



LONG-TERMINTERNSHIP



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VISAKHAPATNAM**

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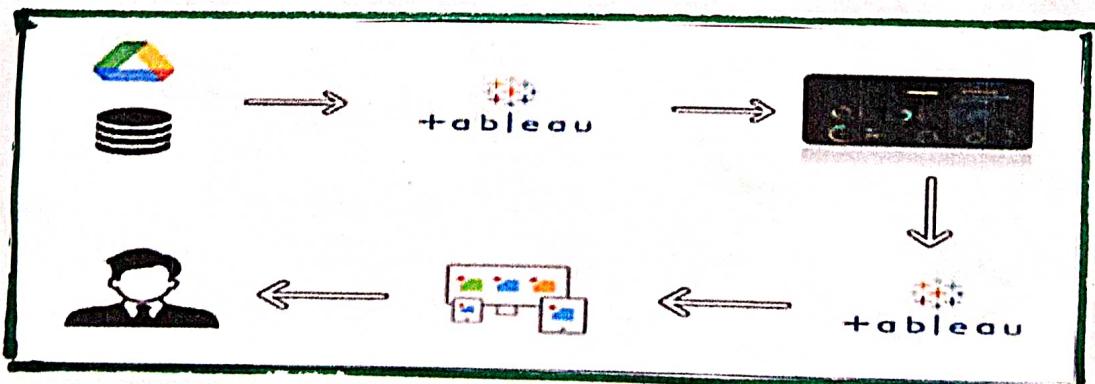
INTRODUCTION

In this Current Situation, emission of CO₂ gradually increases due to human activities.

Global CO₂ emissions from energy combustion and industrial processes rebounded in 2021 to reach their highest ever annual level.

A 6% increase from 2020 pushed emissions to 36.3 gigatonnes, an estimate based on the IEA's detailed region-by-region and fuel-by-fuel analysis, drawing on the latest official national data and publicly available energy, economic and weather data.

The below is the Technical Architecture.



A BRIEF DISCUSSION ABOUT GLOBAL CO₂ EMISSION

Global emission of Carbon dioxide refer to the total amount of Co₂ released into the atmosphere from human activities such as burning fossil fuels for energy, transportation, industry, and deforestation.

These emissions are a Major Contributor to Climate Change, driving global Warming and its Associated Impacts such as Sea level rise, extreme Weather events and Disruption of ecosystems.

Efforts to Reduce Co₂ emissions are Crucial for mitigating Climate Change and preserving the planet for future generations.

Purpose of the Global emissions of Carbon dioxide.

The primary purpose of global emissions of CO_2 is to understand and mitigate their impact on Climate Change. These emissions, largely from human activities like burning fossil fuels and deforestation, contribute to the green house effect, trapping heat in the atmosphere and leading to global warming.

Addressing Carbon dioxide emissions is crucial for reducing the severity of Climate Change and its associated impacts on the environment, economy and society.

LITERATURE SURVEY

Existing Solutions & problems of the Global emissions of Carbon dioxide

Problems :

1. Climate Change: CO₂ emissions are a primary driver of global warming, leading to Climate Change. This results in rising temperatures, melting ice caps and severe extreme weather events.
2. Ocean Acidification: CO₂ emissions are absorbed by the Oceans, leading to increased acidity levels which leads to harm Marine life.
3. Air Pollution: Alongside CO₂, the burning of fossil fuels releases pollutants such as SO₂, NO₂. Causes respiratory diseases.
4. Health Impacts: Impact on health including respiratory diseases, Cardiovascular diseases and premature death.
5. Water Resources: Changes in precipitation patterns and increased temperatures due to CO₂ emissions affect Water Availability, leading to

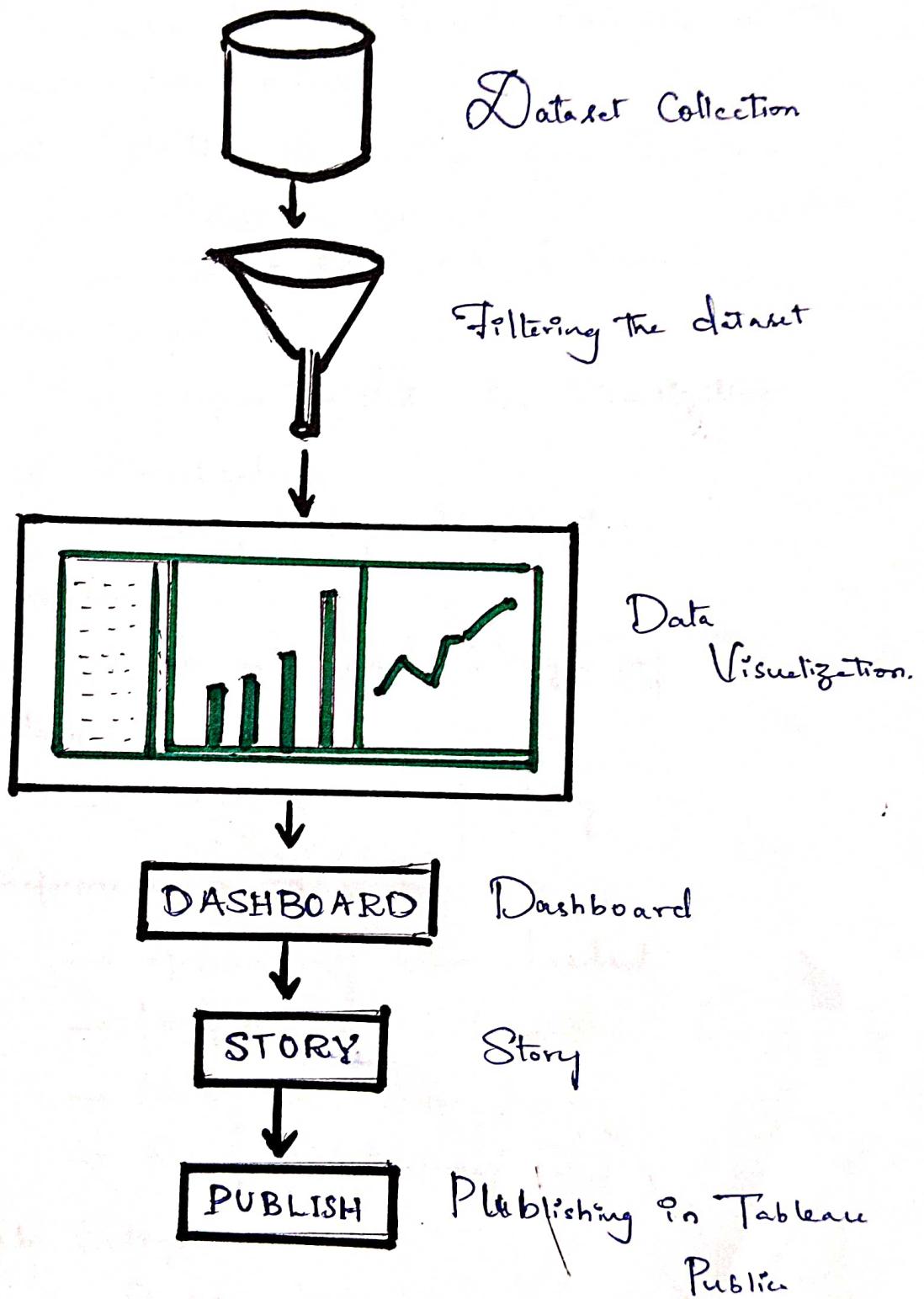
Droughts, Water Scarcity and Conflicts Over Water Resources.

7. Economic Costs: Including damage to infrastructure, loss of agricultural productivity, increased health care expenses and decreased labor productivity.

PROPOSED SOLUTIONS :-

- 1) Renewable Energy: Investing in and transitioning to renewable energy sources such as solar, wind, hydro and geothermal can significantly reduce CO₂ emissions.
- 2) Energy Efficiency: Improving energy efficiency in industries, buildings, transportation and appliances reduces the amount of energy required, thus lowering CO₂ emissions.
- 3) Reforestation & Afforestation: Planting trees and restoring forests can help absorb CO₂ from the atmosphere, acting as a natural carbon sink.
- 4) Public Awareness and Education: Educating the public about the importance of reducing CO₂ emissions & promoting sustainable lifestyles can drive individual & collective action.

BLOCK DIAGRAM



PROJECT FLOW

To Accomplish this, We have to Complete all the activities listed below,

- Data Collection & Extraction from Database
 - Collect the dataset,
 - Connect data with Tableau.
- Data preparation
 - prepare the data for Visualization.
- Data Visualizations
 - No. of Unique Visualizations
- Dashboard
 - Responsive and Design of Dashboard
- Story.
 - No. of Scenes of Story.
- Performance testing
 - Amount of Data loaded
 - Utilization of Data filters
 - No. of Calculation fields.
 - No. of Visualizations / Graphs.
- Web Integration
 - Dashboard and Story embed with UI with Flask.

- Project Demonstration & Documentation
 - Record explanation Video for Project end to end Solution.
 - Project Documentation - Step by Step project development procedure.

Software designing of the Project

Software Requirements of the Project:

The Biggest Requirement of this project is the tableau desktop. All the Visualisations can be done through Tableau desktop Only.

Tableau provides 14-day trial premium for Students. We can Install the Tableau desktop key giving the Essential details, Which they asked While the Installation.

In the Tableau desktop, We can Use Many Visualisation tools like Barchart, Histogram, Stacked bar chart, Gantt Chart, Piechart, line graph, Area chart, Maps, Calculation fields, filters, groups, Sets etc. After Visualisation, We can Create as Many as Dashboards, Stories and We can also Publish it in tableau public by Sharing the dashboards (or) Stories.

The Project below can be done through tableau desktop and tableau public. Github is the another Software requirement for this project. We can Upload the files in Github.

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DATA COLLECTION AND EXTRACTION OF DB

Data Collection is the process of gathering and measuring information on Variables of interest, is an established Systematic fashion that enables one to answer Stated Research questions, test hypothesis and evaluate Outcomes and generate Insights from the data

Activity 1: Collect the dataset

Please Use the link to download the dataset & link.

Activity 1.1: Understand the data

Data Contains all the meta Information Regarding the Columns describe in the CSV files

Column Description of the Dataset :

- Country : This field Contains all the Countries in the World
- Year : This field gives the Information Regarding Co₂ emission analysis. One year by Year
- Cement Co₂ : This field gives the Cement Co₂ contribution in the Co₂ emission analysis.
- Co₂ Growth : This field gives total Overview of the Percentage Growth in every Country.

Coal Co₂ : This field explain the Coal Co₂ Contribution in total Co₂.

Gas Co₂ : This field gives the Gas Co₂ Contribution in total Co₂

Oil Co₂ : This field gives the Oil Co₂ Contribution in total Co₂

Other Industry Co₂ : This field Contains the data of denim mining Industrial Co₂, which are in the part of Co₂ emission.

Population : This field Contains the population all Over the world.

Trade Co₂ Share : This field gives the Share in Trade Co₂

Milestone-2 : Data preparation

Activity 1: Prepare the data for Visualization.

Preparing the data for Visualization involves Cleaning the data to remove irrelevant (or) missing data, transforming the data into a format that can be easily Visualized, exploring the data to identify patterns and trends, filtering the data to focus on specific subsets of data, preparing the data for visualization Software, and ensuring the data is accurate and Complete. This process helps to make the data easily Understandable and ready for Creating Visualizations to gain insights into the performance and efficiency.

MILESTONE 3 : Data Visualisations

Data Visualization is the process of creating graphical representations of data in order to help people understand and explore the information.

The goal of data visualization is to make complex datasets more accessible, intuitive, and easier to interpret. By using visual elements such as charts, graphs and maps, data visualizations can help people quickly identify patterns, trends and outliers in the data.

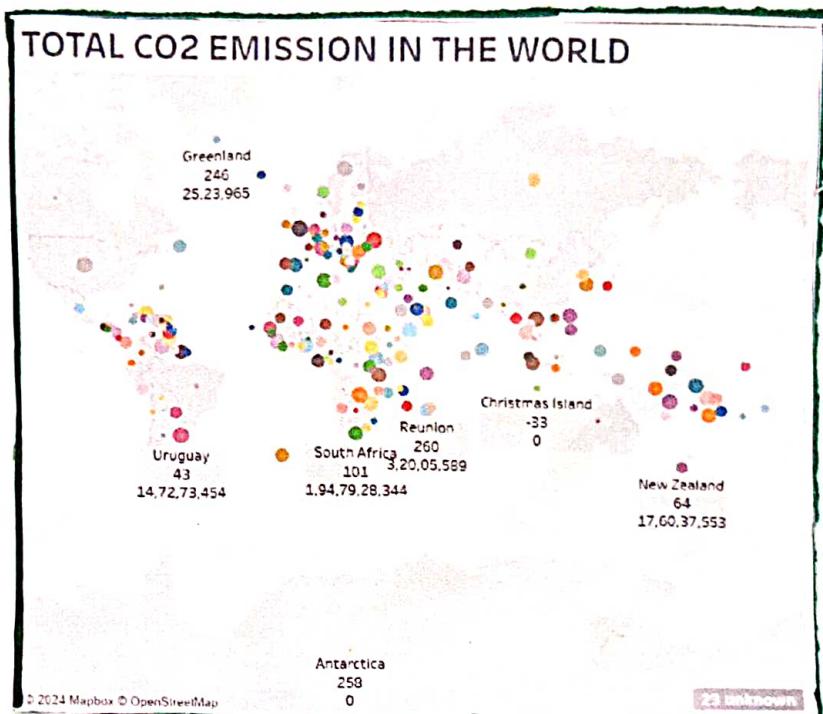
Activity-1 : No. of Unique Visualizations

The no. of Unique Visualizations that can be created with a given dataset. Some common types of visualizations that can be used to analyze the performance and efficiency include barcharts, linecharts, heatmaps, scatterplots, piecharts, maps etc. These visualizations can be used to compare performance, track changes over time, show distribution, and relationships between variables, breakdown of revenue and customer demographics, workload, resource allocation and location of hotels.

DATA VISUALIZATION

First Visualization Sheet: Here is the sheet having Visualization Total CO₂ emission in the world.

The below is the visualization depends on CO₂ Growth Percentage.



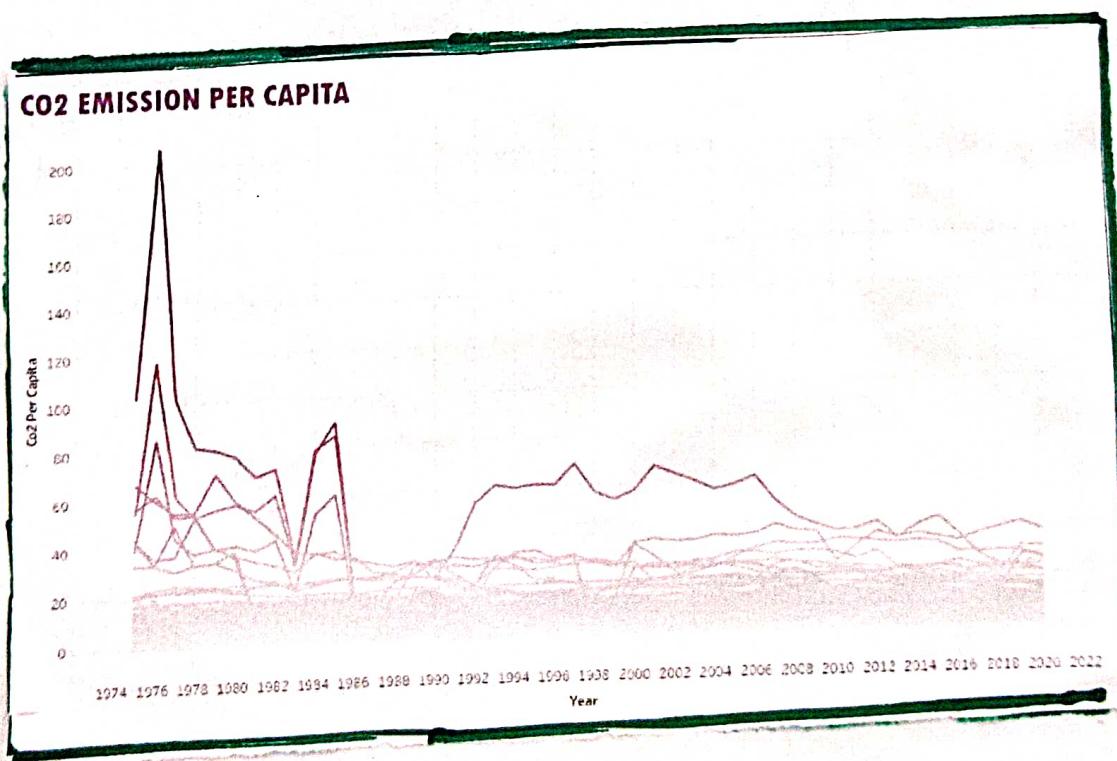
First you have to download the dataset and go to Sheet 1. Take the latitude and longitude in the Rows and Columns respectively. and Go to Fields ,Take Country field and add Size to it and again take Country field and add Colour to it and label it. Take CO₂ Growth Percentage field. By Setting all this in a way, we have the above detailed Sheet of Visualisation.

Second Visualisation Sheet: Here is the sheet having Visualisation CO₂ per Emission per Capita.

The below sheet depends on CO₂ emission per Capita. per capita means per head. That means Average of ^{CO₂ emission} every head in the World.

First You have to take the Year field in the Columns. and CO₂ per Capita in the Rows.

Take CO₂ per Capita field and add Colour to it and take Country field to determine the Average of CO₂ emission per head.



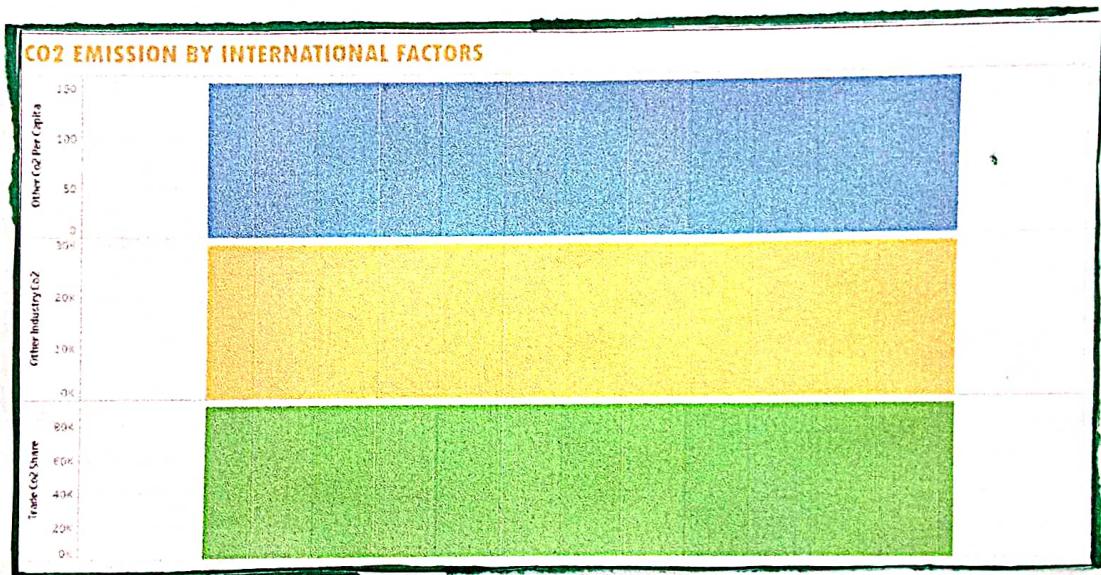
The above Shows the CO₂ emission per Capita Over year by year.

Third Visualisation Sheet:

Here is the Sheet having Visualisation by Co₂ Emission by International factors.

The below sheet depends on Other Co₂ per Capita, Other Industry Co₂, and Trade Co₂ share.

First you have to take the field Other Co₂ per Capita and put it into rows, and take the field Other Industry Co₂ and put it into rows and.



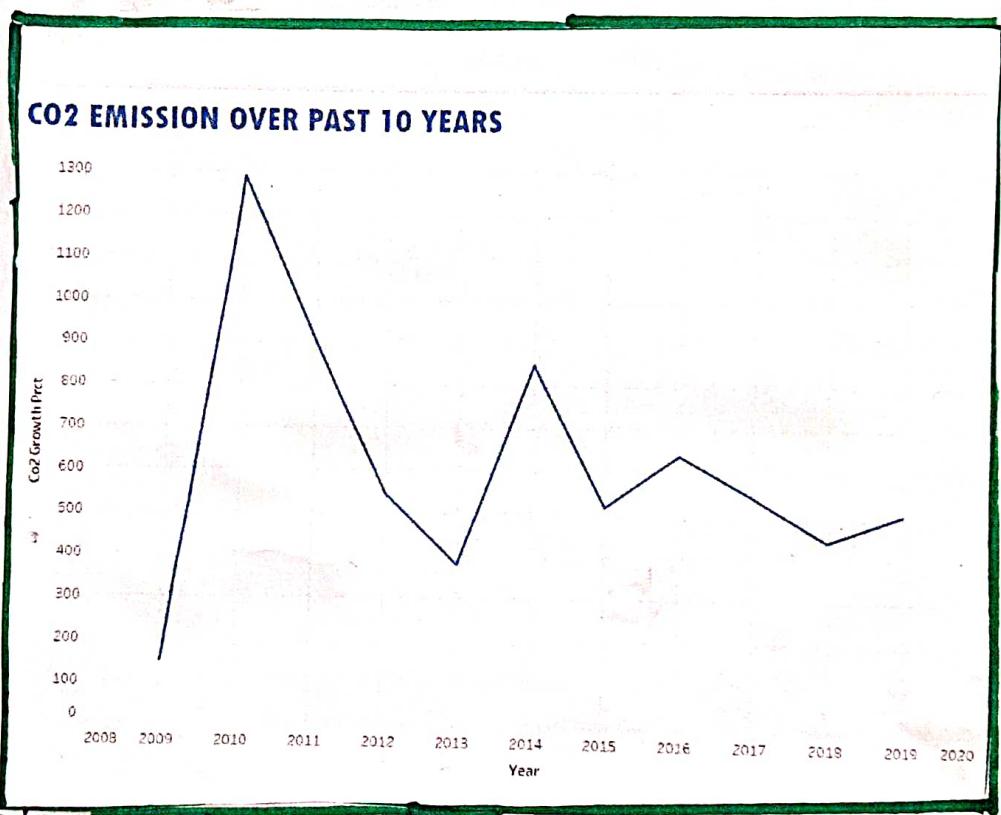
Take the Trade Co₂ Share in Rows and these all gives the above Visualisation. And Take Colour Option to every field.

This Means that the Co₂ emission by International factors.

Fourth Visualisation Sheet: This Sheet having
Visualisation CO_2 emission Over Past 10 years
Shown below.

The below Visualisation depends on the filters
field Year.

Take the field Year and Click on Add filter.
In the filter put limit from 2009 to 2019.



Put it into

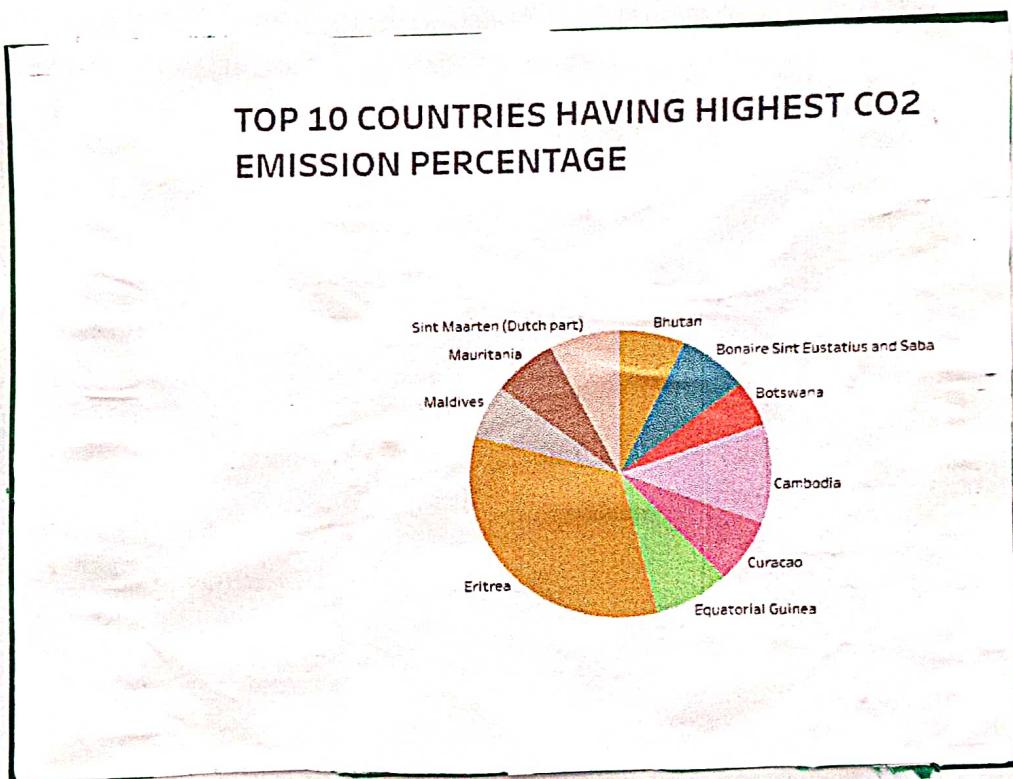
Take the field "Year" and keep it into
Columns and take the field CO_2 Growth percentage
in the Rows.

By setting all this in a key, we have this
detailed Sheet

Fifth Visualization Sheet : This Sheet Having
Visualization Top 10 Countries having highest CO₂
emission Percentage.

The below is the Visualization depends on the
field Country.

Take the field Country and Click on add filter
and give Top 10 from the all Countries click on role.



Take another field CO₂ Growth percentage and add
Size and angle to it. Take Country field and Add
Colour and label on it. By setting all these We can
get the above Visualisation.

DASHBOARDS

First Dashboard: The Below is the Collection of Sheets Named Dashboard.

Sheet 1: This Sheet Obtained , when put the fields Year and Co₂ Growth Percentage in the Columns and ~~Year~~ Rows respectively.

Sheet 2: This Sheet Obtained, When put the fields Year and Co₂ Growth percentage in the Columns and Rows respectively and give the Discrete Option to Year field.

Creating Dashboard:

Step 1: Click on New Dashboard.

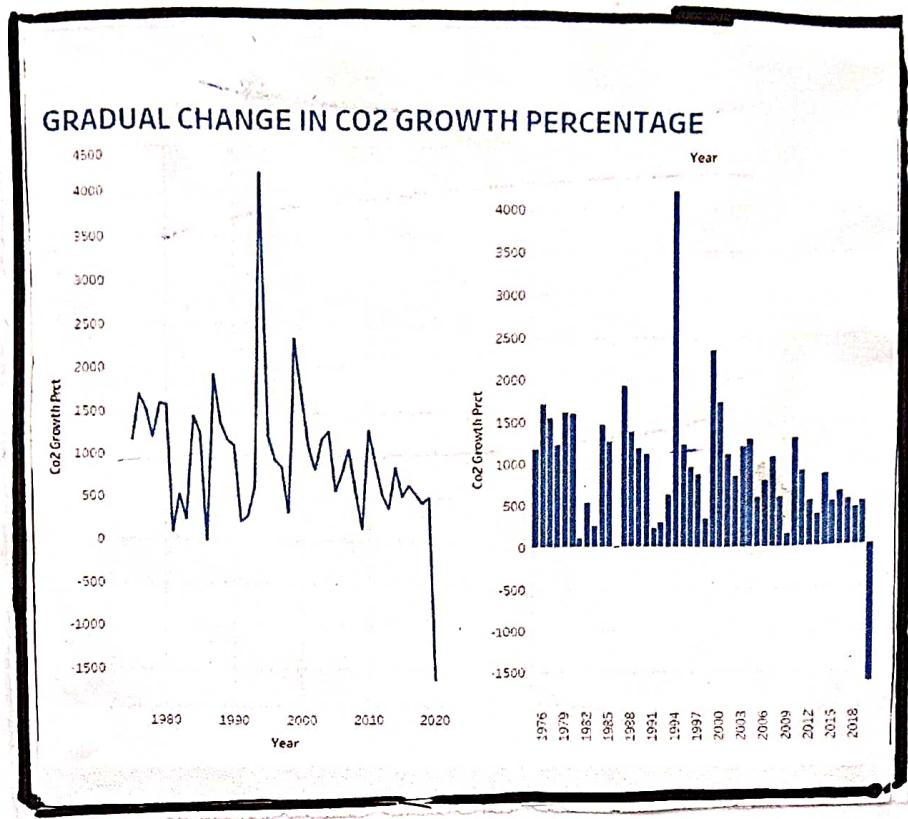
Step 2: Select the Sheets which You Want to Merge

Step 3: Hide the titles of two sheets

Step 4: Click on Show title of the Dashboard.

Step 5: Give the title for Dashboard.

Step 6: Gradually Change in Co₂ Growth Percentage dashboard is Ready. to publish



The above is the dashboard named Gradual Change In CO₂ Growth Percentage.

Second Dashboard : The Below is the dashboard
Named CO₂ Contribution by Different fossil fuels
in India.

Sheet 1 : This sheet Obtained, When put the fields
Year and Coal CO₂ in the Columns and
Rows Respectively.

Here, We need add filter to it
Take Country field and Click on India.

Sheet 2 : This Sheet Obtained, When put the fields
Year and Gas CO₂ in the Columns and
Rows Respectively.

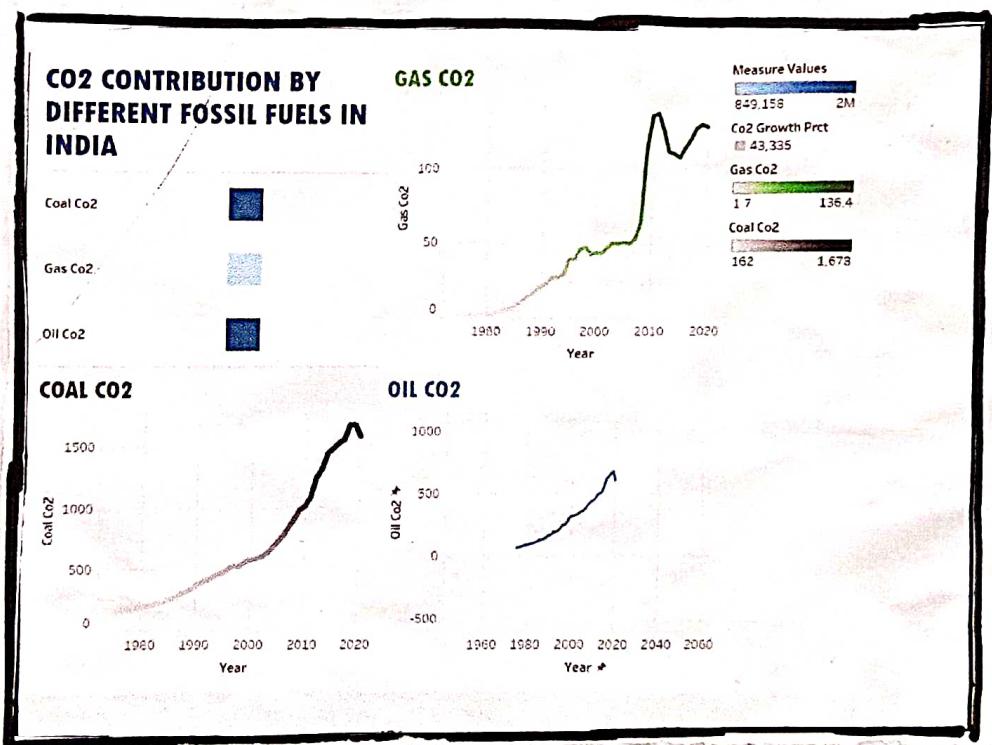
Here, We need Add filter and Colour
to it. Take Country field and Click on India.

Sheet 3 : This Sheet Obtained, When put the fields
Year and Oil CO₂ in the Columns and
Rows Respectively.

Here, We need to add filter and
Colour to it. Take Country field and
Click on India.

Sheet 4: This Sheet Obtained, When put the Measure names and Values in the Rows Add Colour to Measure names. and Take Co₂ Growth Percentage field and Size to it. Select Coal Co₂, Gas Co₂, Oil Co₂ in the Measure Values.

Creating Dashboards



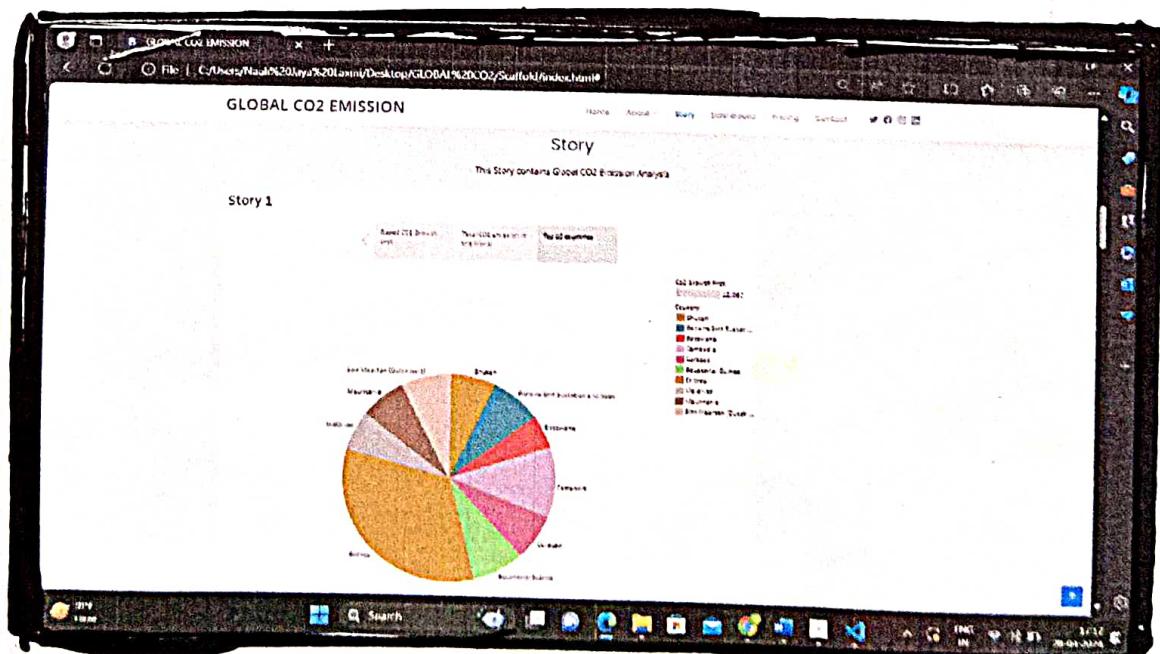
By Merging all the above Sheets, we have the desired Dashboard.

MILESTONE 5: STORY

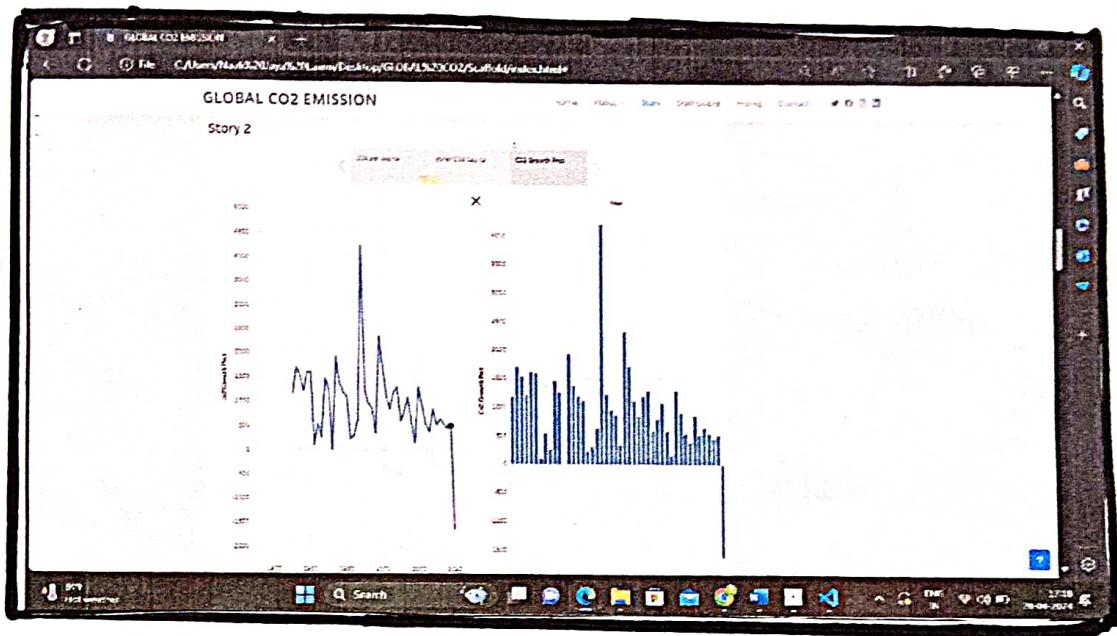
A data Story is a way of presenting data and analysis in a narrative format; with the goal of making the information more engaging and easier to understand. A data Story typically includes a clear introduction that sets the stage and explains the context for the data, a body that presents the data and analysis in a logical and systematic way, and a conclusion that summarizes the key findings and highlights their implications. Data Stories can be told using a variety of mediums, such as reports, presentations, interactive visualizations, and videos.

Activity 1: Global CO₂ Emission Analysis.

Explanation Link:



Story 2: Global CO₂ Emission Analysis



Creation of Story:

By clicking on Book symbol.
Same as Dashboard, Select Sheets, Which you
Want to Merge and publish it by Sharing to
Tableau public.

MILESTONE 6: Performance Testing.

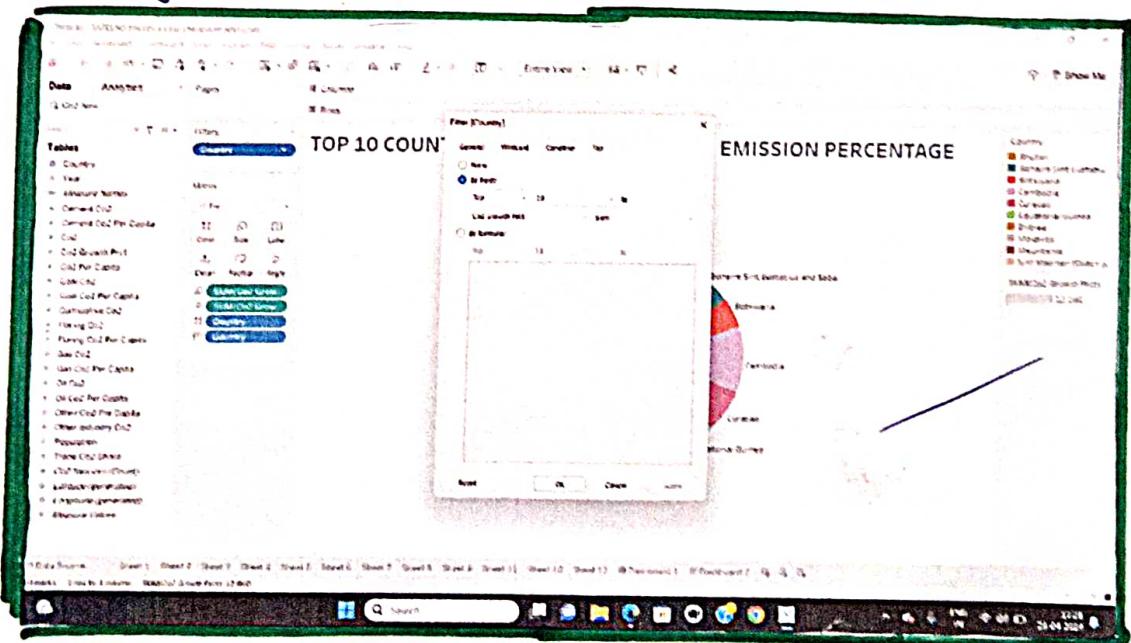
Amount data loaded refers to the quantity (or) Volume of data that has been imported, retrieved (or) loaded into a System, Software application, database, or any Other data Storage (or) processing environment. It's a measure of how much data has been successfully processed and made available for analysis, manipulation, (or) Use within the System.

Activity 2 : UTILISATION OF DATA FILTERS

"Utilization of filters" refers to the applications
(a) Use of filters within a system, Software applications,
(b) data processing pipeline to Selectively extract,
manipulate (c) analyse data based on Specified
Criteria (d) Conditions.

Activity 2.1 : Selected Country as a filter.

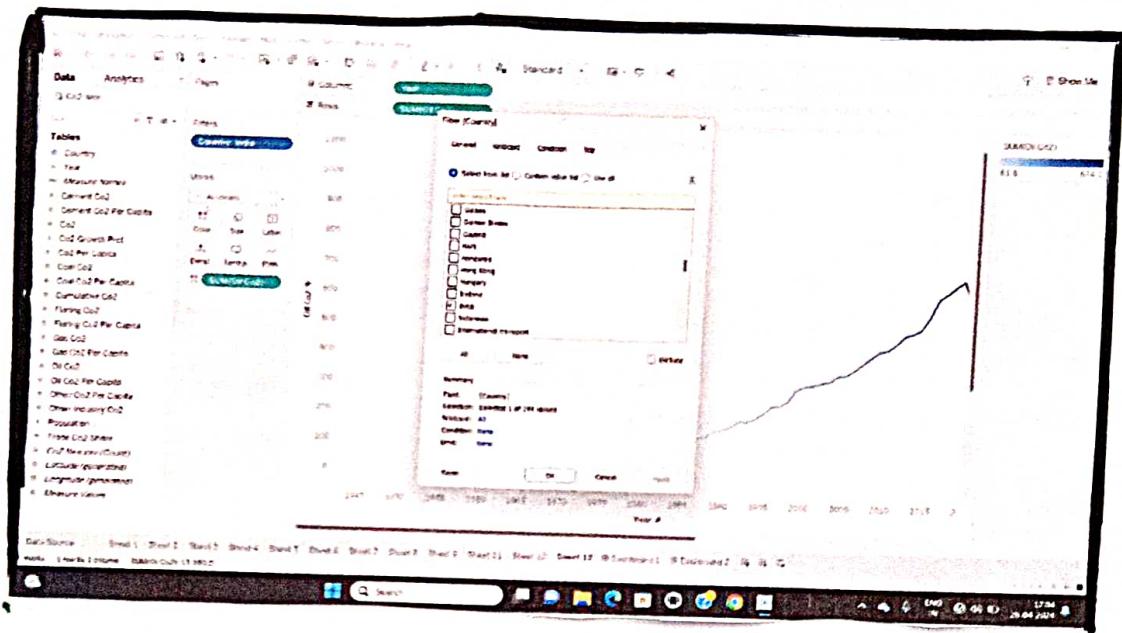
In Order to get the Visualization Top 10 Countries having highest Co₂ emissions Percentage . I have



taken the field Country in the filter and give
Top 10 Option. by field Co₂ growth Percentage

Activity 2.2 Taking Country as filter.

Here I have taken the field Country in the

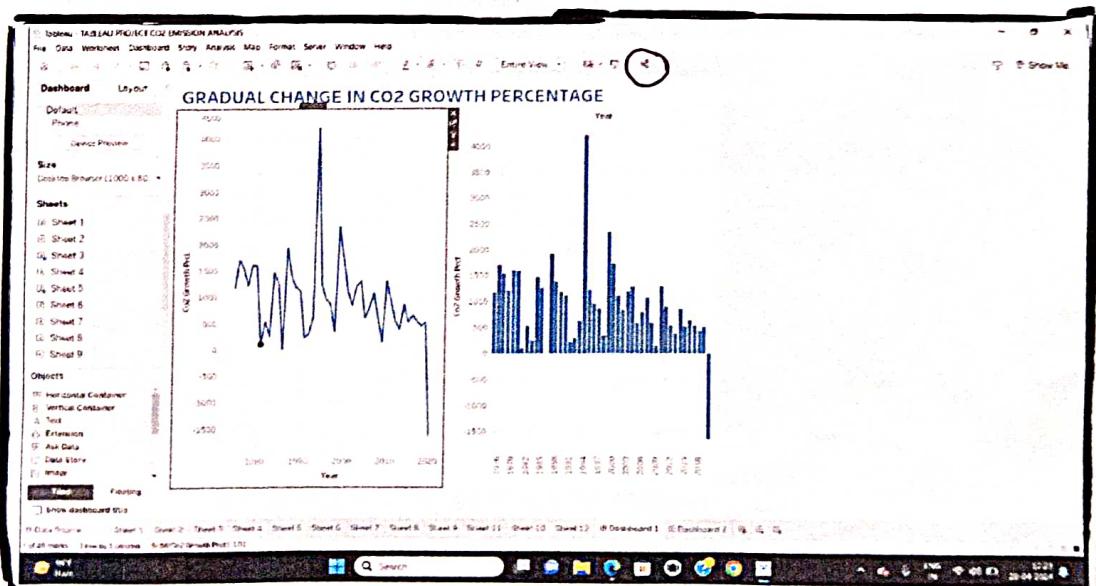
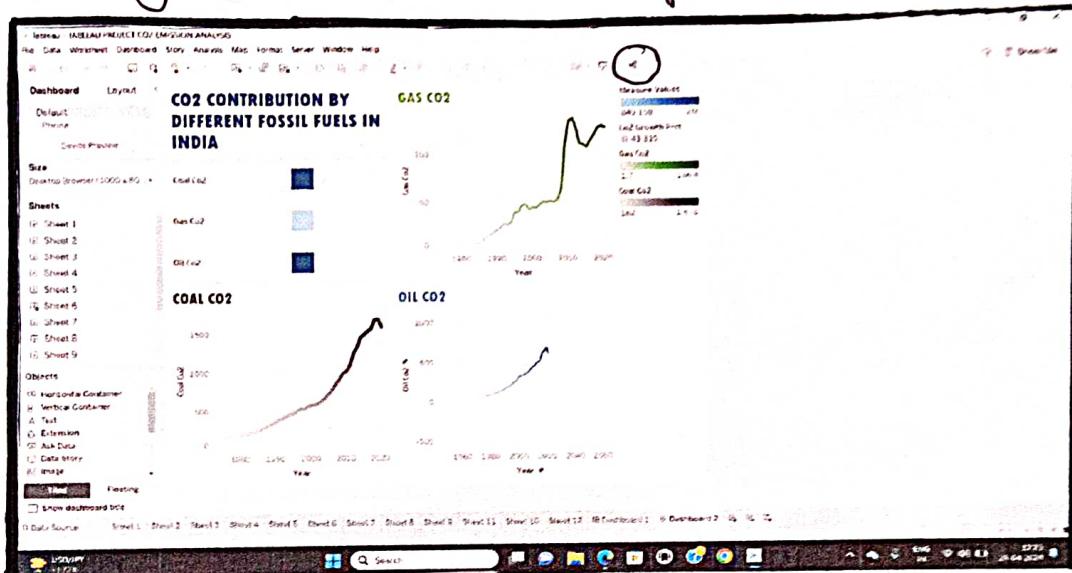


filter and Take India to get the Visualization of Co₂ Contribution in fossil fuel in India.

MILESTONE 7: Web Integration

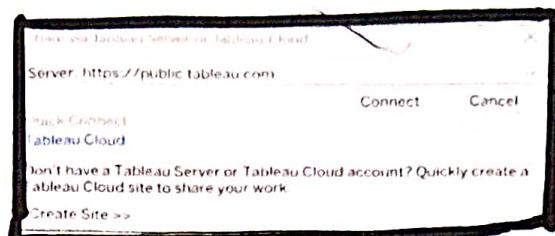
Publishing helps us to track and monitor key performance metrics. To communicate results and progress help a publisher stay informed, make better decisions, and communicate their performance to others.

Publishing dashboard and reports to Tableau public.



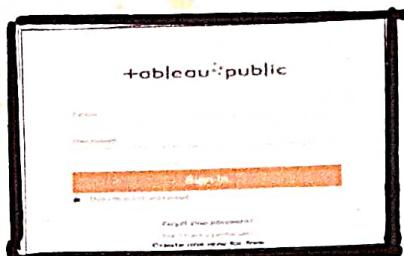
→ Click on the Share button as shown above

Step 1: Go to Dashboard / Story, click on Share button.



Explanation Video :

Step 2: Once you click on Connect it will ask for Tableau Public Username and Password.



Once you log in, the particular Visualization will be Published into Tableau public.

Activity: Dashboard and Story embed with UI with Flask.

A screenshot of a code editor showing a Python Flask application. The file 'app.py' contains the following code:

```
from flask import Flask, render_template
app = Flask(__name__)
@app.route('/')
def hello_world():
    return render_template('index.html')
if __name__ == '__main__':
    app.run(debug=True)
```

The code imports Flask, defines a route for the root, renders an 'index.html' template, and runs the application in debug mode. The file structure on the left shows a 'GLOBAL DM' folder with various subfolders like 'Dashboard', 'Story', 'Form', 'API API', 'Dashboard', 'Inner Page Link', 'Portfolio Details.html', and 'Knowledge'.

Flask Code:

```
from flask import flask, render_template  
app = Flask(__name__)  
@app.route('/')  
def hello_world():  
    return render_template('index.html')  
if __name__ == '__main__':  
    app.run(debug=True).
```

=> After loading it, we get the Output like.

Global CO₂ emission Analysis, which Contains
Stories, Dashboards etc . . .

Advantages of Global CO₂ Emission

- It is crucial to note that there aren't any inherent advantages to global CO₂ emissions. However, some may argue that certain industries benefit commercially from activities that produce CO₂, such as fossil fuel extraction and processing.
- Yet, these perceived advantages come at the cost of environmental degradation, climate change, and long-term sustainability issues. The focus should be on transitioning clean, renewable energy sources to mitigate these negative impacts.

Disadvantages of Global CO₂ emission

- Climate Change: Excessive emissions leads to rising global temperatures, Melting ice caps, etc.
- Air pollution: CO₂ emission produce other pollutants like Nitrogen Oxides, which leads to Respiratory diseases.
- Ocean Acidification: Elevated levels of CO₂ in the atmosphere lead to increased absorption by the Oceans, causing Ocean acidification.
- Loss of Biodiversity: Climate Change resulting from Carbon emissions can disrupt ecosystems and lead to habitat loss.
- Social & Economic Impacts: Climate-related disasters and environmental degradation caused by CO₂ emissions can result in significant economic losses.
- Health Risks: In addition to air pollution related to health problems, Climate Change exacerbated by Carbon emissions can increase the spread of infectious diseases.

APPLICATIONS

- Climate Change Mitigation: Improving energy efficiency, and implementing Carbon Capture & Storage technology.
- Policy development: Governments & International organizations Use data on global CO₂ emissions to develop & Implement policies.
- Energy Planning: Analysis of CO₂ emissions helps in longterm energy planning by Identifying trends in Energy Consumption & Sources of emissions.
- Environmental Monitoring: Monitoring global CO₂ emission provides insights into the health of ecosystems, impacts on biodiversity & change in atmosphere.
- Health Impacts: This analysis are used in economic analysis to assess the costs & benefits & green growth.
- International Cooperation: Global CO₂ emissions data facilitate international cooperation and agreements on climate change mitigation.

ACTIVITY LOG FOR THE FIRST WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	<p>Introduction to BI</p> <ul style="list-style-type: none"> • BI • Intro to D.A • Types of D.A. 	<ul style="list-style-type: none"> • Understand the fundamentals & Significance of business intelligence. 	
Day - 2	<p>Introduction to Tableau</p> <ul style="list-style-type: none"> • Intro to Tableau • Overview & features 	<p>Gain an Overview of Tableau and its features.</p>	
Day - 3	<p>Date Extraction.</p> <ul style="list-style-type: none"> • Intro to Database • Creating DB & Table 	<p>Gain an Overview to db and their imp in data management.</p>	
Day - 4	<p>Basic SQL Operations</p>	<ul style="list-style-type: none"> • Understand the fundamentals of SQL 	
Day - 5	<p>Basic SQL Operations</p>	<p>Understand the fundamentals of SQL & its role in DBMS</p>	
Day - 6			

WEEKLY REPORT

WEEK - 1 (From Dt..... to Dt.....)

Objective of the Activity Done: Provide an intensive Intro to BI, Tableau, Data Extraction.
Detailed Report:
In day 1, Covered Various aspects of BI including data integration, processing, presentation and ETL Architecture.
In day 2, Introduced participants to Tableau's features and Capabilities.
In day 3, Provided an Overview of databases and their role in data Management.
In day 4 & 5, Covered fundamental Concepts of SQL and its importance in Database Management. Taught basic SQL Operations including querying, filtering, Writing and aggregating data.
Participants practiced data manipulation tasks Such as Inserting, Updating and Deleting records in database tables Using SQL Commands.

WEEKLY REPORT

WEEK - 2 (From Dt..... to Dt.....)

Objective of the Activity Done: To delve deeper into Data Visualization Techniques

Detailed Report:

Day 1: Architecture Of Tableau.

Explored the architecture of Tableau, including its components and interface elements. Discussed Tableau field types, Saving and publishing data sources.

Day 2: Charts.

Explored Various Chart types including Histograms, Boxplots, Mnton Charts, Piecharts, Bar Charts, Line Charts and Bubble Charts.

Day 3: Advanced Chart types

Delved into Advanced Chart types such as Bullet Charts, Scatterplots, Tree, Heat Maps, Text tables and Highlighted Tables.

Day 4: Custom Charts

Explored the Concept & importance of Custom Charts in data Visualisation.

Day 5: Working with Metadata and Data Blending.

- Developed expertise in Connecting Tableau to diverse data sources including Excel, Cubes and PDF's for Comprehensive analysis.

ACTIVITY LOG FOR THE SECOND WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	<u>Architecture of Tableau</u> <ul style="list-style-type: none"> • Architecture of Tableau. • Interface of Tableau 	Understand Tableau's architecture and components.	
Day - 2	<u>Charts :</u> <ul style="list-style-type: none"> Motion Histogram Boxplot Bubble. Pie Bar line 	Gain an understanding of Histograms, Box plots, etc and Boxplots, etc.	
Day - 3	<ul style="list-style-type: none"> Bullet Scatter Tree Heat Maps Maps Text table Highlighted Tables 	Understand the Principles and Applications of Custom Charts.	
Day - 4	<ul style="list-style-type: none"> Custom Charts 	Understand the Concept & Imp of Custom Charts in data Visualization.	
Day - 5	Working with Meta data and Data Blending.	Develop expertise in Connecting Tableau to diverse data sources	
Day - 6			

ACTIVITY LOG FOR THE THIRD WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	<ul style="list-style-type: none"> • Joins (Left, Right, Inner And Outer join) • Data blending 	Gain Comprehensive Understanding & Practical Skills in Various types of joins.	
Day - 2	<p>Advanced data Manipulations.</p> <ul style="list-style-type: none"> • Mark & highlight • Groups & Sets 	Master advanced data manipulation techniques including Previewing, Marking.	
Day - 3	<ul style="list-style-type: none"> • Bins • Hierarchies • Sorting & Types • Editing axes & annotations 	Learning how to Utilize bins for grouping Continuous Data into Discrete intervals.	
Day - 4	Working with filters, Organising data.	Master the addition and removal of filters to define & focus datasets.	
Day - 5	<ul style="list-style-type: none"> • Filtering in Tableau • Types of filters • Filtering the Order of Operations 	Master Tableau's filtering tools for Precise data Manipulation	
Day - 6			

WEEKLY REPORT

WEEK - 3 (From Dt..... to Dt.....)

Objective of the Activity Done: To deepen participants' Understanding & Proficiency

Detailed Report:

Day 1: Joins, Union & Datablending.

→ Gained Comprehensive Understanding and practical Skills in Various types of joins including left, Right, Inner & Outer joins.

Day 2: Advanced Data Manipulations.

Mastered Advanced data Manipulation techniques including previewing, Marking and highlighting to enhance data exploration and Analysis.

Day 3: Bins, Hierarchies, Sorting and Formatting.

Participants learned to Use bins for grouping Continuous Data into Discrete Intervals and creating hierarchies for data Organisation.

Day 4: Working With Filters and Data Organisation

Mastered the addition and remove of filters to define and focus datasets based on Specific Criteria.

Day 5: Advanced Filtering in Tableau.

Explored advanced filtering tools in Tableau for precise data Manipulation and Analysis.

ACTIVITY LOG FOR THE FORTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Calculated fields, Quick Table Calculations & LOD Expressions.	Creation of Calculated fields in Tableau for custom data analysis & visualization.	
Day - 2	Quick Table Calculations	Utilize Tableau's quick table Calculations for instant data analysis.	
Day - 3	LOD expressions in Tableau	Utilize Tableau's quick table Calculations for instant data analysis.	
Day - 4	Working with Mapping, Calculations & Expressions.	Master Mapping Skills including Coordinate point Manipulation.	
Day - 5	Working on the background image, including Embed Images.	Learn how to incorporate background images & images in Tableau.	
Day - 6			

WEEKLY REPORT

WEEK - 4 (From Dt..... to Dt.....)

Objective of the Activity Done: to delve into advanced Tableau functionalities

Detailed Report:

Day 1: Calculated fields, Quick Table Calculations & LOD expressions

- Participants learned how to Create Calculated fields in Tableau for Custom data analysis & Visualization.

Day 2: Quick Table Calculations.

- Utilized Tableau's quick table Calculations for instant data analysis and Visualization enhancement.

Day 3: LOD expressions in Tableau

- Participants delved deeper into the Use of LOD expressions for advanced Analytics.

Day 4: Mapping, Calculations and Expressions.

- Participants Mastered Mapping Skills including Coordinate point Manipulation and longitude/ latitude plotting for Spatial data analysis.

Day 5: Advanced Mapping Techniques.

- Participants learned to Incorporate background Images and add Images in Tableau.

ACTIVITY LOG FOR THE FIFTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Working with Parameters	Master The creation of Parameters in Tableau.	
Day - 2	Visual Analytics Pane	Explore The Visual Analytics Pane in Tableau for a	
Day - 3	Dashboards and Stories	Acquire Skills in building and formulating Dashboards	
Day - 4	Creating Multiple Dashboards	Gain proficiency in Creating multiple Dashboards.	
Day - 5	<ul style="list-style-type: none"> • Creating Stories • Including the intro of Story Points • Creating & Updete stories 	Master The Creation Of Stories in Tableau.	
Day - 6			

WEEKLY REPORT

WEEK - 5 (From Dt..... to Dt.....)

Objective of the Activity Done: To focus on advanced Tableau functionality.

Detailed Report:

Day 1 : Working With Parameters.

Participants Mastered the Creation of parameters in Tableau to enhance dynamic analysis and Visualization Capabilities.

Day 2 : Visual Analytics Pane

Explored the Visual Analytics Pane in Tableau for advanced Data Visualisation Techniques.

Day 3 : Dashboards and Stories.

Acquired Skills in building and formatting dashboards in Tableau using Various elements.

Day 4 : Creating Multiple Dashboards.

Gained proficiency in Creating multiple dashboards within Tableau for Comprehensive data analysis.

Day 5 : Creating Stories.

Mastered and Creation and Updating of stories in Tableau, including the introduction of story points and add Catchy Visuals to enhance Storytelling effectiveness.

ACTIVITY LOG FOR THE SIXTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	<ul style="list-style-type: none"> • Adding Annotations with Descriptions dashboards and stories 	Master the Skill of Adding annotations with Descriptions to Provide Content	
Day - 2	Build Tableau web Application.	Acquire an intro ^{info} duction to Flask, a Python Webframework	
Day - 3	Working with Bootstrap	Master the Use of Bootstrap, a front-end framework.	
Day - 4	Building application with flask framework	Acquire the Skills necessary to build Web applications	
Day - 5	Embedding Dashboard & Story with Web Application.	Learn how to Embed Tableau dashboards and Stories into WA	
Day - 6			

WEEKLY REPORT

WEEK - 6 (From Dt..... to Dt.....)

Objective of the Activity Done: To focus on advanced Tableau functionalities.

Detailed Report:

Day 1 : Adding Annotations and Dashboard Interactions

- Participants Mastered the Skill of adding Annotations with descriptions to provide Contextual Information Within Tableau Dashboards & stories.

Day 2 : Building Tableau Web Application with Flask and Bootstrap.

- Acquired an Introduction to Flask, A python Web Framework , for Building Web applications.

Day 3 : Working with Bootstrap.

- Participants Mastered the Use of Bootstrap. a front-end framework for creating responsive and visually appealing Web Interface

Day 4 : Building Applications with Flask framework.

- Acquired the Skills necessary to build Web Applications Using the Flask framework.

Day 5 : Embedding Dashboards and Stories into Web Application.

- Participants learned how to embed Tableau dashboards and stories into Web Application.