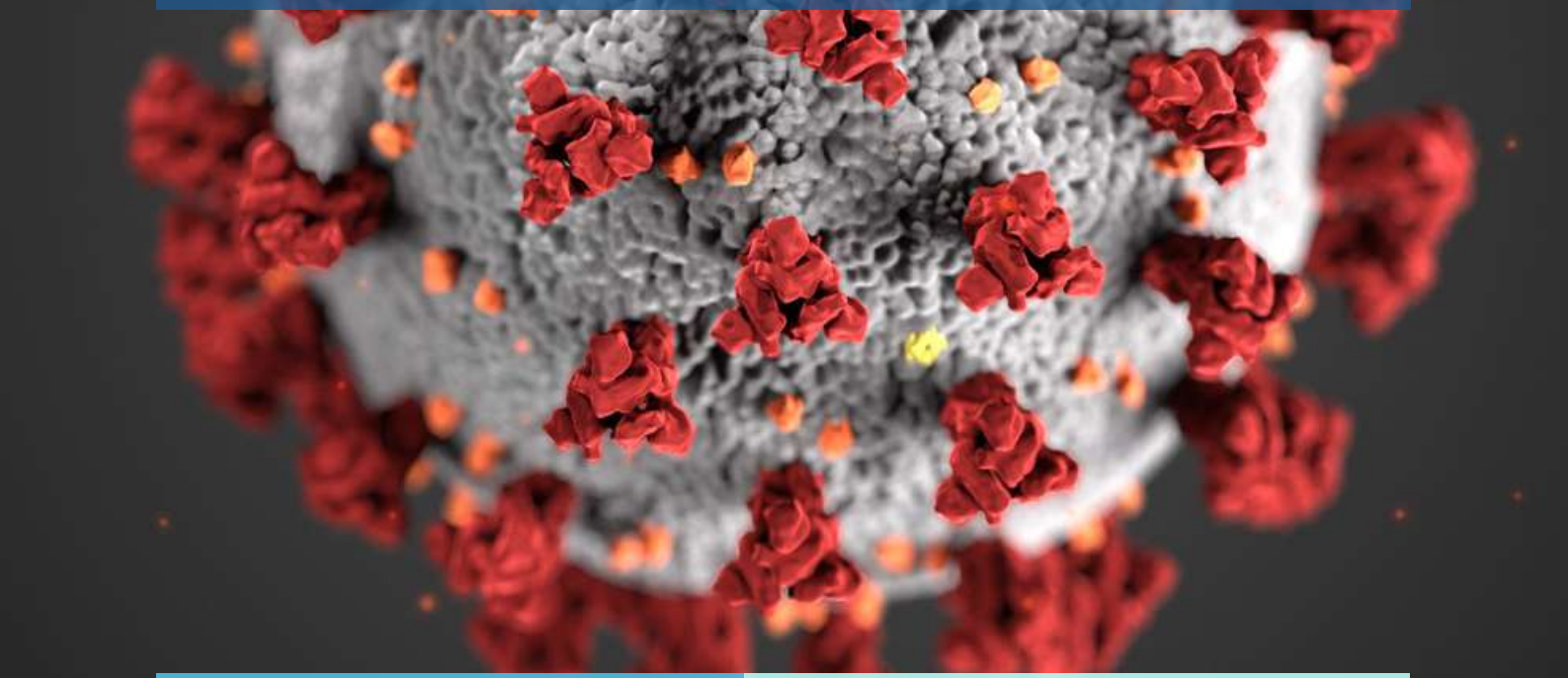
AN EDA FOR COVID-19 ON INDIA



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Subject Code: CSE5007 - EDA

Introduction

India began the administration of COVID-19 vaccines on 16 January 2021. As of 25 May 2022, India has administered over 1.9 billion doses overall, including first, second, and precautionary (booster) doses of the currently approved vaccines. In India, 93% of the eligible population (12+) has received at least one shot, and 82% of the eligible population (12+) is fully vaccinated.
Here we will study the graphs about the population vaccinated and recovery rate, new cases, and deaths after vaccination, and before vaccination. Also about the stats of states too.

What is Coronavirus? The coronavirus SARS-CoV-2 causes Covid-19, a respiratory disease. It is closely related to the virus that caused the severe acute respiratory syndrome epidemic in 2003. (SARS). Coronaviruses are a broad family of viruses that cause respiratory diseases in humans, animals, and birds. The highly virulent viruses responsible for SARS, Middle East respiratory disease (MERS), and, of course, Covid-19 are all members of the family. These illnesses are not only highly infectious but also extremely virulent, with death rates ranging from 2 to 5%. The risks of highly aggressive coronavirus illnesses like Covid-19 must not be underestimated.

BACKGROUND

COVID-19 immunisation is an important preventative step that can assist to bring the COVID-19 pandemic to a stop. COVID-19 vaccinations are now readily accessible in the United States, and the CDC advises that everyone aged 12 and up get vaccinated.

The US Food and Drug Administration (FDA) licenced an mRNA vaccine (Pfizer-BioNTech/Comirnaty) as a 2-dose series for symptomatic COVID-19 prophylaxis in people aged 16 and up on August 23, 2021. This vaccine is also approved for use in children aged 12 to 15 years old as part of an Emergency Use Authorization (EUA). An EUA has approved a second mRNA vaccine (Moderna) and a recombinant, replication-incompetent adenovirus serotype 26 (Ad26) vector vaccine (Janssen vaccine [Johnson & Johnson]) for use in people over the age of 18. Both mRNA vaccines are also approved for a second dose to be given to immunocompromised people.

When people are 2 weeks after receiving the second dosage of a 2-dose series (mRNA vaccines) or 2 weeks after receiving a single-dose vaccine (Janssen vaccine), they are deemed completely immunised.

Evidence of vaccination effectiveness against symptomatic COVID-19 with and without severe consequences, as well as vaccine influence on SARS-CoV-2 transmission, are considered in public health recommendations for those completely immunised with FDA-approved or FDA-authorized COVID-19 vaccines. When examining the benefits and potential risks of extra preventative methods (e.g., masking, physical separation) among vaccinated individuals,

BACKGROUND

When examining the benefits and potential risks of extra preventative methods (e.g., masking, physical separation) among vaccinated individuals, other individual and societal factors are equally significant. When establishing vaccine recommendations, the Advisory Committee on Immunization Practices and the Centers for Disease Control and Prevention examine individual health benefits and hazards, as well as population values, acceptability, and feasibility of implementation. These variables were also taken into account by the Centers for Disease Control and Prevention (CDC) when developing interim public health guidelines for fully vaccinated people.

In this scientific brief, we summarise the evidence available for the currently approved or authorized COVID-19 vaccines (administered according to the recommended schedules) through August 24, 2021, as well as additional considerations used to inform public health recommendations for fully vaccinated people, such as:

Vaccine efficacy and effectiveness in the general population and among immunocompromised people against SARS-CoV-2 infection

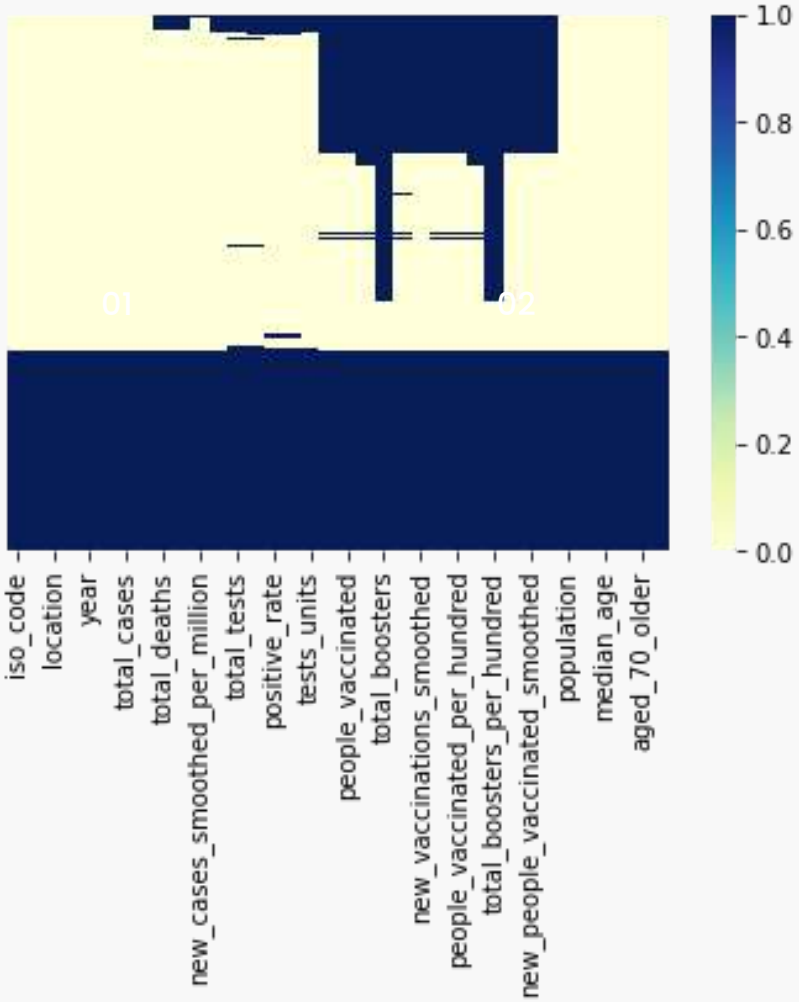
Heterologous (mixed) vaccination series vaccine efficacy

The performance of vaccines against new SARS-CoV-2 variant viruses (i.e., immunogenicity and efficacy), with a focus on the Delta (B.1.617.2) variation.

According to current evidence, those who are completely vaccinated and do not have any immunocompromising illnesses can engage in most activities with a minimal risk of contracting or transmitting SARS-CoV-2 if they take adequate precautions (e.g. masking)

CASE EVALUTION

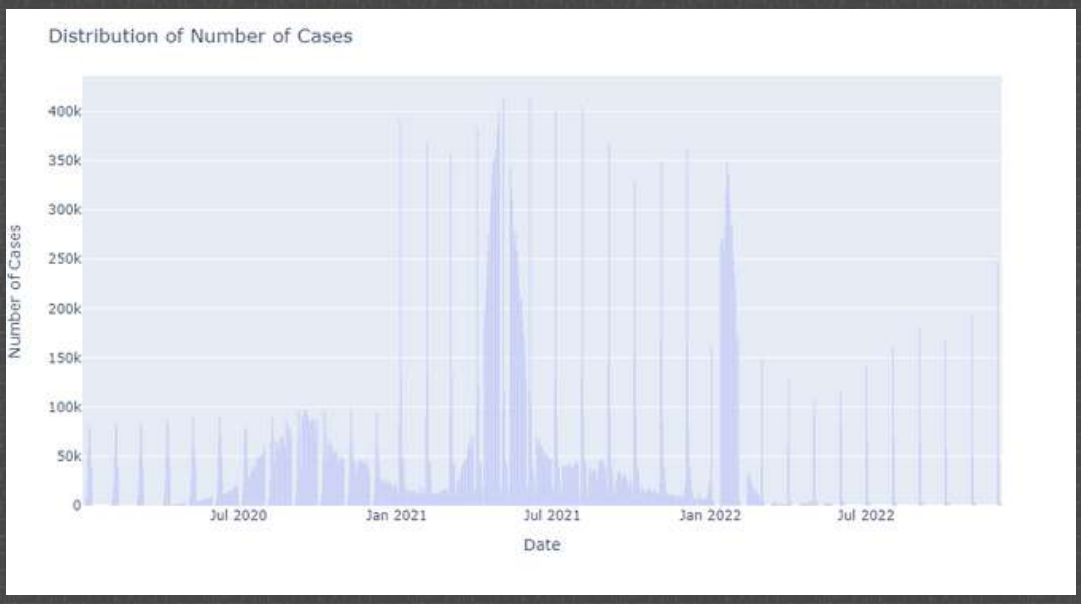
Working on two dataset with 1000 around rows having 60 approx columns named 'owid-covid-data'. The platform used is Jupyter Notebook and the tool used is Python. Firstly check for the null values by plotting graph then filtering the null values and extracting the main columns required for visualization and dropped the other ones
Working on the Visualization:



IMPLEMENTATION

The working is with respect to Vaccination. So, first let get some insight on cases before vaccination

1. Cases

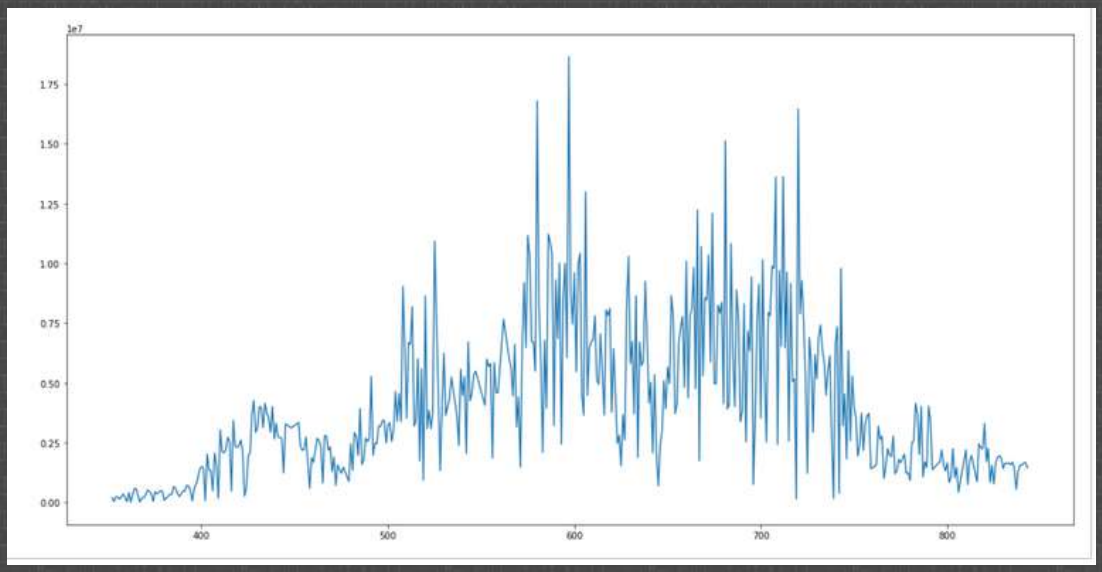


2. Death

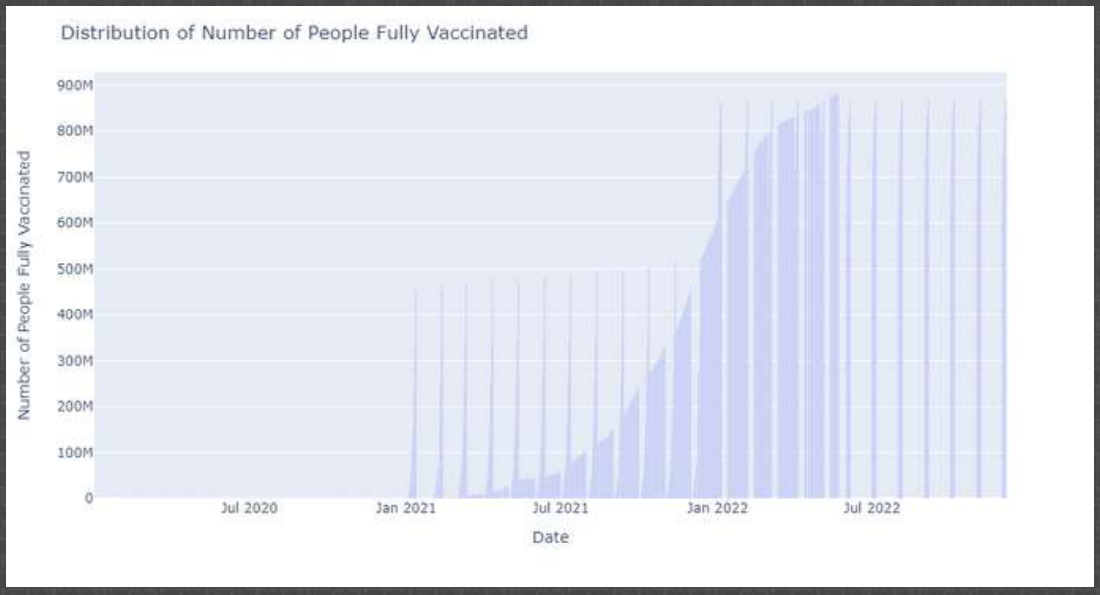
IMPLEMENTATION

As the main concern was working with the vaccination therefor:

1. Proper insight on Vaccination



2. Vaccination on respective dates



IMPLEMENTATION

RECOVERY RATE

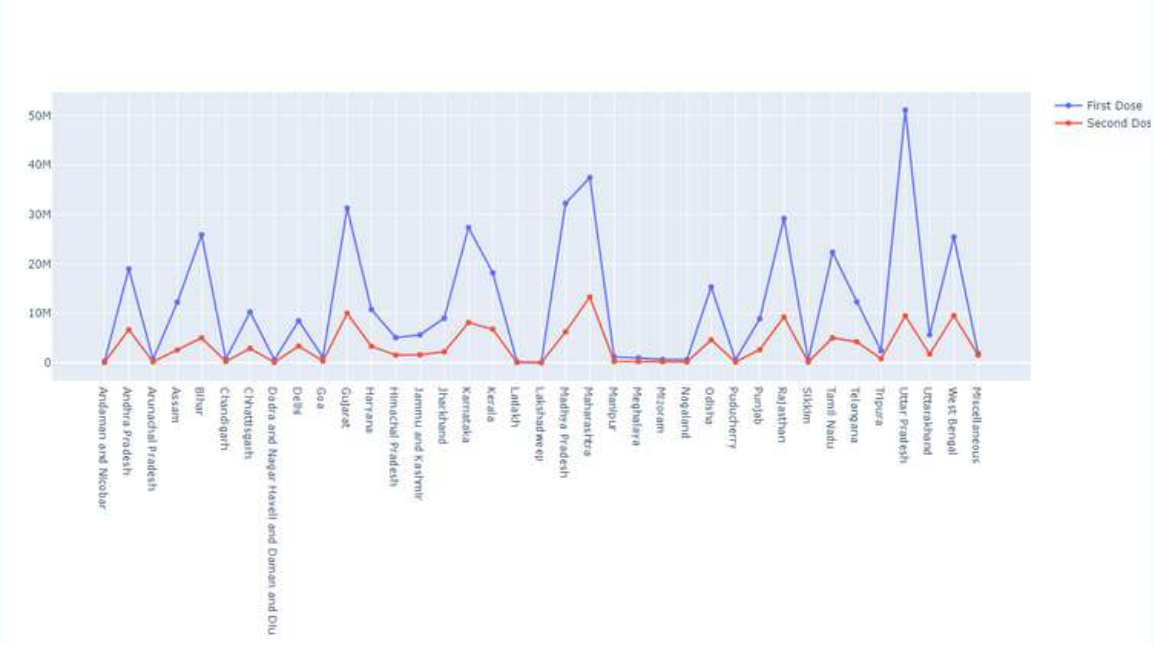
Here from the distribution graph we can say that recovery rate after vaccination got increased.

STATES DATA

A Brief
About The DATASET

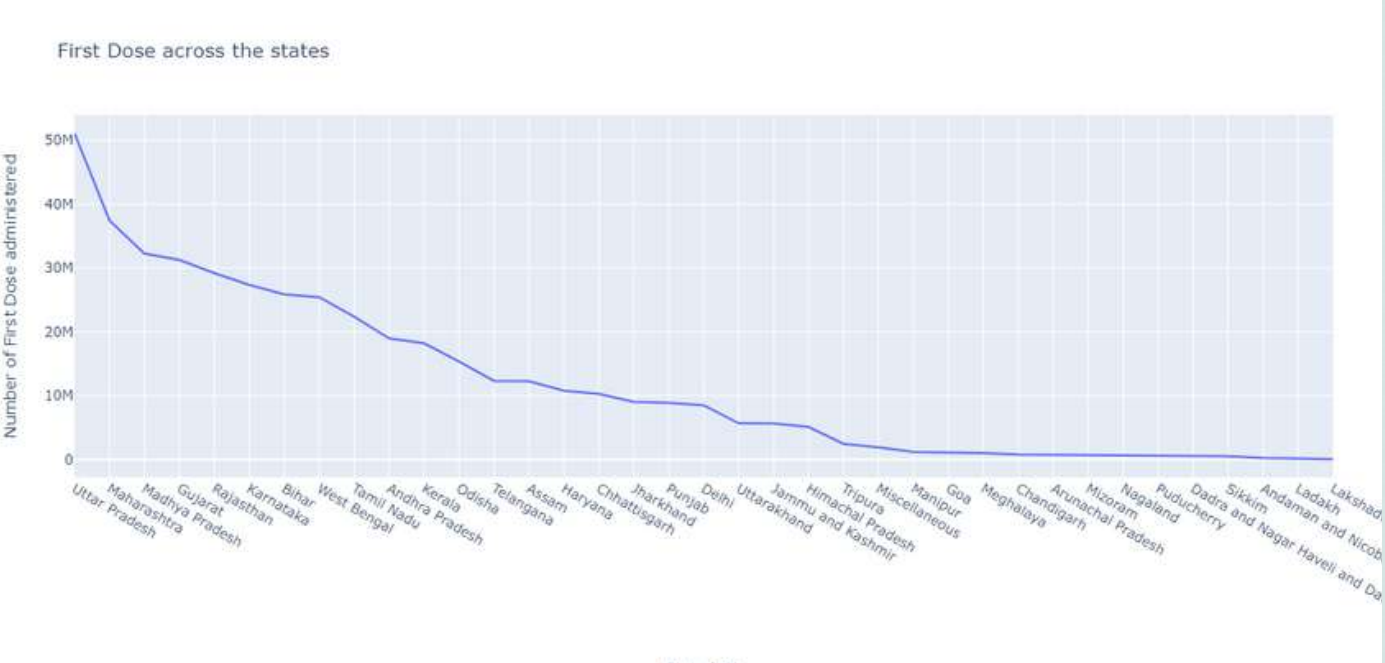
States Data having 37 rows and 4 columns
State/UTs - Names of states and union territories of India
Total Vaccination Doses- Total number of vaccine doses given
Dose 1 - Number of the first dose of vaccine given
Dose 2 - Number of the second dose of vaccine given

DOSES DISTRIBUTION ACROSS THE STATES

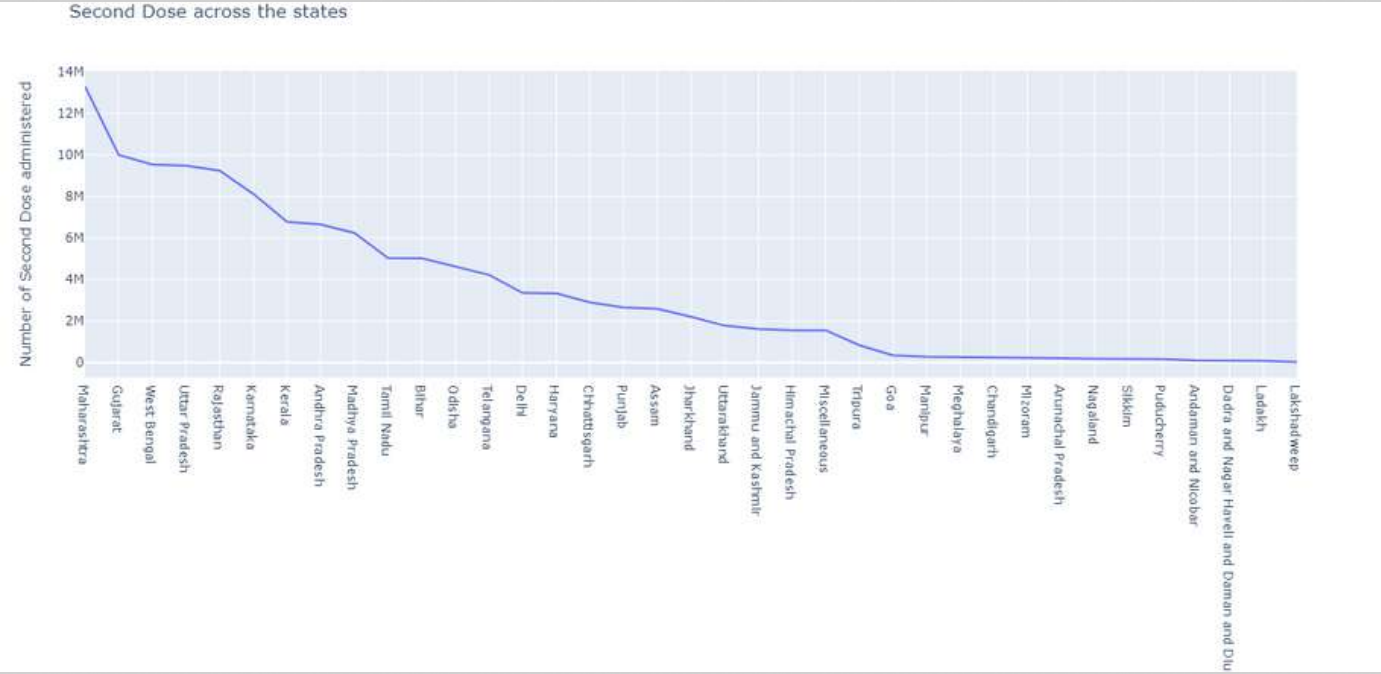


IMPLEMENTATION

FIRST DOSAGE DISTRIBUTION ACROSS THE STATES



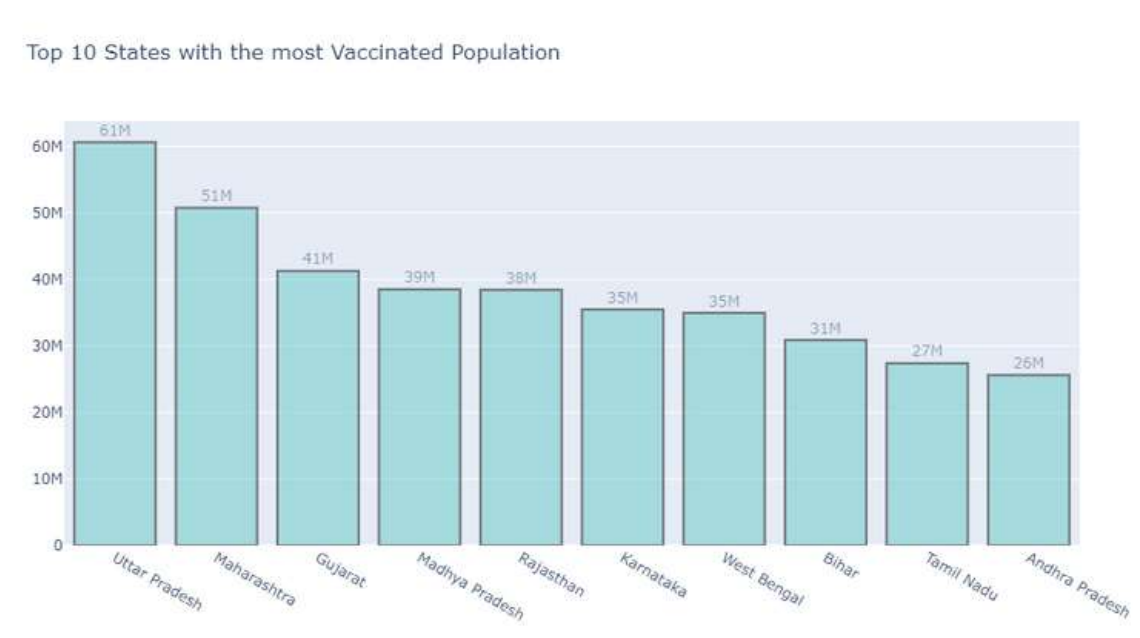
Distribution oF Second Dose across the states



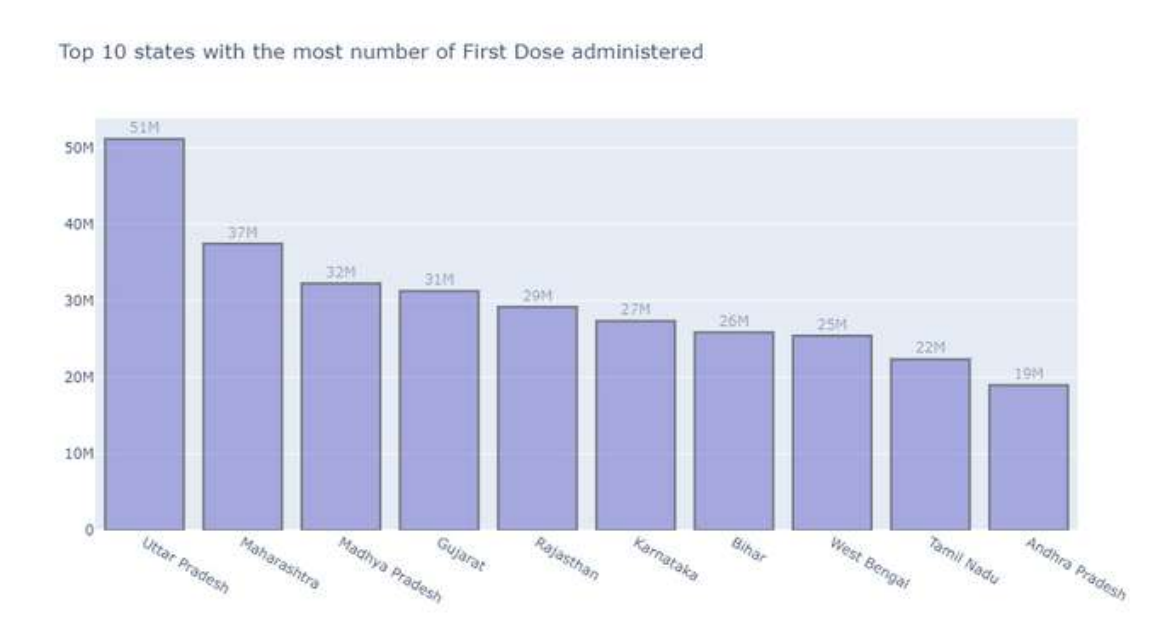
IMPLEMENTATION

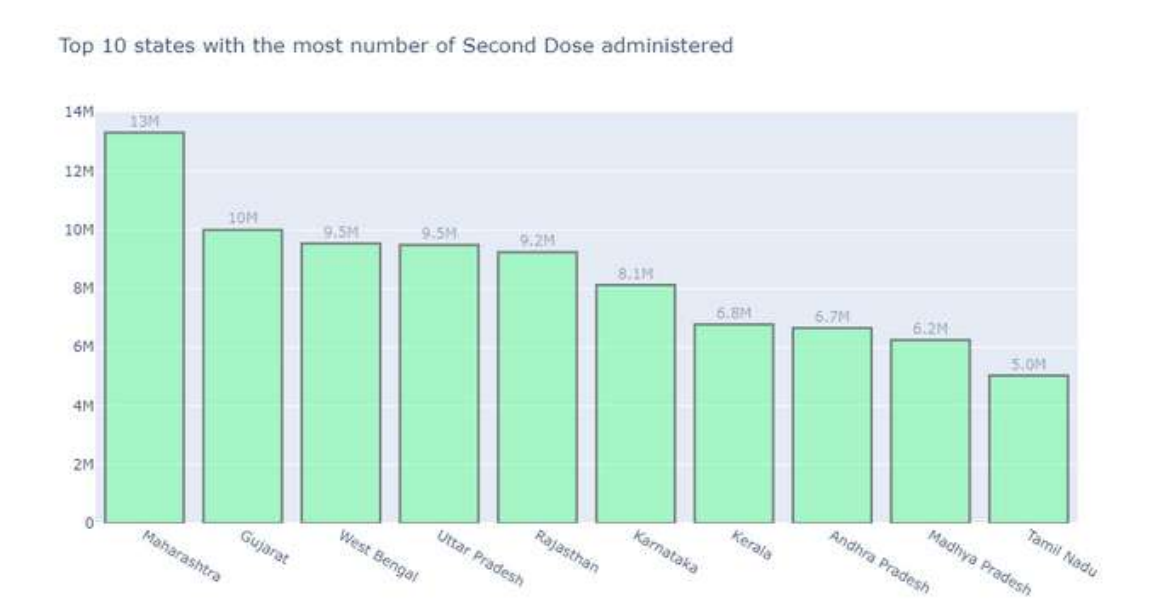
Q) Which state or union territory is the most vaccinated?
As we can see from the above graph(Acumulated figures for vacinations) Uttar Pradesh is the state with highest number of Vaccinations. Vaccinations: 60,606,763

Q) Which state or union territory is the least vaccinated?
As we can see from the above graph(Acumulated figures for vacinations) Lakshadweep is the union territory with lowest number of Vaccinations. Vaccinations: 70,217

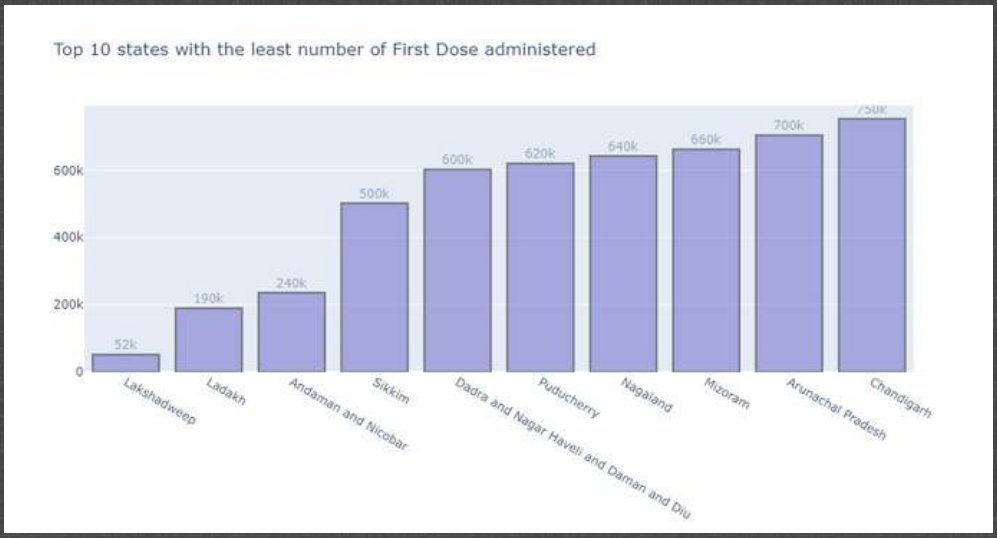


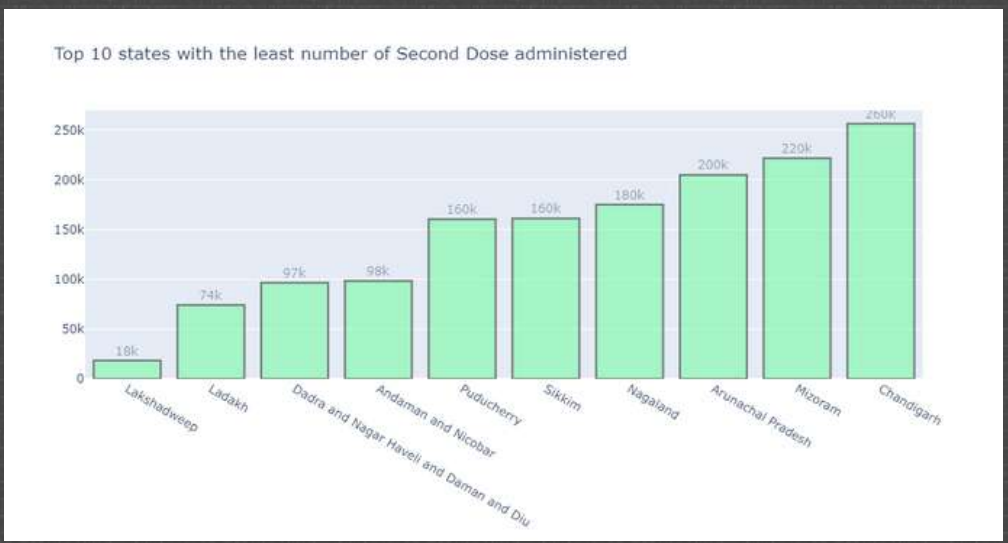
IMPLEMENTATION

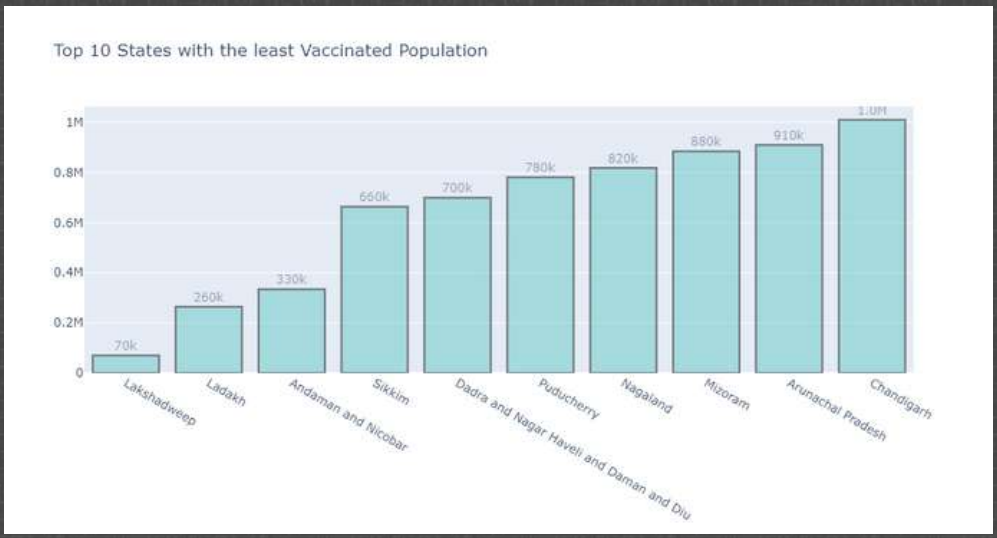




IMPLEMENTATION







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Thank You

An EDA 0n COVID-19

The goal is to turn data into information and information into insight.
"The best way to learn data science is to do data science"

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