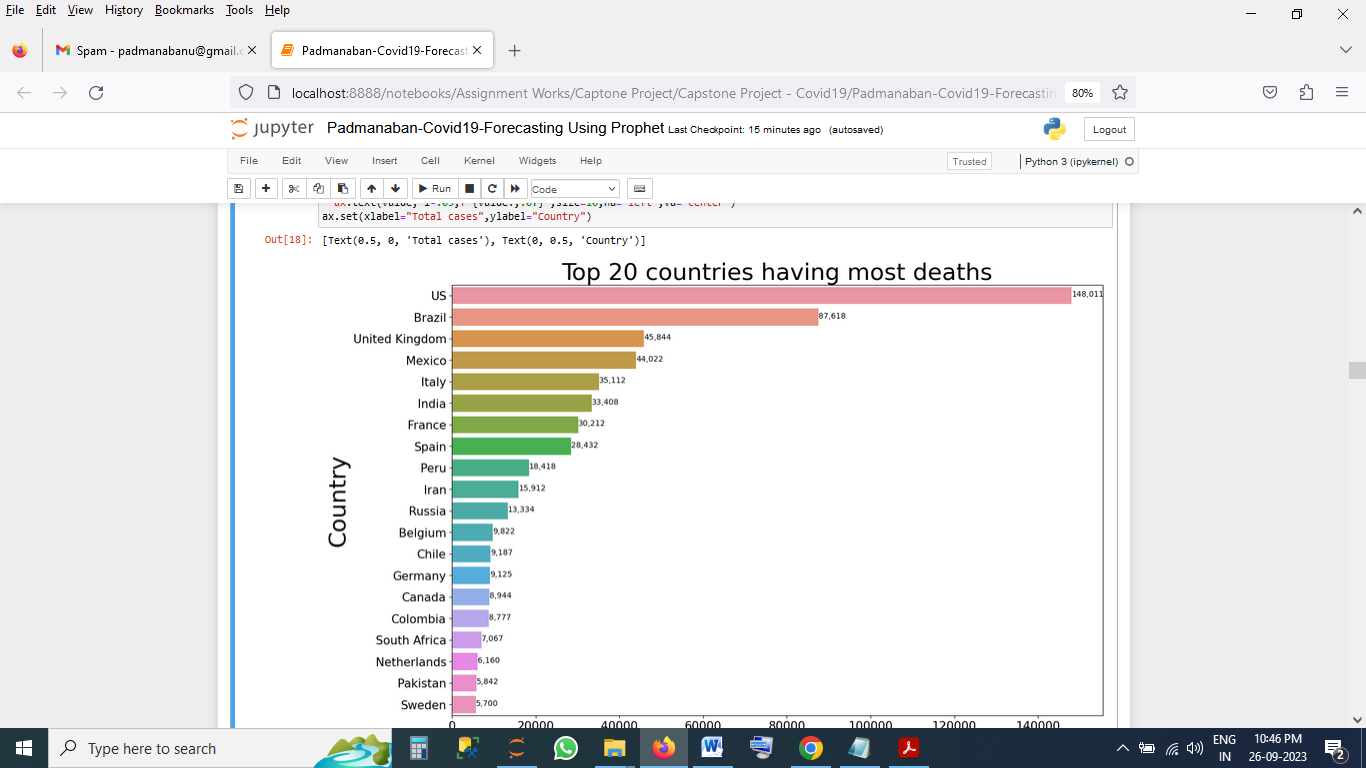


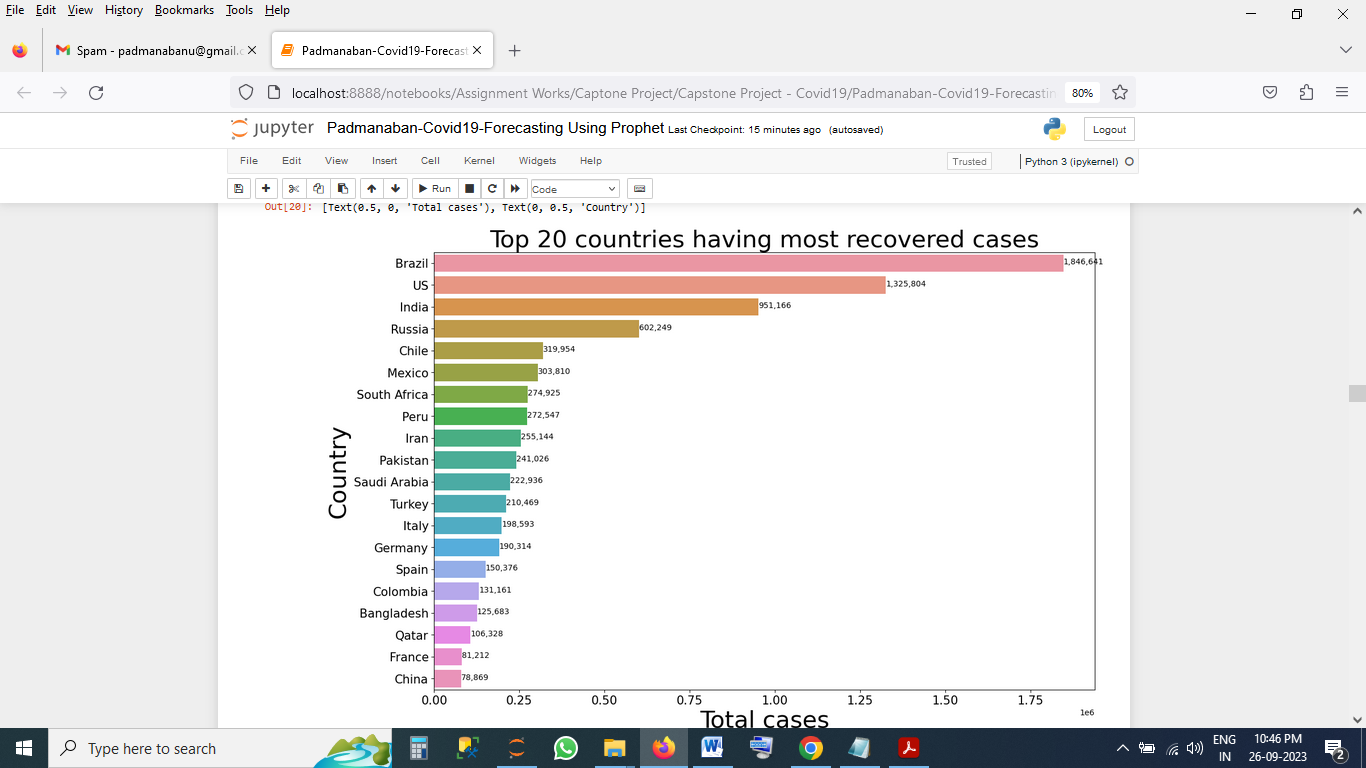
**Covid Trend on World Wise**

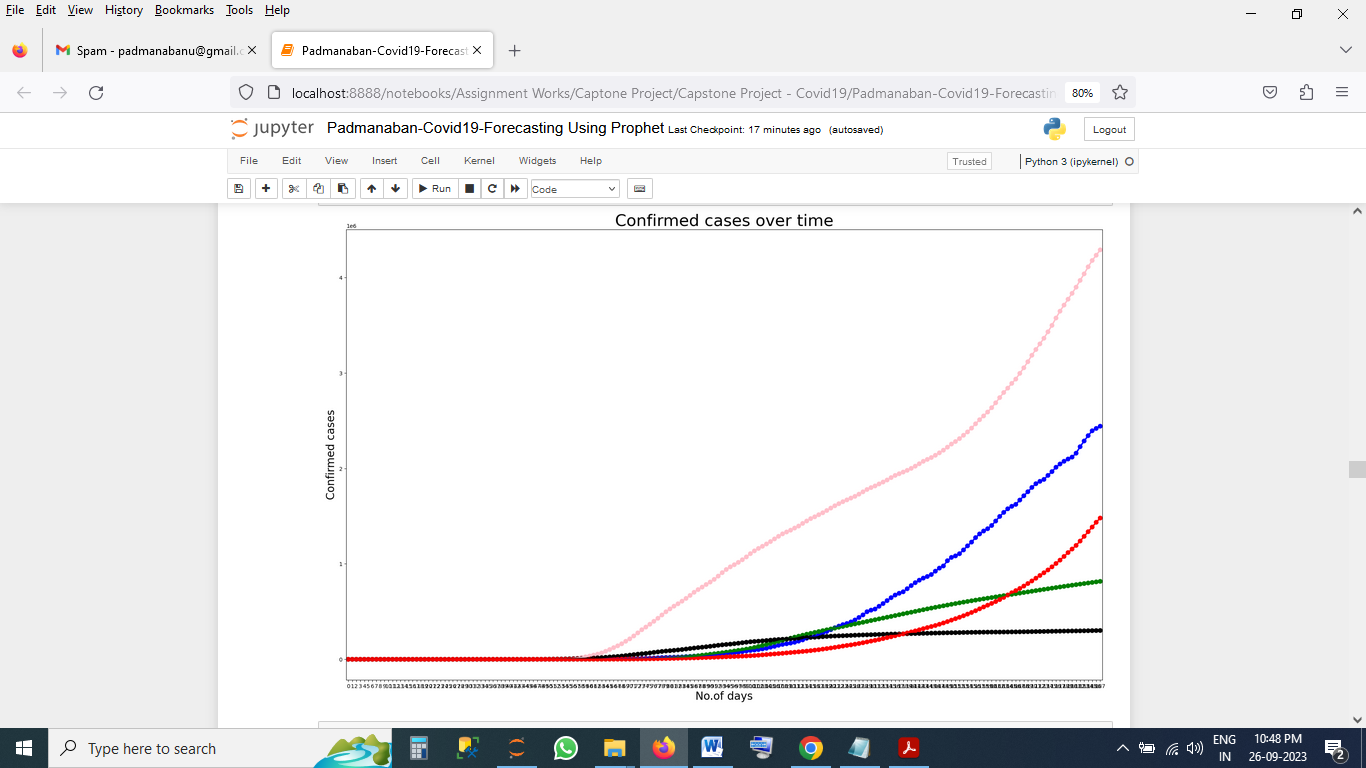


Most Active Case in top 20 Country









**6. Choosing the Algorithm for the Project**

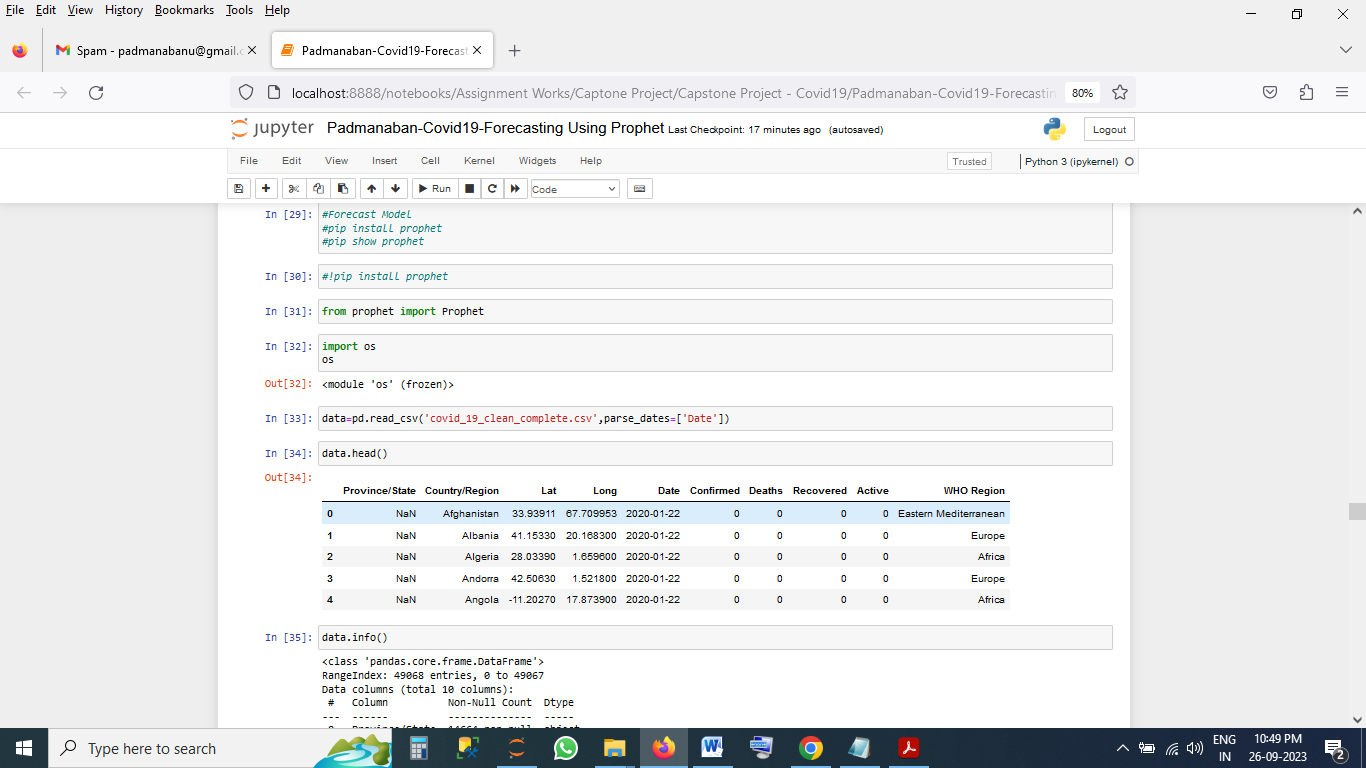
I am Here using Prophet Library For Forecasting

#Forecast Model

#pip install prophet

#pip show prophet

from prophet import Prophet



#change column name for prophet library require

# ds = datatime

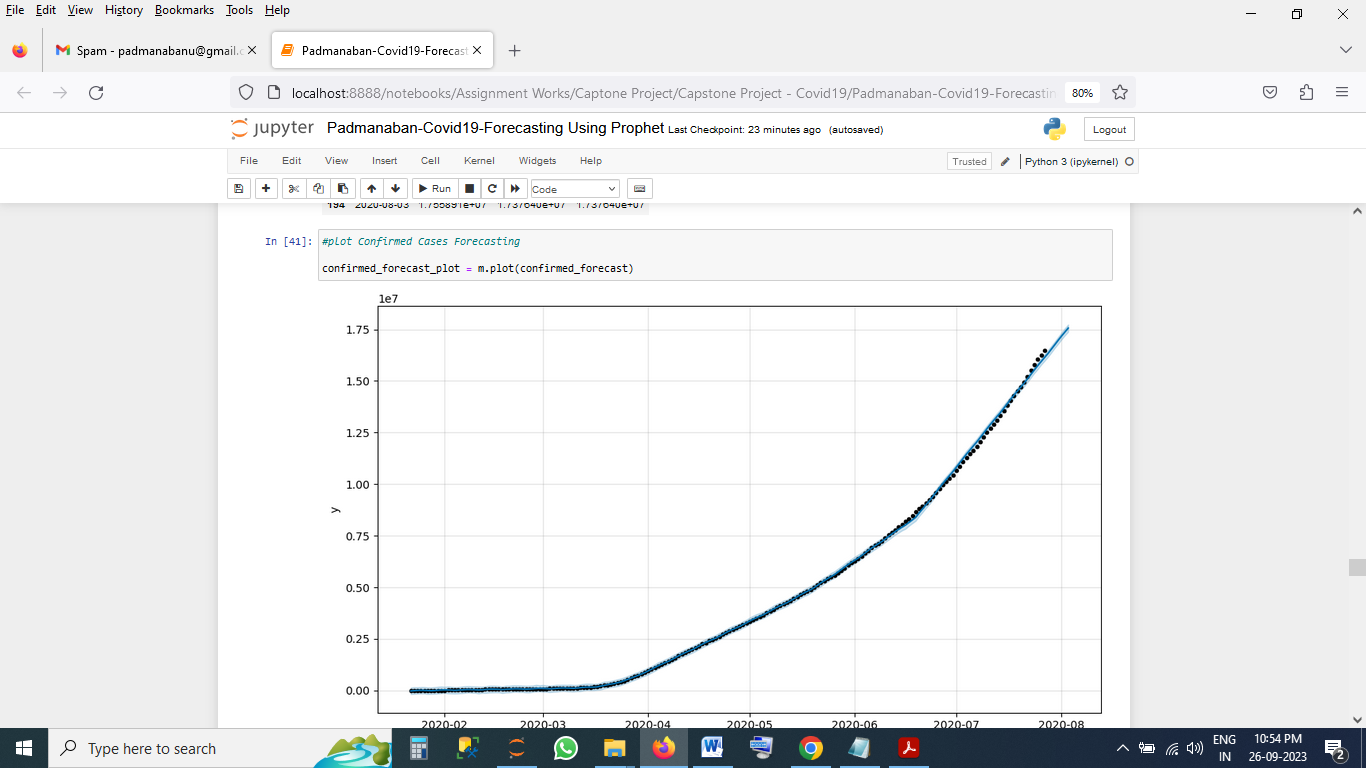
#y target value

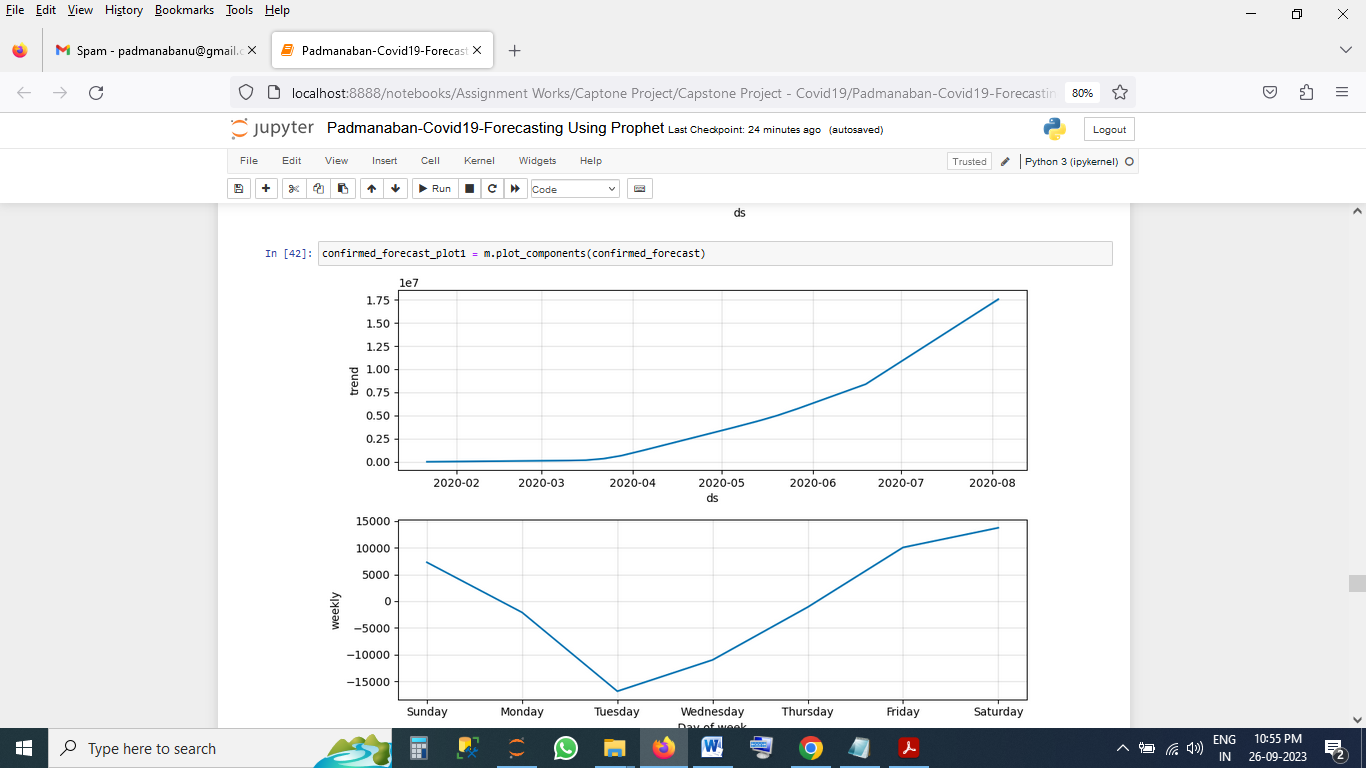
confirmed.columns = ['ds','y']

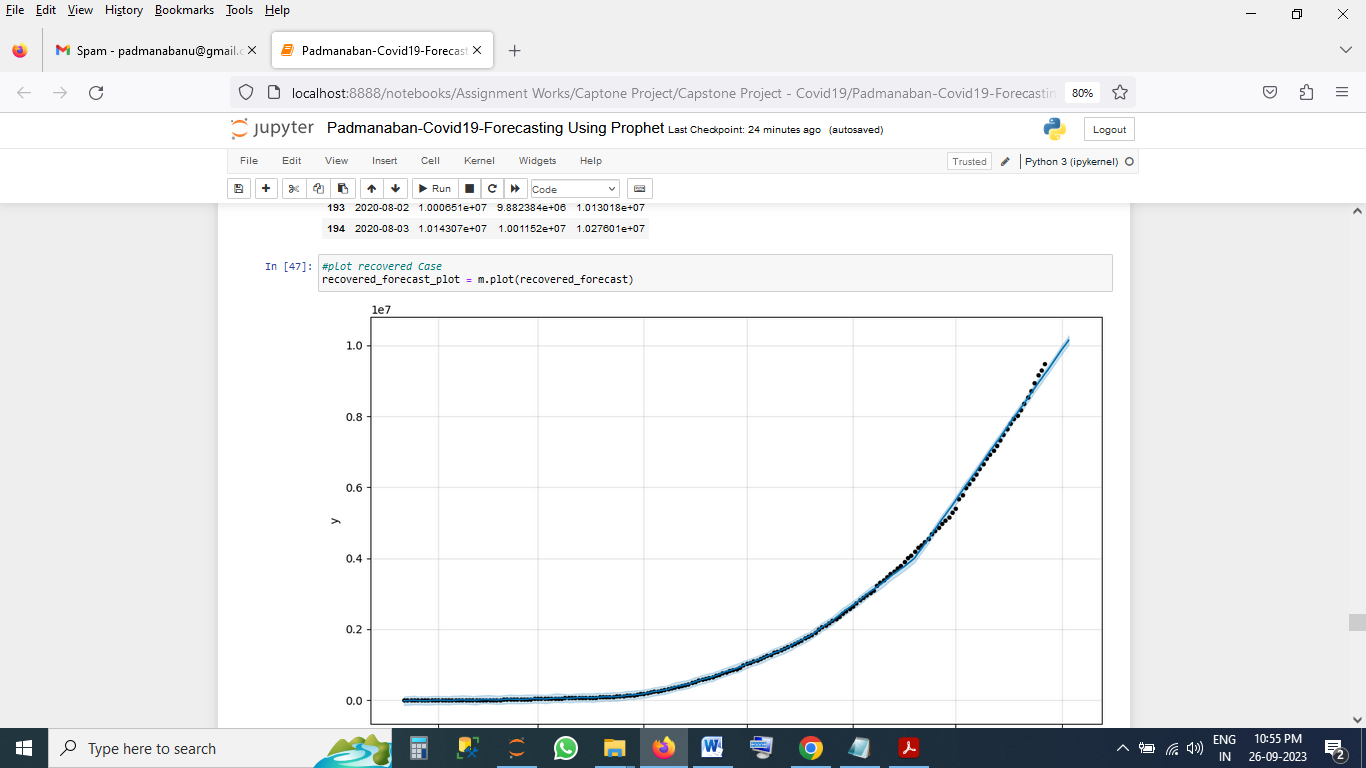
confirmed ['ds']=pd.to\_datetime(confirmed['ds'])

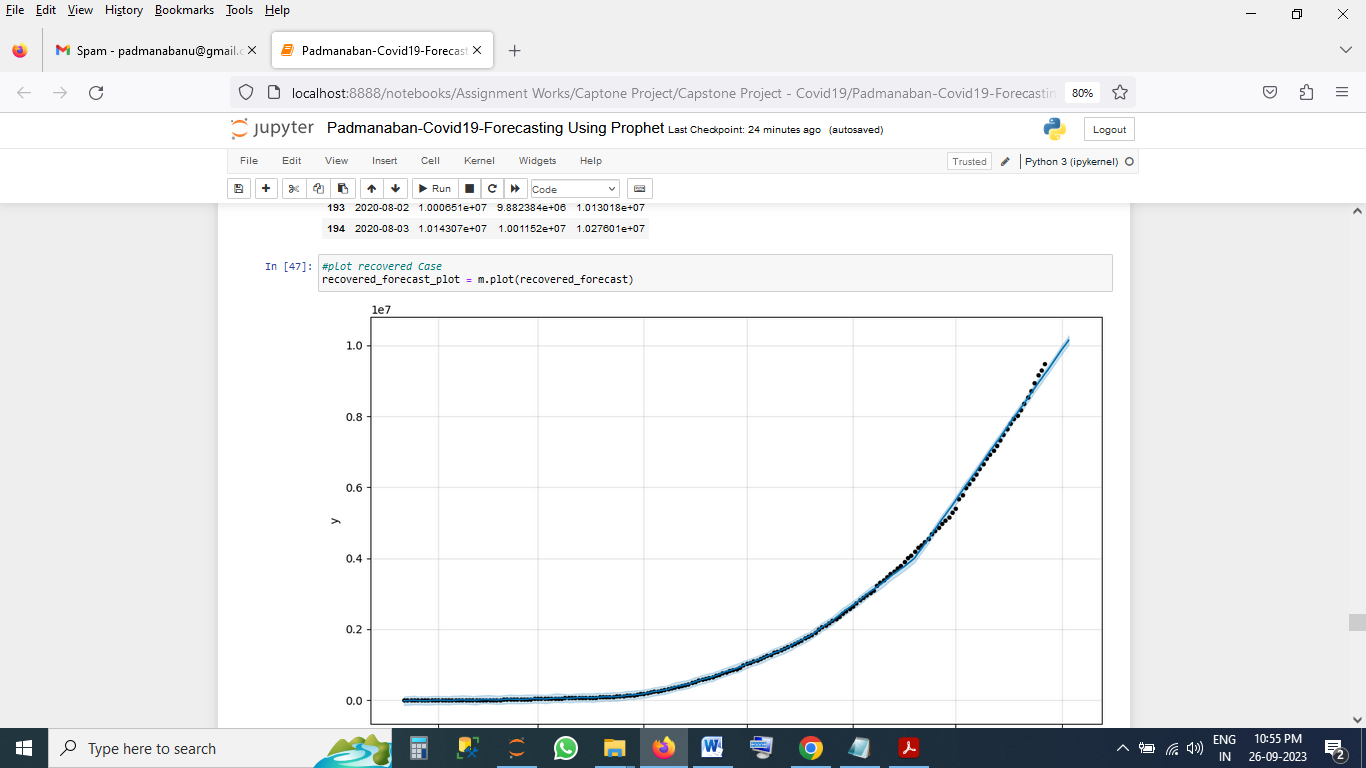
**7 Model Evaluation and Techniques**

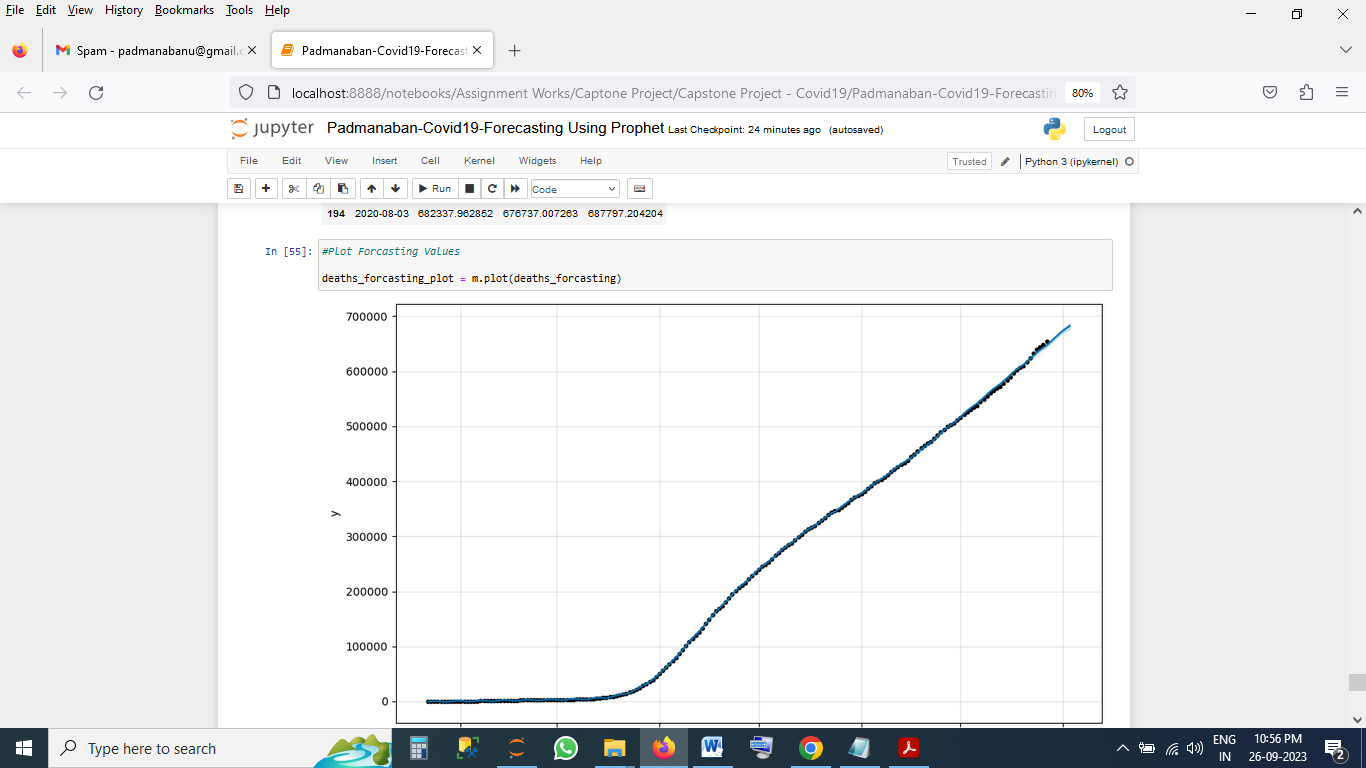
Plotting Forecasting Confirmed Cases

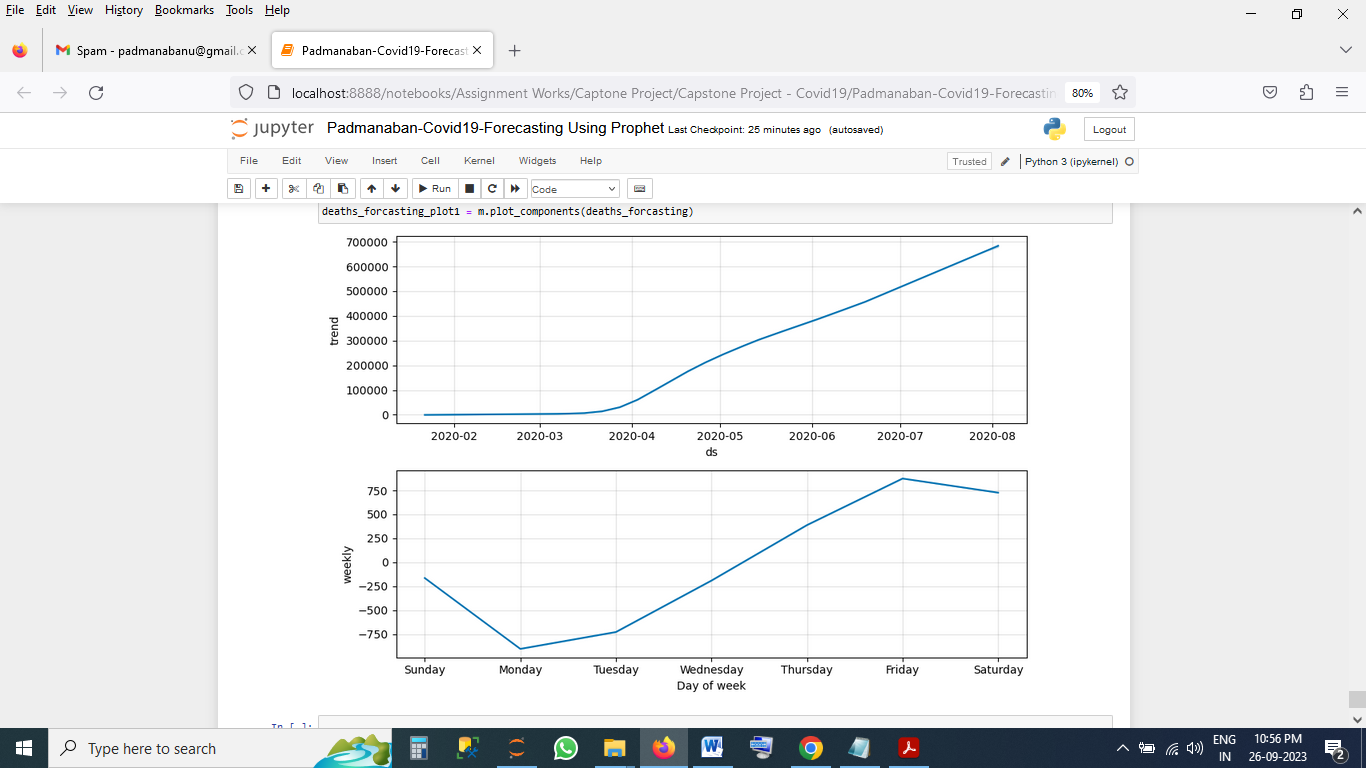












**8 Conclusion**

If Our Prophet forecasting Model Gives better Results

**9. References**

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