

Analysing and Predicting the COVID-19 Trend in India

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1. Introduction

1.1. Background

Coronaviruses are a large family of viruses which may cause illness in animals or humans. In humans, several coronaviruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). The most recently discovered coronavirus causes coronavirus disease COVID-19. COVID-19 is an infectious disease caused by the most recently discovered coronavirus. This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019. COVID-19 is now a pandemic affecting many countries globally.

1.2. Problem

The main problem is that there is not much information known about the spread, cure, or the end of this disease's pandemic. An attempt is made to analyse the spread of COVID-19 in India. Also, to predict its expanse and when its growth will be curbed.

1.3. Interest

Currently, everyone is interested in knowing how and when this pandemic will stop. If we focus specifically on the specialists, then the analysts will be interested in this as to figure out ways to handle the situation. As the country is currently in lockdown and on the situation where it may be extended, this will help the strategists to estimate the duration of lockdown needed to curb the pandemic in India.

2. Data acquisition & cleaning

2.1. Data sources

The data source is a dataset from kaggle which is scraped from the authentic data source of the Indian government's COVID dashboard and website. The data has the following information:

- Date - Date of cumulative report
- Name of State / Union Territory / National Capital Region

- Total Confirmed cases (Indian National) - Cumulative count of Indian national confirmed with COVID-19
- Total Confirmed cases (Foreign National) - Cumulative count of foreign national confirmed with COVID-19
- Cured/Discharged/Migrated - Cumulative count of cured/ discharged cases
- Latitude - Latitude of the location
- Longitude - Longitude of the location
- Death - Cumulative count of deaths reported
- Total Confirmed cases