

# Covid-19 Data Analysis Using Python

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## Introduction to Dataset

The project utilizes two distinct datasets to analyse the impact of COVID-19 and vaccination efforts in India: **COVID-19 Dataset** and **Vaccination Dataset**

**Covid-19 Dataset link** : [Click here](#)

The dataset contains **7 columns**, described below:

1. **Date**: The specific date on which the data was recorded.
2. **State/Union Territory**: Name of the state or union territory in India.
3. **Cured**: The cumulative count of individuals who have recovered from COVID-19.
4. **Deaths**: The total number of fatalities reported due to COVID-19.
5. **Confirmed**: The cumulative count of confirmed COVID-19 cases.
6. **Month**: The month extracted from the Date column, represented in short format.
7. **Year**: The year extracted from the Date column (e.g., 2020, 2021).

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**Vaccination Dataset link** : [Click here](#)

The dataset provides information about the administration of COVID-19 vaccines in India, segmented by various demographic and age groups. Below is a detailed description of the columns:

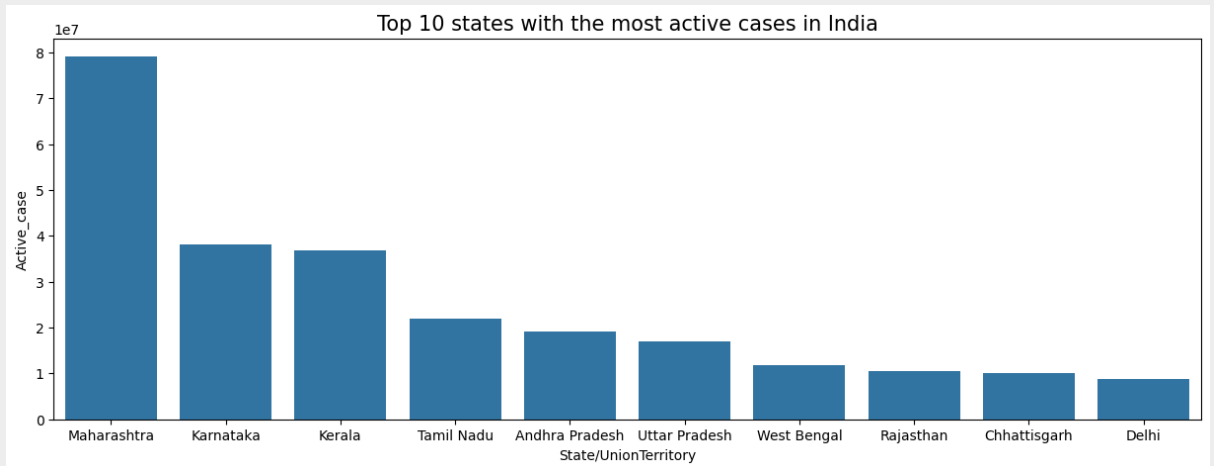
1. **Updated On**: The date when the vaccination data was last updated.
2. **State**: The name of the state or region.
3. **Total Doses Administered**: The number of vaccine doses administered up to the given date.
4. **18-44 Years (Individuals Vaccinated)**: The number of individuals aged 18 to 44 years vaccinated.
5. **45-60 Years (Individuals Vaccinated)**: The number of individuals aged 45 to 60 years vaccinated.
6. **60+ Years (Individuals Vaccinated)**: The number of individuals aged 60 years and above vaccinated.
7. **Male (Individuals Vaccinated)**: The number of male individuals vaccinated.
8. **Female (Individuals Vaccinated)**: The number of female individuals vaccinated.
9. **Transgender (Individuals Vaccinated)**: The number of transgender individuals vaccinated.
10. **Total Individuals Vaccinated**: The cumulative count of individuals vaccinated, regardless of gender or age.

# COVID-19 Data Analysis (30-01-2020 to 11-08-2021)

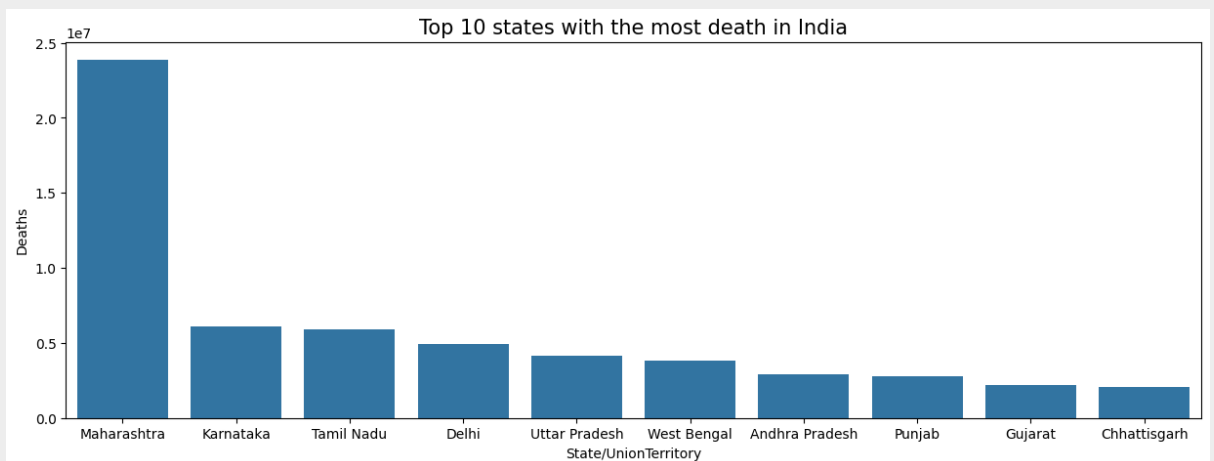
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## 1. State-wise Analysis:

### 1. Top 10 States by Active Cases:



### 2. Top 10 States with the Most Deaths in India:



### 3. State with Maximum Mortality Rate:

- **Punjab** recorded the highest mortality rate.

### 4. State with Maximum Recovery Rate:

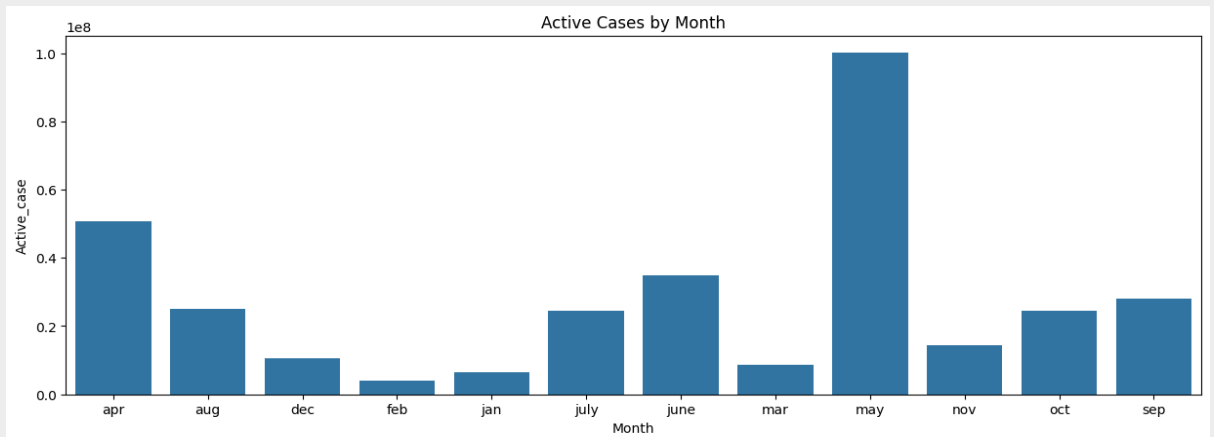
- **Dadra and Nagar Haveli** achieved the highest recovery rate.

### 5. Most Affected State:

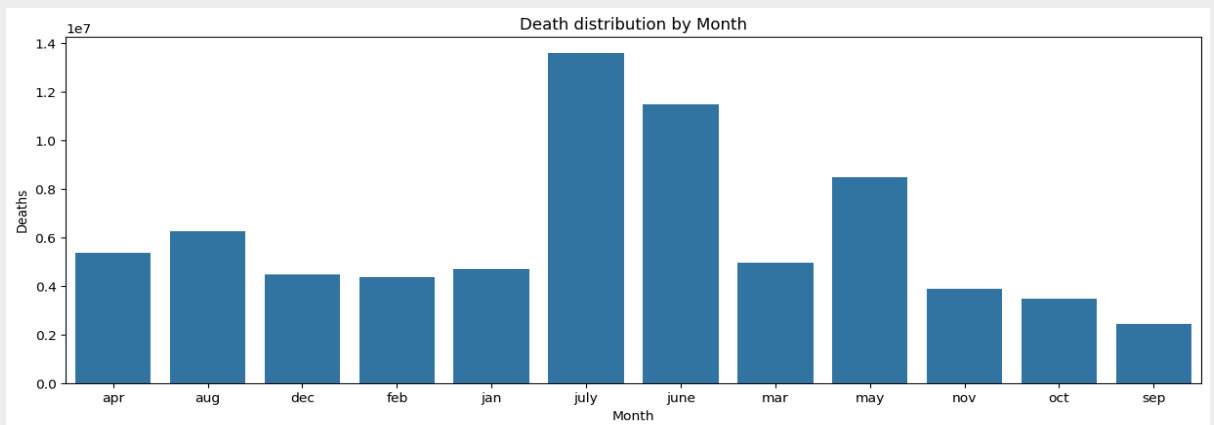
- Based on the analysis, **Maharashtra** was the most affected state by COVID-19.
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## 2.Month-wise Analysis:

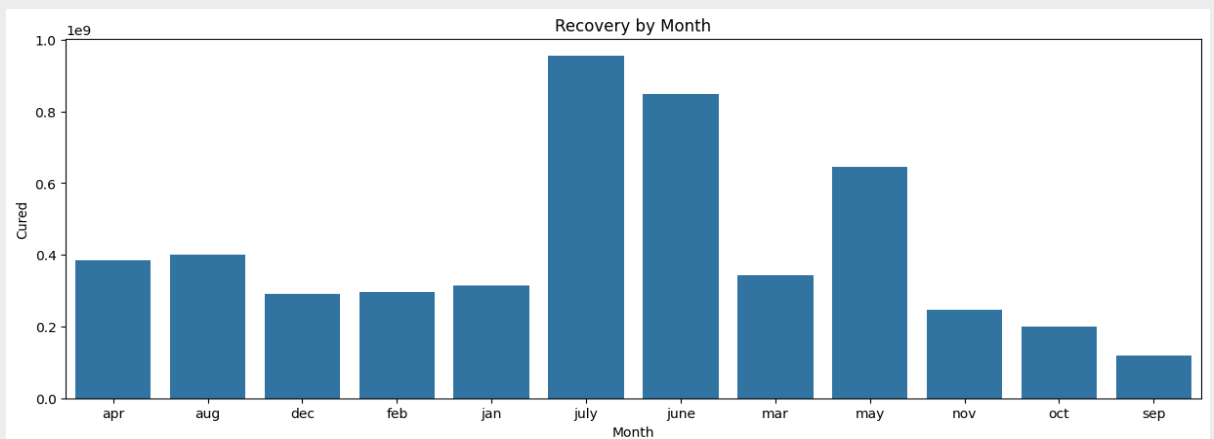
### 1. Active Cases by Month:



### 2. Death Distribution by Month:



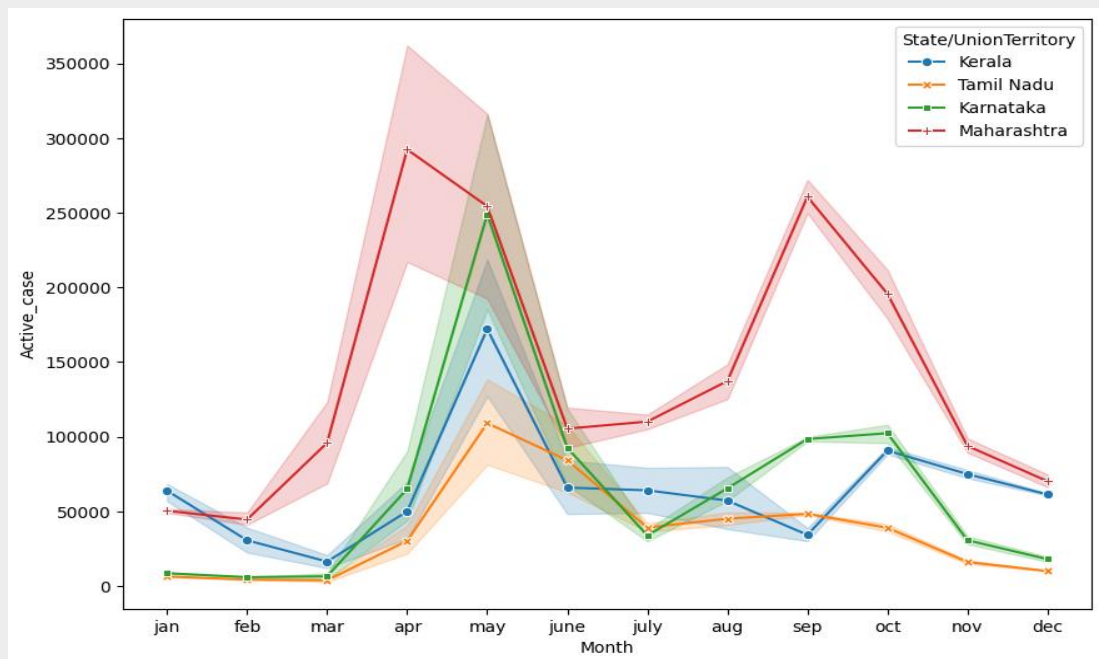
### 3. Recovery by Month:



## Key Observations:

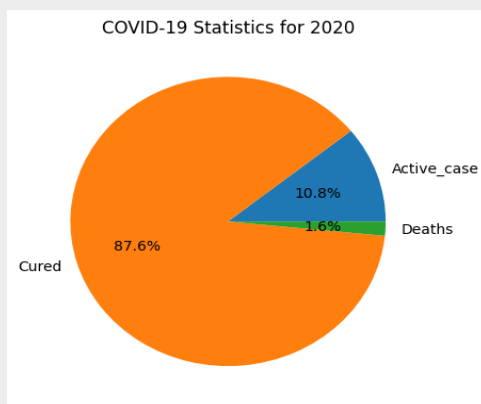
- The **maximum active cases** were recorded in **May**.
- **Maximum deaths** occurred in **July and June**.
- The **highest recovery rate** was observed in **July**, followed by **June** and **May**.

#### 4. Active Cases Analysis with Respect to Month and States:

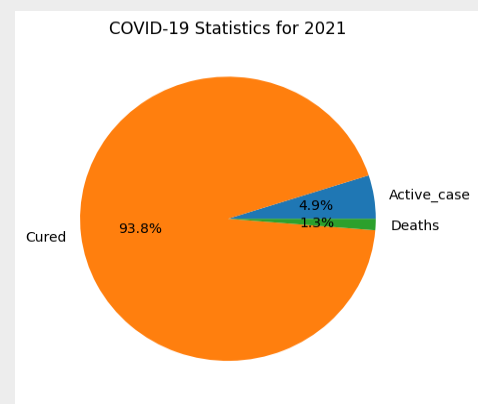


#### 3. Year-wise Data Analysis:

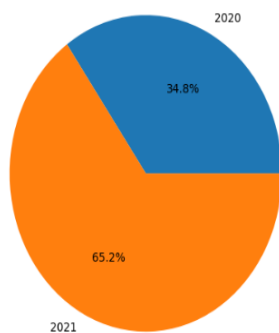
##### COVID-19 Statistics for 2020



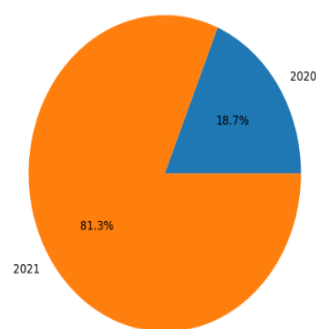
##### COVID-19 Statistics for 2021:



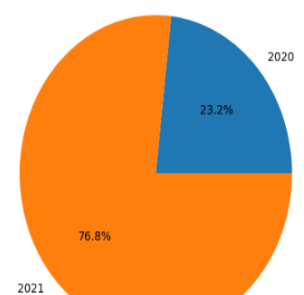
##### Active Cases Over Years



##### Recovered Cases Over Years

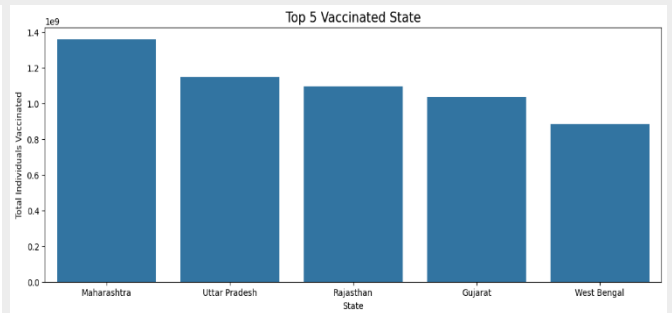
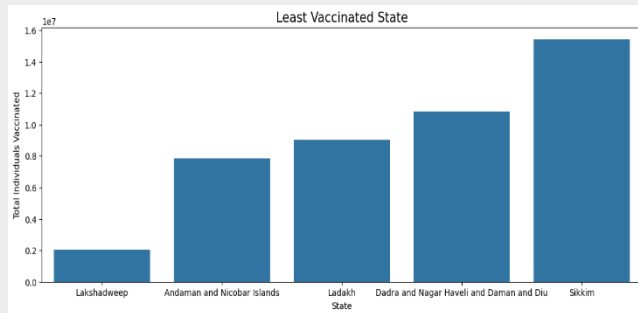


##### Deaths Over Years

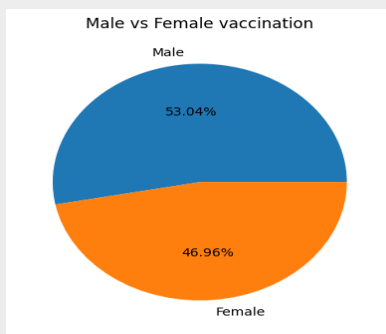


# Vaccination Data Analysis

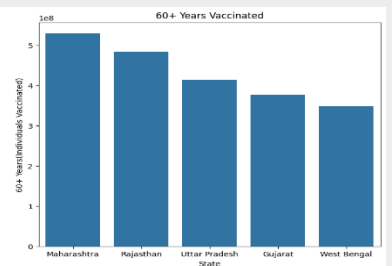
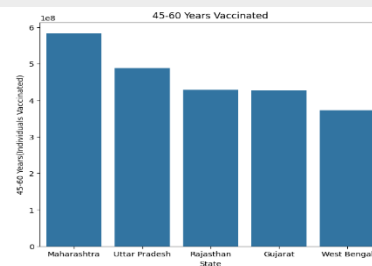
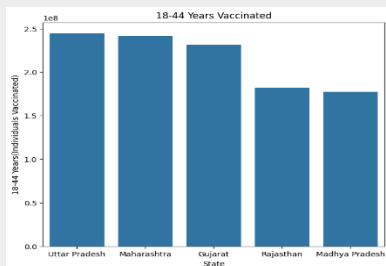
## 1. State-wise Vaccine Data Analysis:



## 2. Male vs Female Vaccination:



## 3. State-wise Age Distribution of Vaccination:



# Thank You !!!

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