Github Link : https://github.com/yashikachugh160301/Covid-Lockdown-Prediction

Sitting at home was getting difficult for all the people and there was a hope for relaxation after lockdown of 21 days in India which was further extended to 3rd may 2020 making it 40 days. Using whatever little knowledge of ML and data science I have I wanted to create a predictive model which could tell the number of days required for India to be in a lockdown. For this I created a dataset which had only those countries where lockdown proved to be beneficial i.e. : the number of active cases saw a downward trend. I could dig up 20 such countries who have a supposed lockdown end date. The dataset has following columns:

Name of Country , Total and recovered cases as of 20 April 2020, first case registered, date when lockdown is supposed to end or has ended, number of cases before lockdown, when was the lockdown implied, number of deaths and week wise data starting from the day of lockdown.

I considered statistics for 4 weeks of lockdown and filled in missing values using method of interpolation.

There are some results that I drew up with the help of data visualisation and analysis. Also I used basic regression models to predict the day when there would be a decline in number of active cases. Using this I further predicted the number of days we require to be in the lockdown. I haven’t optimised the model as there was similarity in the two ways I made predictions. Here is what I could get:

Total Cases depends highly on cases in 3rd and 4th week after lockdown that means crucial time for India is around after 12th April.

As per common trend Recovery rate starts improving after about 50 days of lockdown

Lockdown if applied 40 days maximum after first case was found gives desirable recovery rate. India took 55 days.

The curve should have started flattening in 22 days of lockdown which is not so in India to end the pandemic we should take maximum 33 days

Lesser the number of days lockdown was implied after, less are the total cases. Situation worsens every 20 days exponentially.

Number of active cases in India suggests at least 50 day lockdown. Right now we have of 40 days.

**We should see a dip after 26 April 2020.**

**Lockdown end date: 14 May 2020**

Further I would be expanding the dataset by considering number of sample testing and then also for state-wise lockdown date.