

Impact of Covid-19 Affected Population All Over India Using Tableau Software

**Dr. S. Sai Kumar¹, Ab. Nafisa Sulthana², A. Veera Lavanya³,
Ch. Gayatri Ritika Sri⁴**

Sr. Assistant Professor, Department of Information Technology¹

II B. Tech, Department of Information Technology^{2,3,4}

Prasad V. Potluri Siddhartha Institute of Technology, Vijayawada, Andhra Pradesh, India

Abstract: This report focuses on the data visualization of the COVID-19 pandemic, utilizing a variety of graphical representations and analytical tools to elucidate the complex dynamics of the virus's spread, impact, and response efforts. Drawing from a diverse dataset up to the knowledge cutoff date of January 2022, the report aims to offer a visually compelling and informative narrative that enhances our understanding of the pandemic. The visualization journey begins with an overview of global COVID-19 trends, mapping the geographical distribution of cases, deaths, and vaccination rates.

Index terms: Data visualization, COVID-19, States, Cases, Deaths, Recovered, Active Cases, Vaccination Rates.

I. Introduction:

COVID-19, also known as the novel coronavirus, is a highly contagious respiratory illness caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). COVID-19 primarily spreads through respiratory droplets when an infected person coughs, sneezes, talks, or breathes. Symptoms of COVID-19 range from mild to severe and can include fever, cough, difficulty breathing, fatigue, sore throat, loss of taste or smell, and body aches. As the situation continues to evolve, it is crucial to stay informed about the latest guidelines and recommendations from health authorities to protect ourselves and prevent further spread of the virus.

II. Proposed Systems:

Systems for health monitoring, immunization administration, improved testing, data analytics, public outreach, supply chain management, and emergency response planning are among the suggested approaches to combat COVID-19. These technologies are intended to enhance early detection, fair vaccination distribution, mass testing, well-informed decision-making, precise information delivery, effective resource allocation, and prompt emergency response. In order to contain the epidemic and protect public health, these systems must be put into place.

III. Technologies Used:

Microsoft Excel: Microsoft Excel is a versatile spreadsheet program used for data analysis, operations, finance, and complex computations. It is compatible with various platforms like Windows, macOS, Android, and iOS, offering features such as pivot tables, graph tools, and macro programming. Excel's data visualization capabilities allow for the creation of insightful visualizations like column charts, bar charts, pie charts, line charts, and more.

Tableau software: Tableau is a software provider that helps businesses using business information analytics by providing collaborative data visualization tools. Businesses use Tableau to make data easier to grasp by visualizing it and highlighting trends for business intelligence analysis.

Files: Tableau output can be saved in a variety of formats following data analysis. A variety of Tableau-specific file types, including bookmarks (.twb), workbooks (.tbn), data extracts (.tde), and packaged data sources (.tds), can be used to save your work. Save these files using the appropriate extension. These files are kept in the My Tableau Repository directory's corresponding folders.

Dashboard: A dashboard is an assortment of multiple displays that enable you to compare multiple data points at once. Instead of going to different worksheets, you can make a dashboard that shows all of the views at once, for instance, if you have a group of views that you evaluate every day. All you have to do to create a dashboard

is drag views to the visualization area from the sheets section. Views from any worksheet in the workbook can be added to a dashboard along with a variety of auxiliary objects like text fields, web pages, and photos.

Maps: In order to plot the data on a map, this application requires a geographical location. Location names, latitude, and longitude must be included in a single map data source.

Server: Tableau Server is a program designed for sharing worksheets generated using Tableau Desktop. Only authorized users will be able to access worksheets after they are uploaded to the server.

IV. Results:

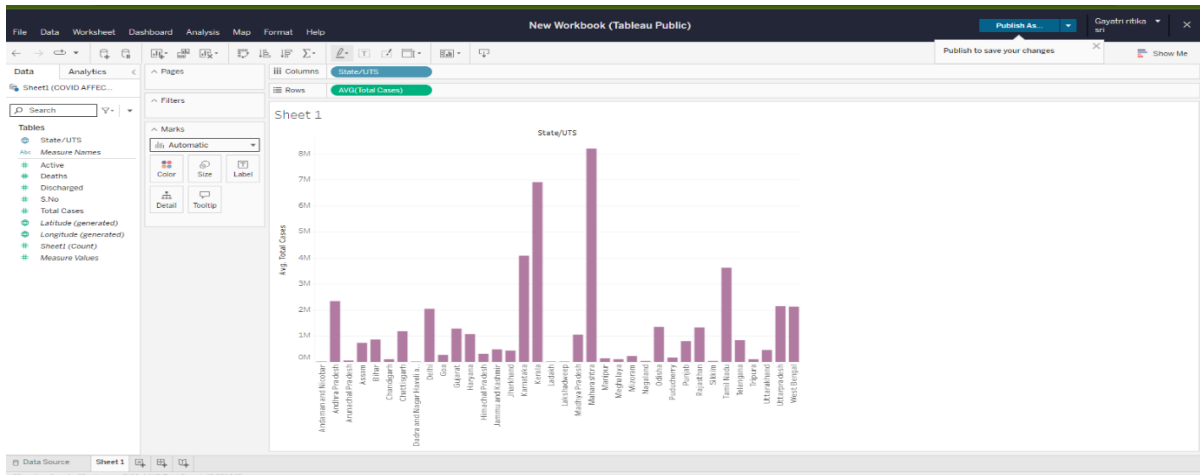


Figure 1.1 Shows the percentage of total cases throughout the India in bar chart

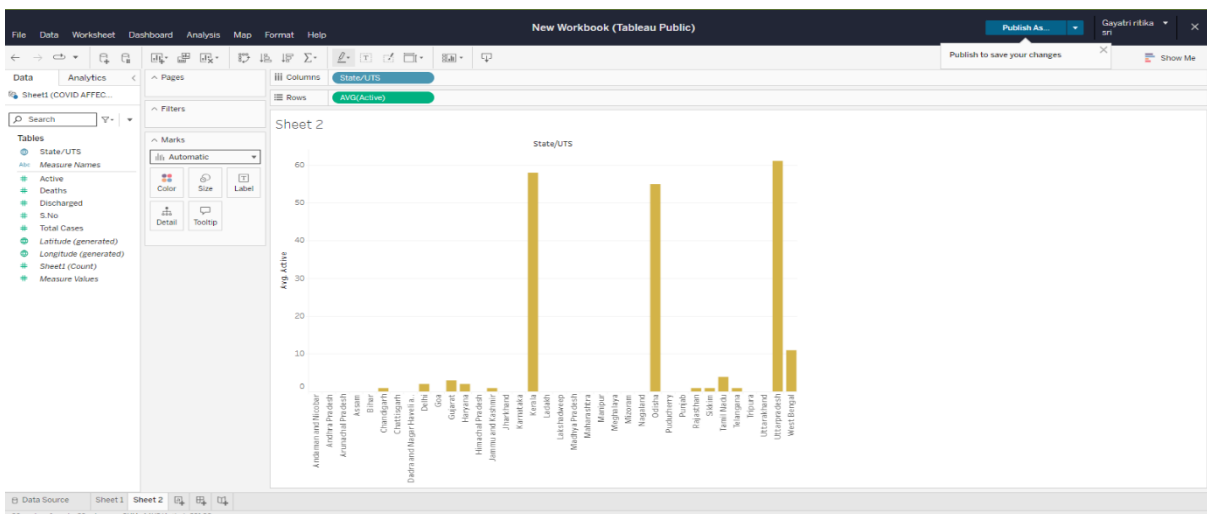


Figure 1.2 shows the percentage of active cases throughout the India in bar chart

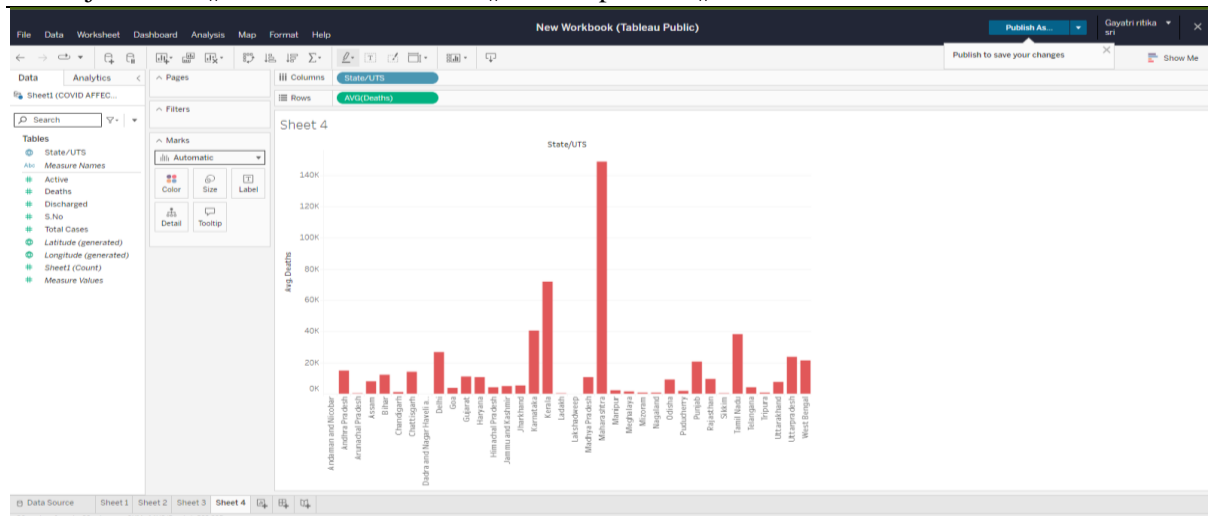


Figure 1.3 shows the percentage of deaths cases throughout the India in bar chart

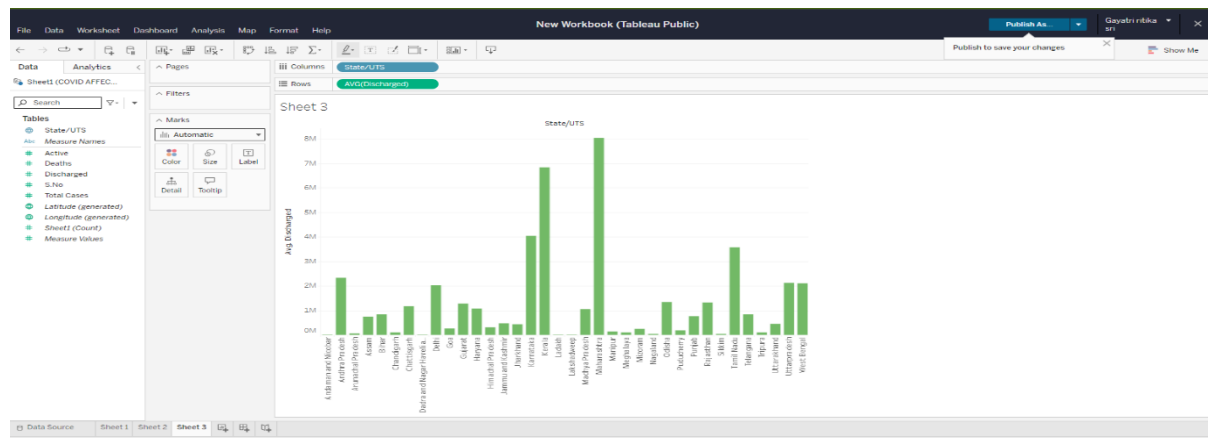


Figure 1.4 shows the percentage of discharged cases throughout the India in bar chart

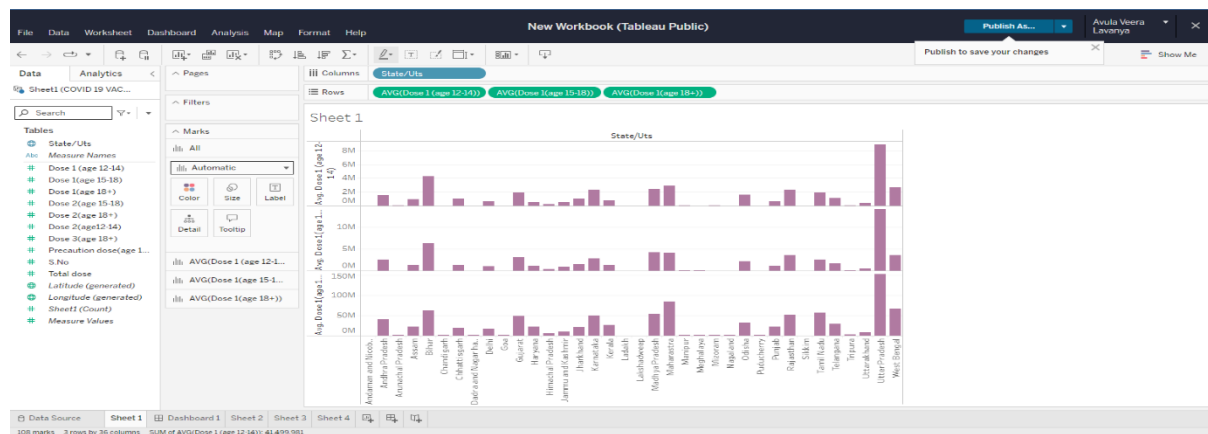


Figure 1.5 shows the percentage of Dose 1 of age groups (12-14) (15-18) (18+) throughout the India in bar chart

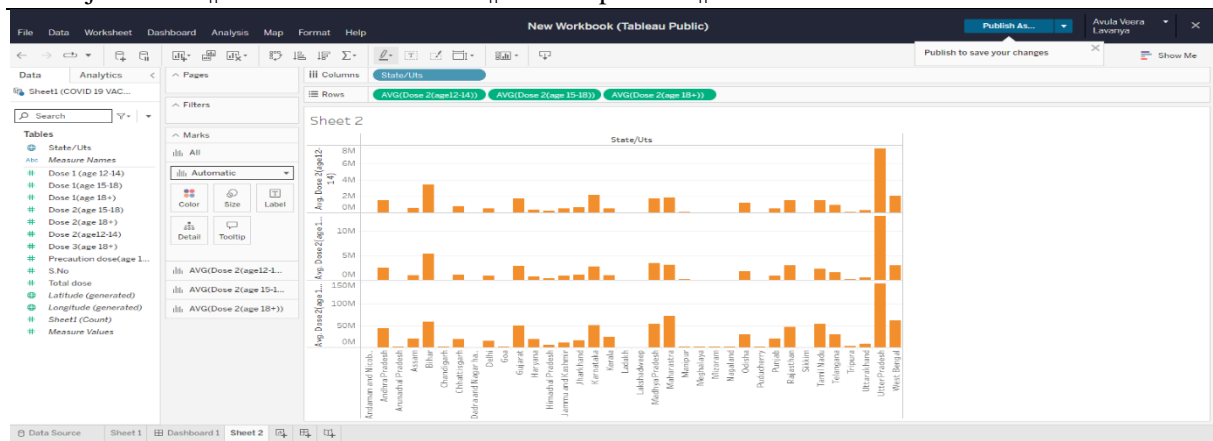


Figure 1.6 shows the percentage of Dose 2 of age groups (12-14) (15-18) (18+) throughout the India in bar chart

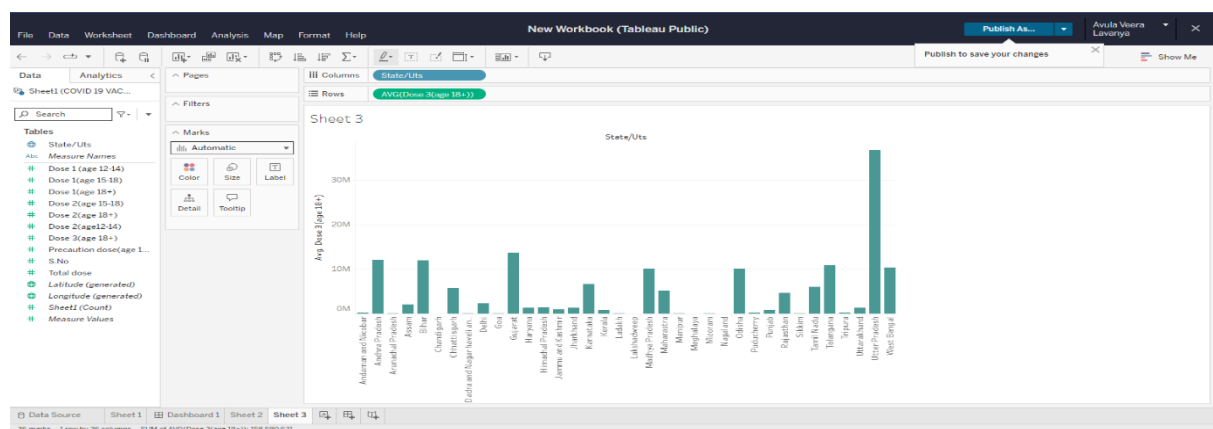


Figure 1.7 shows the percentage of Dose 3 of age groups (18+) throughout the India in bar chart

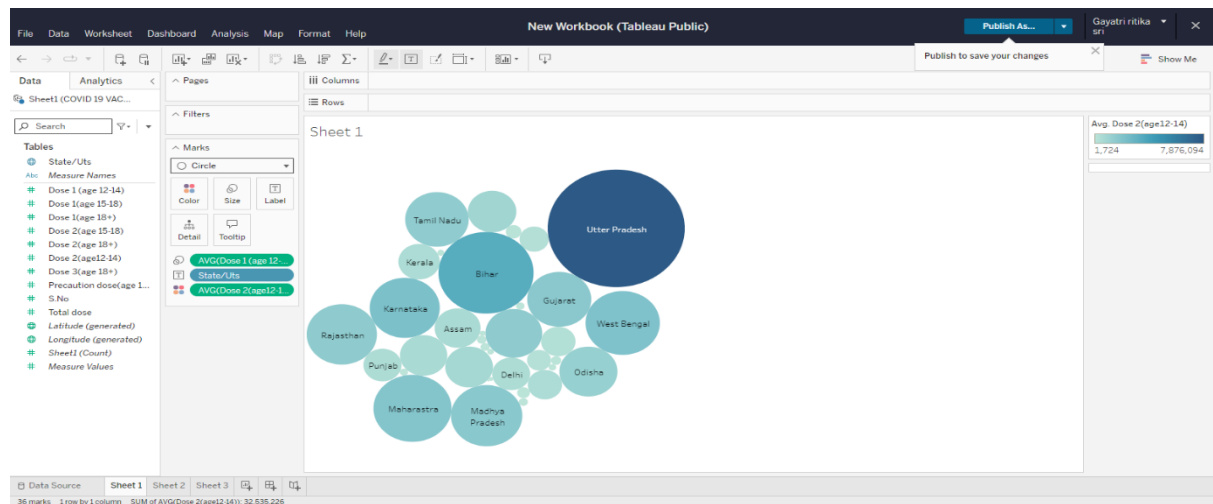


Figure 1.8 shows the percentage of Dose 1 and Dose 2 of age group (12-14) throughout the India in bubble chart

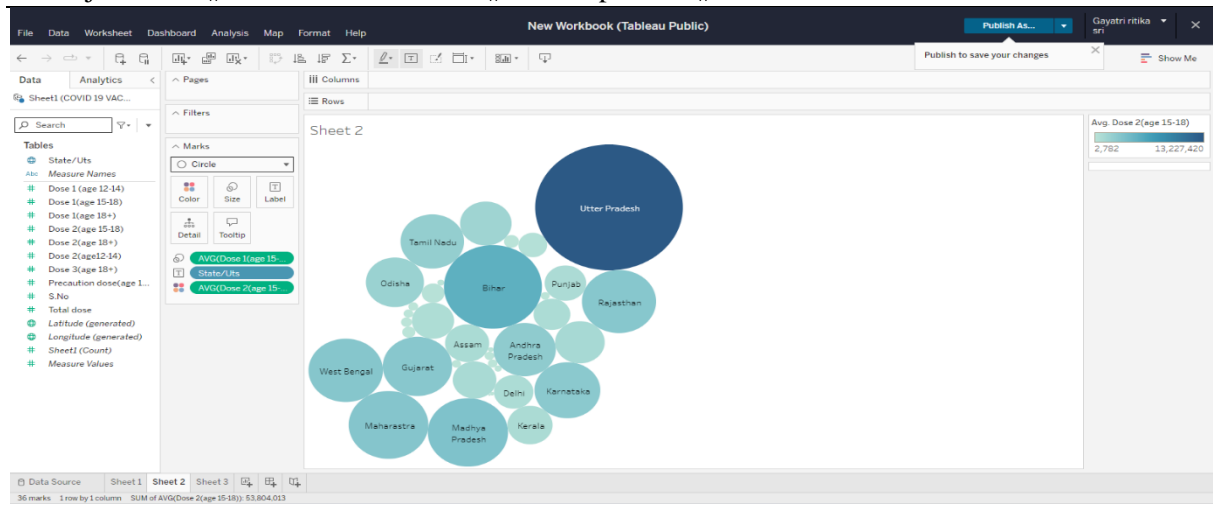


Figure 1.9 shows the percentage of Dose 1 and Dose 2 of age group (15-18) throughout the India in bubble chart

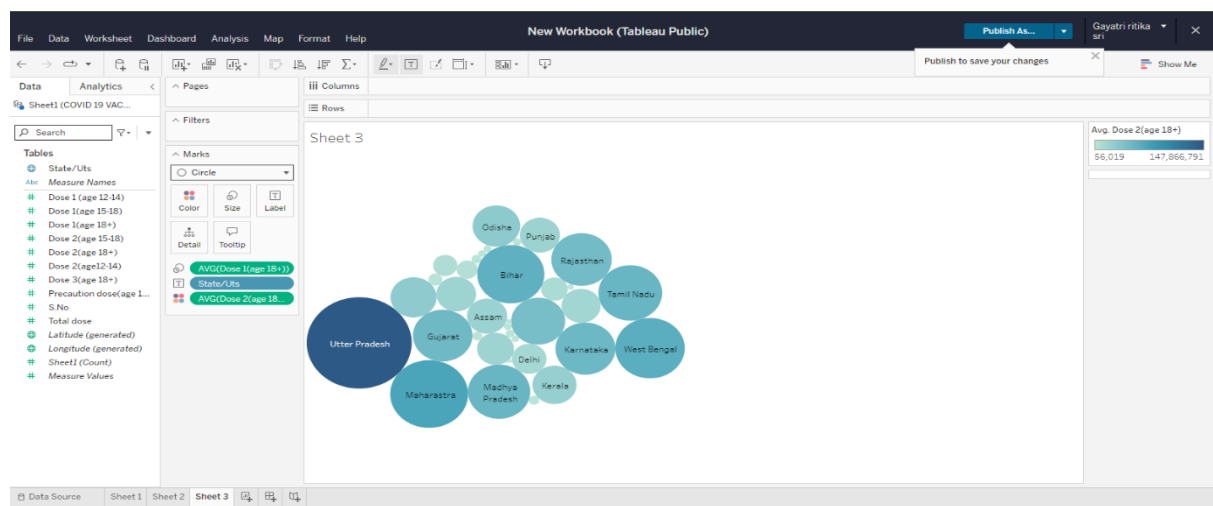


Figure 1.10 shows the percentage of Dose 1 and Dose 2 of age group (18+) throughout the India in bubble chart

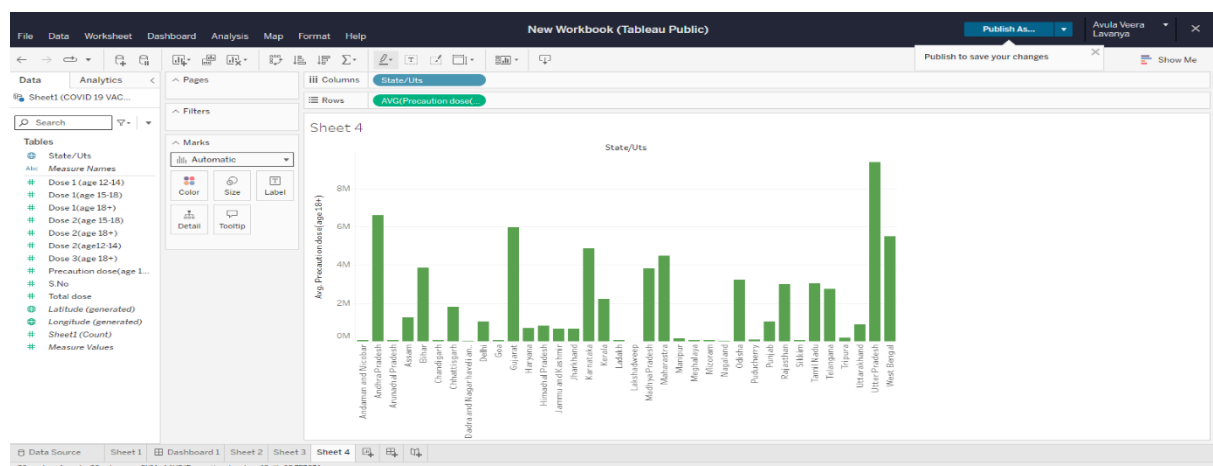


Figure 1.11 shows the percentage of Precaution dose throughout the India in bar chart

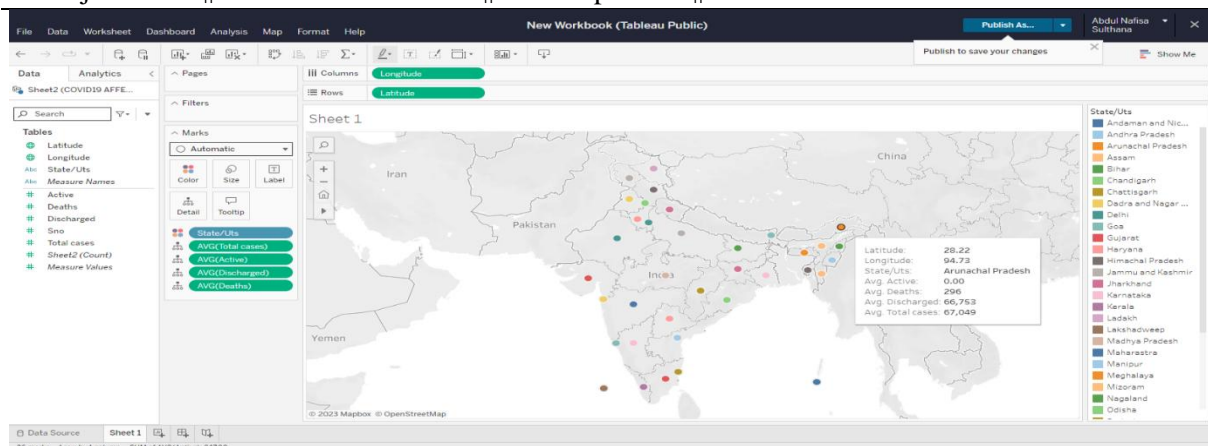


Figure 1.12 shows the details of overall tables of a specific state (Arunachal Pradesh) throughout the India using located map

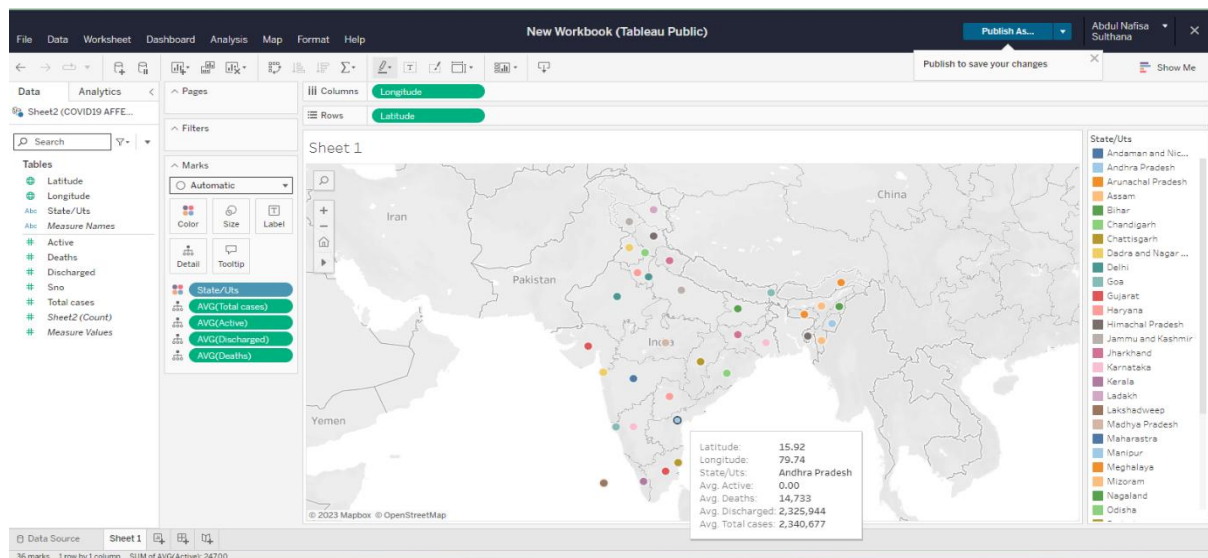


Figure 1.13 shows the details of overall tables of a specific state (Andhra Pradesh) throughout the India using located map

V. Conclusion:

The data on COVID-19 cases is evaluated using Tableau, and several significant conclusions regarding the affected population are made. First of all, the epidemic has disproportionately affected specific demographic groups; these include the elderly and people with underlying medical conditions, who are more likely to suffer from severe illness or perhaps die. Second, infection rates vary significantly by region, with higher case counts reported in densely populated cities and areas with limited access to medical facilities. Additionally, our research highlights the need of timely public health actions, such vaccination campaigns and social distancing programs, in reducing the virus's spread and its impact on vulnerable populations. Looking ahead, it's crucial to continuously monitor and analyze COVID-19 data to guide targeted interventions and address the enduring health and socioeconomic repercussions of the crisis.

References:

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