

# **Mapping and Analysis of COVID-19 spread using Satellite based Surface Temperature, and Humidity Data**

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## **Abstract:**

For much of the international populace, the global spread of COVID-19 and the resulting hundreds of thousands of casualties have considerably marred the beginning of the year 2020. More, as COVID-19 is a new coronavirus strain, sufficient data for an ideal comprehension of its behavior is non-existent; therefore, there remains uneasiness and apprehension regarding the upcoming, further destruction by the virus. Nevertheless, despite uncertainty, there are indicators, such as that of climate's potential impact on the viability and endurance of COVID-19, which warrant special consideration. Thus, this study intends to provide utility by examining the climate data, from cities across the globe, with significant community temporal spread. By the utilization of tools, such as QGIS and Octave, datasets, from MODIS and Landsat satellite imagery, NOAA/NCEP reanalysis data, the World Health Organization (WHO) and more, will be aggregated and processed. The end results, will be a simplified prediction model, incorporating climate data and additional parameters, such as population, population density, socioeconomic data and transportation, that forecasts the regions at higher risk for community spread of COVID-19.

## **Datasets:**

COVID-19 infection and mortality data, Remote Sensing data, Surface temperature, Humidity, Socioeconomic data, transportation data, etc.

## **Computer Skill**

Summer Intern will learn/work on QGIS, Octave, Excel and Word.

## **Benefits to students:**

Summer Intern will benefit through writing report that can be converted in manuscript.