COVID'19 ANALYSIS

BIG DATA PROJECT

Submitted By:
Mayank Asnani (9918103161)
Abhinav Jha (9918103152)
Pranjal Rastogi (9918103014)
Akshat Dubey(9918103208

Teacher- Payal Khurana Batra

Department of CSE
Jaypee Institute of Information and Technology, NOIDA-128

Introduction :

COVID-19 is a contagion belongs to the "Nidovirus family", or "Nidovirales" which includes "Coronaviridae", "Artieviridae" and "Roiniviridae" family, responsible for respiratory illness in humans which may cause common cold to more austere diseases such as "Middle East Respiratory Syndrome(MERS)" and "Severe Acute Respiratory sndrome(SARS)". The most common symptoms or traits of COVID-19 are fever, tiredness, dry cough, aches and pain, nasal congestion, runny nose or sore throat. The main thing to note here is that some people get infected and don't get these symptoms or traits and doesn't feel unwell. All age group people who has a medical history of blood pressure, cardiovascular disease or diabetes are more prone to get infected and if anyone with fever, cough and breathing difficulties should immediately seek for medical attention. COVID-19 is a "communicable" disease and can be passes through the droplets from nose or mouth when an infected person coughs or exhales and this is the main reason to maintain 1m (3 feet) distance from the sick person. Studies till date indicate that COVID-19 is mainly spread through contact rather than transmitted through air. As many people only experienced mild symptoms so it is a high probability to catch COVID-19 from the person who has mild cough or doesn't feel ill. Protection from and prevention of spreading COVID -19 can be minimized by including some of the simple and easy to adopt precautions in daily habits which include thoroughly cleaning hands with alcohol based hand rub or washing them with soap and water, avoid touching eyes, nose and mouth as hands touches several surfaces which might be contaminated.

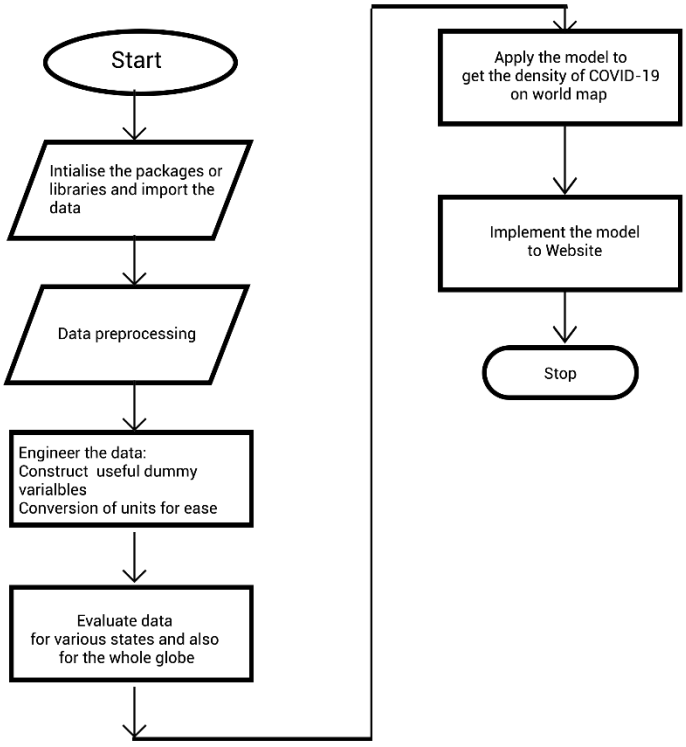
On 30 January 2020, India reported its first coronavirus case in Kerala when a student returned from Wuhan (epicenter of coronavirus) and till then the number of cases has been increasing exponentially. In recent times there is no vaccine or medicine available particularly for treatment of COVID-19 and currently are under investigation. This project analyzes the current trend of COVID-19 based on certain criterion using "Exploratory Data Analysis". Exploratory Data Analysis (EDA) is the way to explore the data with the aim of extracting useful and actionable information from it. EDA is the revelatory step in any kind of analysis

PROBLEM STATEMENT:

Performing Statistical Data analysis on Covid-19 dataset and drawing conclusion in R.

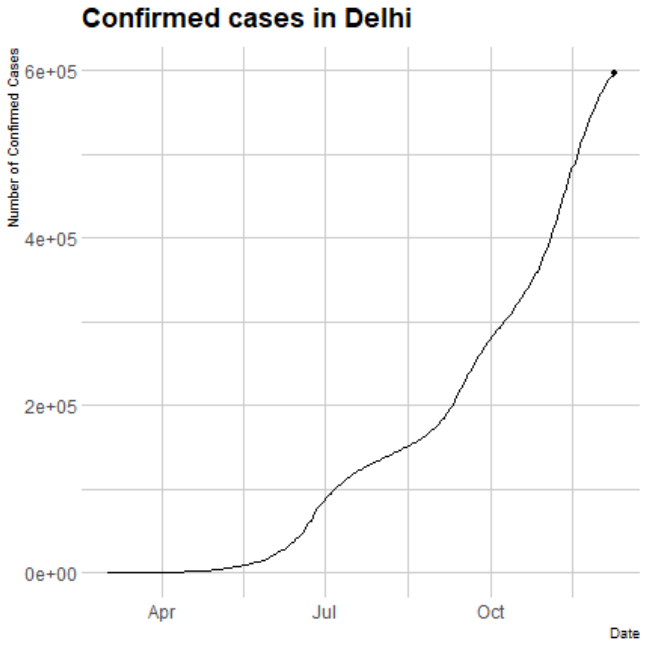
The number of COVID-19 cases in India is increasing at a rapid pace. The National and local authorities are having a hard time to create a pattern, analyze and forecast the spread of COVID-19 in India. The main aim of this paper is to draw a statistical model for better understanding of COVID-19 spread in India by thoroughly studying the reported cases in the country till 22 April 2020. An Exploratory Data Analysis (EDA) technique is being implemented to study and analyze the reported COVID-19 cases in India. The result of the analysis divulges the impact of COVID-19 in India on daily and weekly manner, analogize India with abutting countries as well as with the countries who are badly affected and arrangement of India's Healthcare sector for such epidemic.

DETAILED DESIGN:

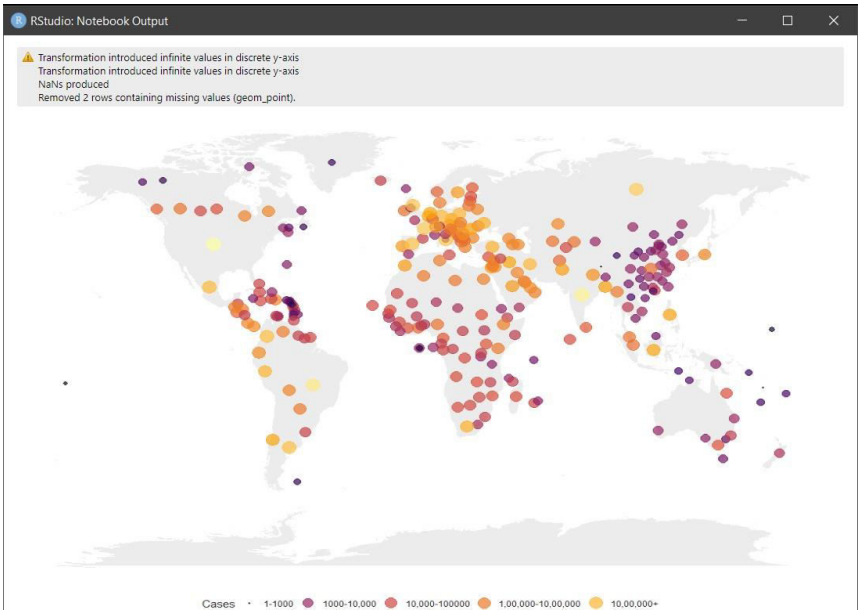


RESULTS:

Graph showing cases confirmed in Delhi over a period of time.



Density of Covid-19 patients on world Map:



Conclusion and Future work:

The main aim of the project is to study and analyze the COVID-19 spread in India since the day of outbreak and pattern of spreading of virus in India and to understand why National and local authorities are having a difficult time in dealing with the COVID-19. Moreover to study about the common symptoms of COVID-19 that are observed till now, age wise spread of COVID -19 to observe which age group is affected most, the spread of disease in India compared to other countries, the state wise trend of the epidemic to get detail understanding of how this is spreading and also to analyze the Healthcare sector of India and lastly to predict the future of epidemic in India.

This paper work can be extended to higher level in future, predictive model for lasting of Covid'19 that uses Machine Learning algorithm. Moreover the future Prediction analysis can be extended and resulted in more accurate prediction as to predict more accurate number of total cases in India.