

NANDHA ENGINEERING COLLEGE

(Autonomous Institution)

Erode-638 052



TABLEAU - TWO CREDIT COURSE

IV – Semester

B.Tech - Artificial Intelligence and Data Science

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BRANCH : B.TECH-AI & DS

YEAR : II

What is Tableau ?

Tableau is a powerful data visualization and business intelligence tool that enables users to easily connect to various types of data, analyze it, and create interactive, shareable dashboards. It allows people to transform raw data into meaningful insights using simple drag-and-drop features without needing complex programming skills. Tableau supports integration with many data sources like Excel, SQL databases, cloud services, and more. Its visual and interactive capabilities make it easier for businesses and individuals to spot trends, identify patterns, and make data-driven decisions quickly. By turning complex information into clear and visually appealing charts and reports, Tableau empowers users to better understand their data and communicate findings effectively.

Overall purpose :

In this Tableau workbook, a comprehensive dataset titled "Global Healthcare Disease Mortality and Recovery Rates" was developed using data sourced from global healthcare reports. The primary objective of this analysis is to examine how a single disease can impact multiple regions simultaneously and to evaluate the patterns of disease spread, mortality, and recovery among diverse populations. Furthermore, the study explores how widespread health crises influence surrounding socio-economic factors, particularly the rise in poverty levels and the disruption of community well-being. Through detailed visualization and analysis, the project highlights the unequal distribution of healthcare resources across different regions and emphasizes the critical need for strategic healthcare interventions, policy planning, and equitable access to medical support on a global scale. This analysis aims to contribute valuable insights for health organizations, policymakers, and researchers working toward improving global health outcomes.

Dashboard:

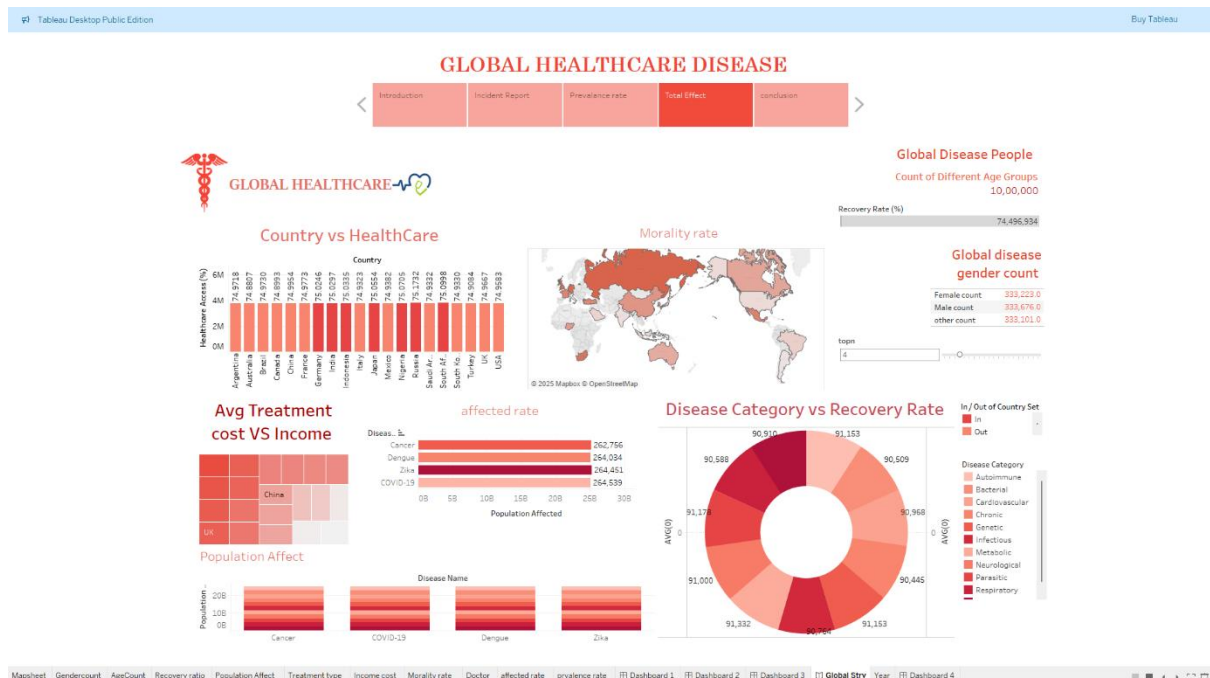


Fig I : Dashboard of Total cause by the Global disease dataset .

Fig I : The dashboard offers a comprehensive view of global healthcare trends from 2018 to 2024, analyzing disease prevalence, healthcare access, mortality, and recovery rates across various regions. Countries like the USA, Russia, and Nigeria exhibit higher mortality and disease prevalence, while Argentina, Brazil, and Australia report lower levels. Key diseases such as COVID-19, Cancer, Dengue, and Zika have significantly impacted populations, with recovery rates

averaging around 74 million cases globally. The data also highlights gender distribution, which is balanced, and compares average treatment costs with income, revealing financial healthcare burdens, especially in China and the UK. Disease categories, including autoimmune, infectious, and respiratory conditions, show recovery rates around 90,000 on average. Additionally, healthcare infrastructure data, regional variations, the socioeconomic impact of healthcare costs, and the role of telemedicine during the COVID-19 pandemic further contextualize disparities in healthcare access. The dashboard also emphasizes the role of international aid, vaccination programs, and environmental factors like air quality, while also addressing health disparities by gender, age, and ethnicity. The strong global recovery rate and consistent healthcare access, despite disparities, reflect the varied effectiveness of pandemic responses and healthcare systems worldwide.

1) Count of Age group and gender

Global Disease People

Count of Different Age Groups

10,00,000

Global disease
gender count

Female count	333,223.0
Male count	333,676.0
other count	333,101.0

The above things are formed by using **count** to calculate the diseased person on different Age group and Gender. To get separate the category of the group among different regions and disease name, and by these we can easily come to conclusion that which age group people get more affect in the pandemic situation.

Recovery Rate (%)

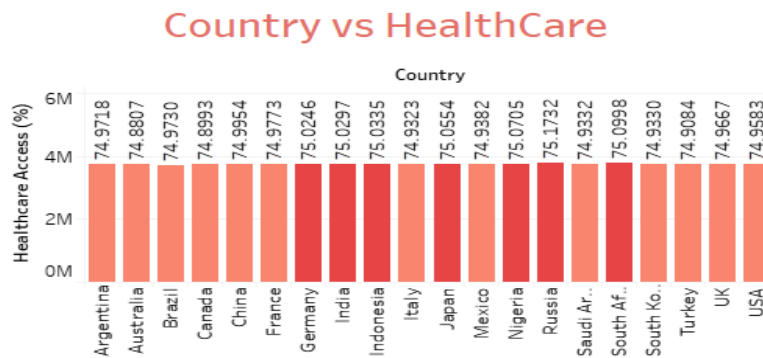
74,496,934

topn

3

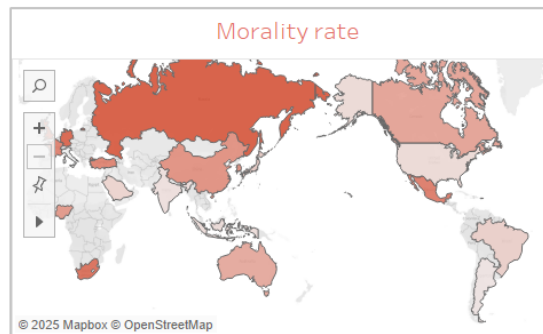
Recovery rate is the sum of people in a particular got recovered for a disease by the treatment and the disease type, region and total number people affect by that disease can be control according to the required knowledge by the parameter.

2) Country vs Healthcare



The visualization titled "Country vs Healthcare" represents the comparison between different countries based on the average health access score. In this chart, each country is plotted against the average value of health access, providing a clear overview of how accessible healthcare services are in each region. By using the average, the data is simplified, allowing for easy comparison across countries. Higher average scores indicate better access to healthcare facilities, while lower scores suggest potential gaps in medical service availability. This approach helps in identifying disparities in healthcare access globally and highlights regions that may require focused improvements.

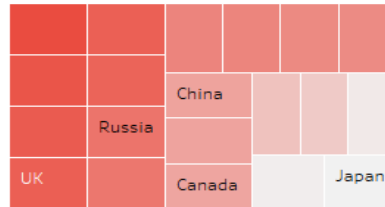
3) Morality Rate



The visualization provides filters for Country, Latitude and Longitude, Mortality Rate, Disease Category, and Disease Name to support more detailed and customized analysis. The Country filter allows users to focus on health data specific to different regions, while Latitude and Longitude help in studying geographic patterns. The Mortality Rate filter enables examination based on the severity of health outcomes. Disease Category organizes related diseases, making it easier to concentrate on specific health issues, and the Disease Name filter allows for a deeper look into individual diseases. Together, these filters enhance the flexibility and depth of the analysis.

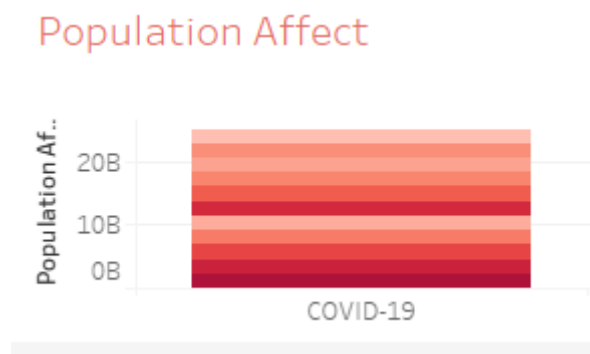
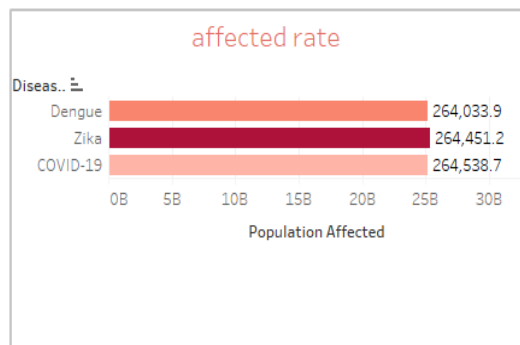
4) Treatment cost vs per capita

Avg Treatment cost VS Income



The visualization compares **Treatment Cost** and **Per Capita Income** across different countries, with an additional focus on the **average sum of treatment cost** for better clarity. Users can filter the data by **Disease Category** and **Country** to narrow down the analysis to specific health conditions and regions. By looking at the average treatment cost alongside income levels, the comparison highlights the economic burden of diseases and reveals healthcare affordability gaps across countries.

5) Affected rate and population affect in a particular disease

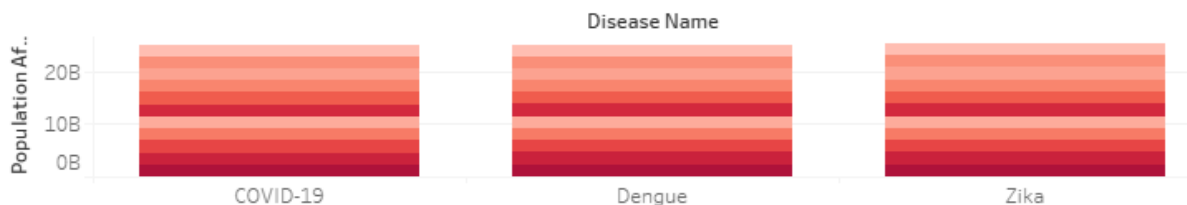


The visualization explores the **Healthcare Affect Rate** and **Affect Ratio** across various **Disease Categories**, providing insights into how different diseases impact healthcare systems. Filters allow users to focus on specific diseases and categories for a more targeted analysis. The **Healthcare Affect Rate** measures the intensity at which diseases influence healthcare resources, while the **Affect Ratio** highlights the proportion of affected cases relative to the overall health conditions within a category. In parallel, the **Population Affect Rate** is analyzed by grouping people based on **Disease Category**, helping to understand how different segments of the population are impacted by specific diseases. This combined analysis not only

reveals the burden of diseases at the system level but also highlights the vulnerability of different population groups, supporting deeper evaluation of healthcare needs and resource planning.

6) Population Affect on overall disease

Population Affect



Disease Category

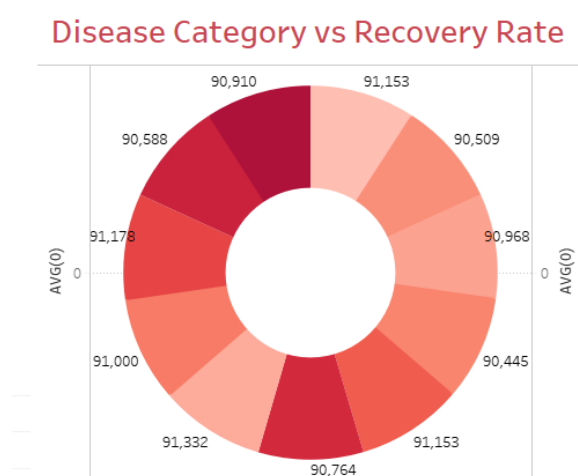
- Autoimmune
- Bacterial
- Cardiovascular
- Chronic
- Genetic
- Infectious
- Metabolic
- Neurological
- Parasitic
- Respiratory
- Viral

The visualization presents the relationship between Population Affect and Disease Name, with a focus on the Mortality Rate for diseases that have affected up to 20 billion people. It highlights how different diseases contribute to

large-scale health impacts and allows users to see which diseases have the highest effect on the global population. Additionally, the visualization includes the sum of the Population Affect, providing an overall view of the total

number of people impacted across all diseases. By combining disease-specific data with mortality outcomes, this analysis offers a clear understanding of major global health threats and their severity.

7) Recovery rate



The visualization displays the Recovery Rate for various Disease Names across all countries, providing insights into how different regions are

managing disease recovery. This allows for a comparison of treatment effectiveness globally. By comparing recovery rates the analysis reveals regional strengths and weaknesses in treatment methods, highlighting areas that need improved healthcare strategies or resources to enhance recovery outcomes.

Overview of the Story :



Fig 1.1 : overview of healthcare Range

Fig 1.1 : The image illustrates the global healthcare landscape from 2018 to 2024, focusing on the spread and impact of major diseases across different continents. It highlights the affected population ranges and infection severity, helping to visualize how different regions experienced healthcare challenges over time. This visual representation also reflects the effectiveness of interventions such as vaccination drives, public health policies, and medical advancements. By analyzing this data, we gain insights into global preparedness, response efficiency, and the crucial need for strengthening healthcare systems to combat future pandemics.

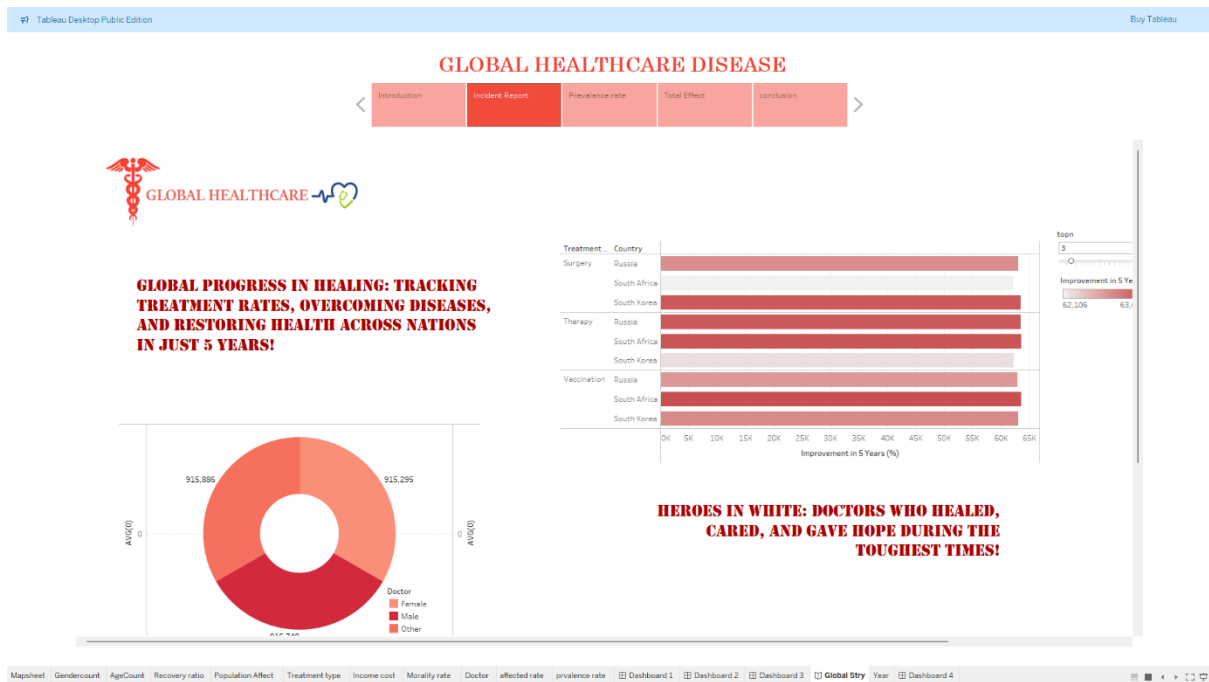


Fig 1.2 : Overview of Treatment rate on disease by the doctor in specific region .

Fig 1.2 : This dataset captures the treatment rates of various diseases managed by healthcare professionals across different regions. By analyzing historical medical records, recovery statistics, and treatment timelines, the dataset highlights how doctors responded to critical health challenges. It elevates key metrics such as patient recovery rates, average treatment duration, mortality reduction, and the introduction of new medical protocols. Regional comparisons reveal variations in healthcare efficiency, availability of resources, and doctor-to-patient ratios, providing actionable insights. Such elevation through data not only showcases the dedication and success of medical teams but also identifies areas needing further investment, training, and medical infrastructure improvements to enhance global health resilience.

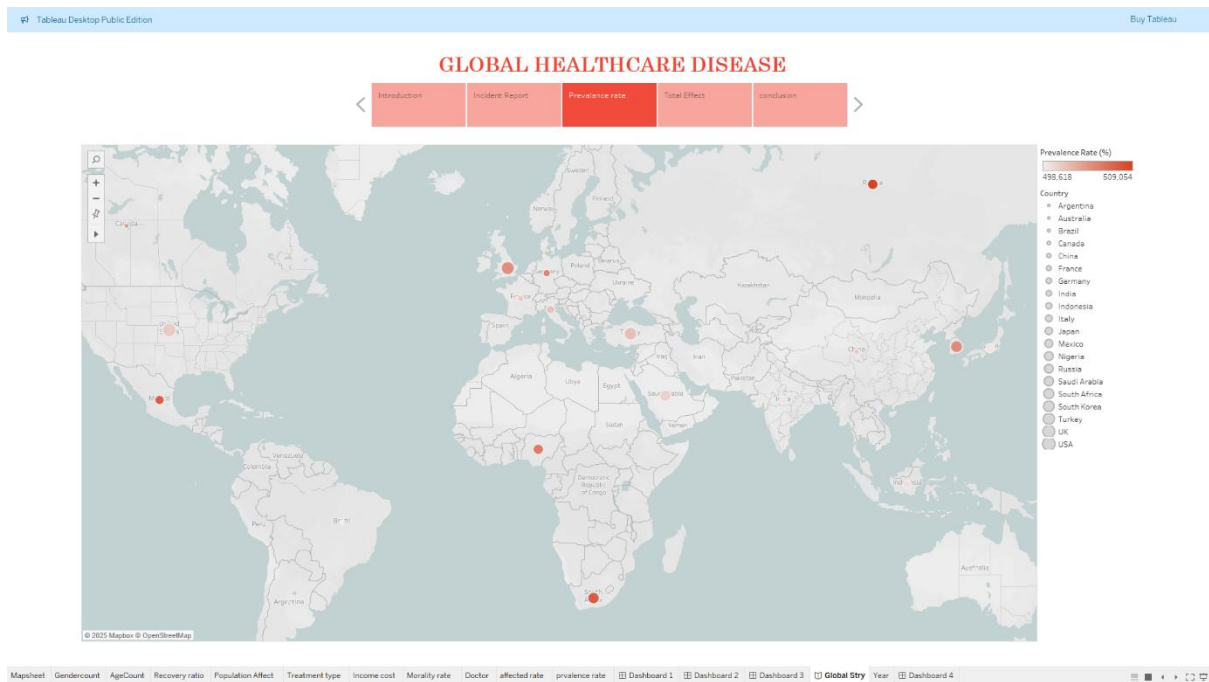


Fig 1.3 : shows the Prevalance rate all around global.

Fig 1.3 :Prevalence rate refers to the total number of existing cases of a particular disease within a specific population at a given time, indicating the overall disease burden. During the observed period, the prevalence of diseases varied significantly across countries worldwide. Nations such as the United States, Japan, Russia, and Nigeria recorded the highest prevalence rates, reflecting a greater burden of disease and a higher number of affected individuals. Factors such as population density, healthcare access, and early outbreak exposure contributed to these elevated figures. In contrast, countries like Argentina, Brazil, and Australia reported relatively lower prevalence rates, demonstrating more controlled disease spread or more effective public health measures. This global distribution highlights the urgent need for region-specific healthcare strategies and better resource allocation to manage disease outbreaks efficiently.

Things to Highlight :

- Strong global recovery, with 74 million cases showing successful outcomes across major diseases.
- Countries with robust healthcare systems like Argentina and Australia exhibit impressive recovery rates.
- High recovery rates for autoimmune, infectious, and respiratory diseases, with an average of 90,000 cases.
- Consistent healthcare access worldwide has contributed to effective treatment and recovery.
- Vaccination and preventative care efforts have significantly improved recovery rates, particularly for infectious diseases.

Conclusion:



Empowering Global Health:
Harnessing Historical Datasets to
Predict Future Pandemics,
Strengthen Preparedness,

Accelerate Treatments and Vaccines, and Bridge Healthcare
Gaps Worldwide for a Safer Tomorrow.