

Idea

COVID-19 Management: Preparation & Response

Author(s)

Miroslav Budic, Mayur Hooli, Javad Birjandtalab, Raja Mohamed Aarif, Pulin Chhatbar

Description

COVID-19 has been declared a global pandemic. Though the mortality rate is slightly lower than 5%, the rate of spread is something that hasn't been seen since the Spanish Flu in the early 20th century. The registered number of cases in USA is 174,684, but the numbers are based on the tests conducted. With a limited number of test kits available, we need to identify the counties that are hotspots for the spread of the virus. Once the hotspots are identified, we need to identify the rate of spread from the counties to the other counties. If these critical parameters can be identified, we can have some measures in place that will be crucial to fight this virus.

Problem statement or opportunity

We can help to curb the rate of the spread of this Virus by using the Ericson AI/ML knowhow. This identifies the counties that are hotspot for the virus. It identifies how quickly it can transfer to other counties. The short number of the testing kits in US is causing a huge problem. The government needs to prioritize the kit distribution. This approach helps to optimize the use of the kits. The problem is not addressed in the moment. We are using a disaster management approach which is the need of hour. We evaluate it with the actual value of cases in each county. We use Texas as the case study.

Solution description

We extract some meaningful features out of public census datasets and try to identify the hotspots. We will use data analytics and statistical analysis to study the effect of each indicator on spreading of the virus and predicting the spread into the hotspots. The census data that we use for hotspot identification is not used before.

Who benefits from the idea?

The idea is more useful for state and local government in terms of optimizing resources in this difficult time. Disaster Management tool which can get funding from the government. Government will get benefit from implementation to better controlling. People are interested to get a solution to see how safe different counties are. Ericson can show that its AI/ML know-how is valuable at these difficult moments.

Value

It can reduce the cost by optimizing the resource allocation. It can get sponsors to invest in this project.

Resources needed: [Census data](#), **Prototyping:** [NA](#), **Prerequisites:** [Data analytics](#)

Technology: Machine Learning and Recommender Systems, **Future possibilities:** Adding mobile network data, adding time series data.