Covid-19 Analysis

Problem Statement

A client of Aon, company ABC, has offices across the US and India. The advent of Covid-19 has exposed them to multiple risks, with one of the main ones being the safety of their employees. The client wants to know more about the impact of Covid-19, especially in the US and in India and how it might impact their employees. The client also wants to know the recommendations you would provide (based on data), that would help them plan reopening the physical offices.

The lead data scientist working on this project has identified a dataset on Covid-19 (the details could be found below.) You have been tasked with

(1) Creating an engaging dashboard to help the client understand the impact of Covid-19.

(2) Create a predictive model to identify the number of potential cases up to 2 weeks ahead (along with the confidence in prediction). You should be able to explain the output of the model to the client.

(3) What prescriptive measures would you recommend (based on the data) to ensure smooth reopening of the physical offices without compromising the safety of the employees or causing significant business interruptions.

Deliverables

1. Please provide a stand-alone dashboard with storyline.
2. Please provide a well commented/documented scripts for the modeling assignment.
3. Please provide the trained models and usage function, so that we can test it on separate data.
4. Use Python or R. Python preferred.

Data description

The data pertains to the number of positive cases, deaths and recoveries related to Covid-19. It is from JHU CSSE COVID-19 Data repository.

Sno - Serial number

ObservationDate - Date of the observation in MM/DD/YYYY

Province/State - Province or state of the observation (Could be empty when missing)

Country/Region - Country of observation

Last Update - Time in UTC at which the row is updated for the given province or country.

Confirmed - Cumulative number of confirmed cases till that date

Deaths - Cumulative number of of deaths till that date

Recovered - Cumulative number of recovered cases till that date