

DETECTING NEARBY HOSPITAL VENUES FOR MEDICAL EMERGENCIES

PROBLEM DESCRIPTION

1. Problem Background

The swift spreading of the novel corona virus COVID-19 had brought the entire world to a stand-still. Researchers had suggested that its repercussions are still premature and yet to be realized completely. This pandemic has caught the entire world on tenterhooks. Scientists world over are running against time to develop an anti-body for this COVID-19 that would bring a cure and curtail its further advancements.

The state of interest, Tamilnadu (TN), located in southern India had been chosen for analyzing the Covid-19 impact. As we are in a covid-19 pandemic situation, citizens of populated cities often get infected by coming in close contact with an infected person whenever he or she coughs or sneezes. This covid-19 disease may lead to death for people who have chronic medical disorders and granny adults.

The urban cities Chennai, Madurai, Trichy and so on of TN, are considered as densely populated cities of TN. Most of the other district people reside in these urban cities, since they account for very high job market. In such populated urban cities, the spreading of Covid-19 virus is highly alarming. These cities are rich in having enough hospitals within its circumference to serve the needy. Besides, at the rural areas of TN, there are very minimum hospitals in close proximity.

Finding nearby hospitals based on current location (Latitude, Longitude) in case of medical emergencies for the patients is vital. To condense these odds of

happening, a health care category finder that would extract nearby locations of medical centers is important for providing medical emergencies on demand.

From the health ministry affairs, it is very important in finding out the severity of covid-19 cases over the districts of TN State. Many urban and rural districts of TN are affected by this disease and the count is highly alarming, it becomes necessary to group affected districts based on severity level which would go a long way in assisting health organizations to give importance for such places where the spreading of the disease is rapid.

2. Problem Description

When a patient is looking for a hospital in need of medical emergency, it is often better to locate existing hospitals and find the category of such hospitals. The purpose of this project is to find nearby hospital locations within a minimal radius from the current location in an optimal manner. The proposed project focuses on the districts with dense or less populated districts, finds the nearby hospitals based on Foursquare API. The distance between the current location and the hospital locations are computed. The project suggests most optimal neighborhood hospitals sorted by distance as a result.

Also, this project utilizes clustering algorithm to cluster districts of TN State's pandemic situation by considering fields such as number of active cases, recovered cases and deaths on day-to-day basis using web scrapping of covid-19 data from Wikipedia. From the clustering analysis, the impact of covid-19 spreading over the districts is analyzed.

The major Insights influenced in the problem are,

- Suggests the number of prevailing hospitals in the neighborhood areas
- Distance to the neighborhood hospitals from the current location
- Grouping of similar districts based on covid-19 cases where utmost care has to be taken