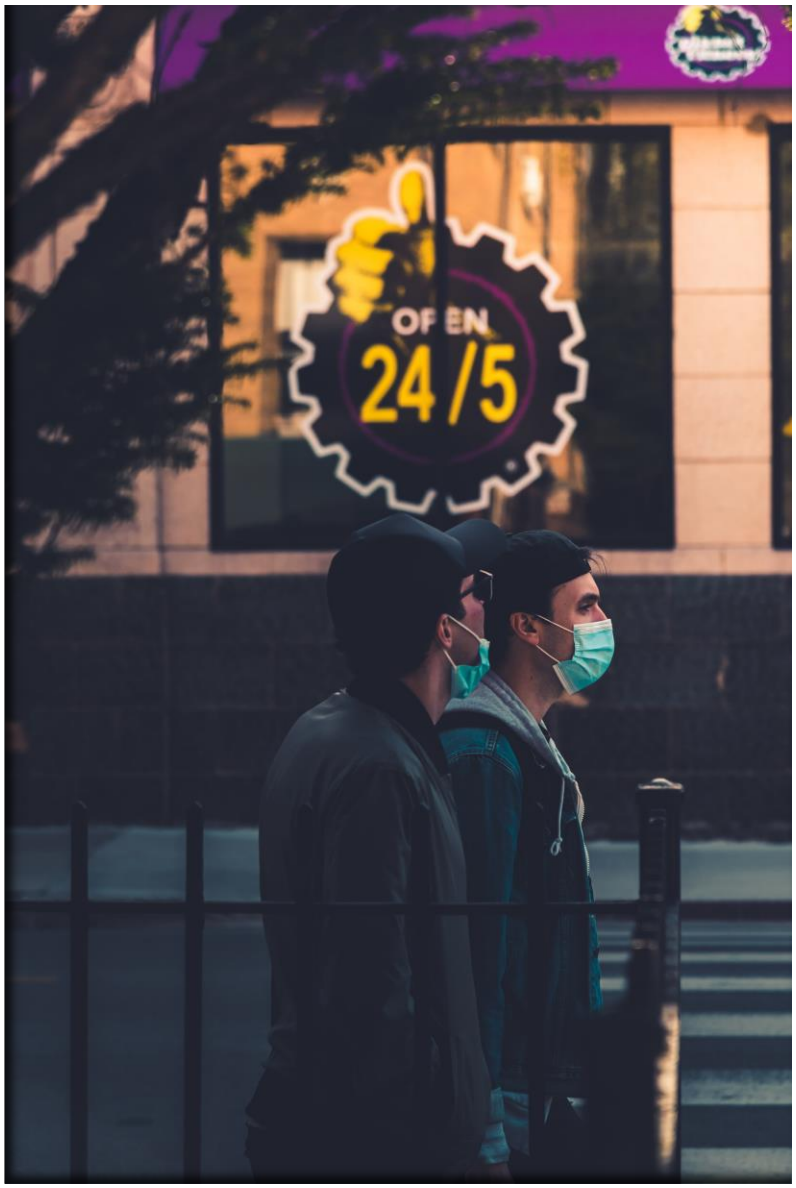

IBM DATA SCIENCE CAPSTONE PROJECT

COVID-19 TESTING CENTRES

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INTRODUCTION

The global pandemic that began in the month of January has crippled the way the world functions. Most countries have come to a standstill and with months into it, this is being called the new normal. However, with life in many parts of the world returning to normalcy with the opening of public places, the risks are still profound and precautions at cost are extremely necessary.

This project is being carried out with an aim to ensure precautions and not let a loose stance with the lifting of lockdowns. Let's take a look at what the problem is and what's the proposed solution.

Problem Statement

As public spaces open up and people come out to have a good time after months of being trapped, popular venues and destinations are going to get crowded. This also opens up the possibility of another out break emerging from such hotspots.

In regards to this, a safe prospect would be to set up Covid-19 testing centers in the proximity of these venues and trending places to conduct randomize testing to ensure regularly ensure that the place is not turning into a Covid-19 hotspot.

By helping identify the perfect places to set up testing centers using Machine Learning is one of the most efficient ways to go about the process and will result in precise decision making.

TARGET AUDIENCE/STAKEHOLDERS

Th target audience is the medical lobbies and associations that approve the setting up of test centers. It will also involve private testing labs to give in their input as to where the best places of setup could be.

In case of remote testing centers in form of moving vehicles, popular places in and around a particular radius can be covered in a single day. Since this project is focused in the city of Chennai, India, it will mostly be concerned with authorities in this region.

DATA

We will use the following data to come to come up with the best suggestions:

- List of neighborhoods in Chennai, Tamil Nadu and to be more specific, we can extract the neighborhoods in the western part of this large city. We will extract data from this Wikipedia page - https://en.wikipedia.org/wiki/List_of_neighbourhoods_of_Chennai
- Geographical coordinates or latitudes and longitudes of the specific locations to plot the map for a visual outlook.
- Data of the popular places and venues in the western part of Chennai.
- We will also consider some commonly known facts about the Chennai to make the best possible model.

After cleaning up the data, we will use K-Means to create clusters of the neighborhoods and then we will figure out which cluster will need a testing center and what would be the most ideal spot.