PROJECT:

Suicides In India Visualizations Using Tableau

Category: Data Analytics

Skills Required:

Exploratory Data Analysis, MySQL, Databases, Tableau

Team leader: PANGA SAI PRUDHVI

Team members: 1) PALIVELA NAGA PUJITHA

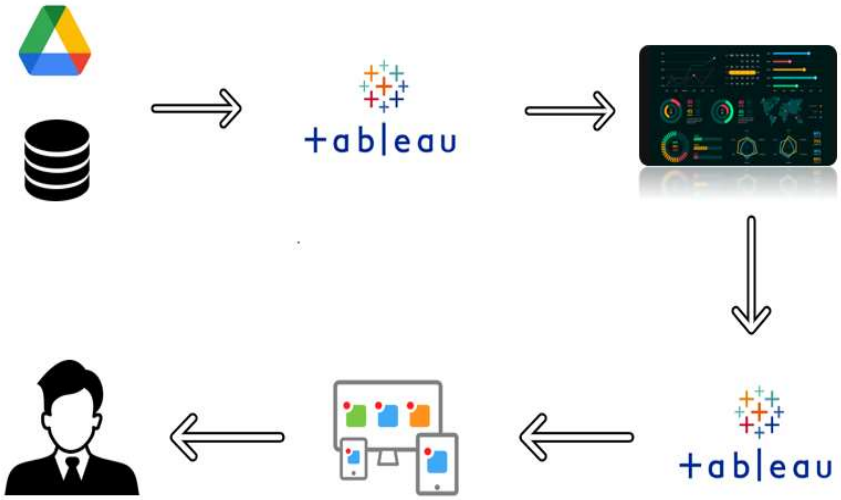
2) NODAGALA AVINESHWARA SAI

3) MOSUGANTI JEDIDIAH

Project Description:

Suicides in India is a significant public health concern , with a rate of 10.4 per 100,000 people in 2019 . Men account for a majority of suicides , and common reasons include family issues , illness and mental health disorders . Prevention efforts should focus on mental health awareness and acccess to services .

Technical Architecture:



Project Flow

To accomplish this, we must complete all the activities listed below,

Data Collection

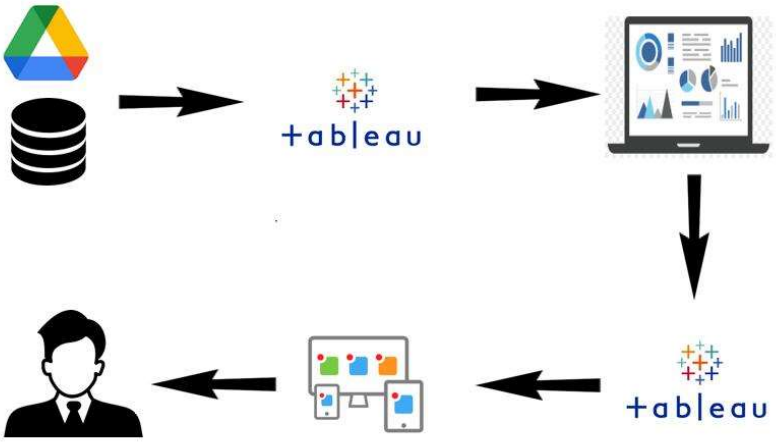
Working With Dataset

Data Visualization

Dashboard

Story

Technical Architecture:



Pre-Requisites

For Completing this project these are some of the prerequisites needed

- A system with a minimum 4GB RAM and 128GB Hard Disk
- Good Internet Connection
- Google Drive / Any of the Database Server with Management Studio
- MySQL:
- **SQL Server Management Studio:**
- **Tableau Desktop:**
- Tableau Public Account: https://public.tableau.com/app/discover
- Html, CSS or Bootstrap

Prior-Knowledge

To Complete this project, one must understand the below concepts and able to work with the tools

- **Data Visualization:**
- **Univariate, Bi- Variate and Multi-Variate Analysis**
- **Chart Types:**
- **Tableau:**
- **Business Intelligence:**

Project Objectives

By the end of this project, you will:

- Able to Connect Tableau with different data sources
- Know fundamental concepts and techniques used for Data Visualization.
- Gain a broad understanding about data and different types of charts.
- Have knowledge of developing Visualizations, Dashboards and Story.
- Able to Integrate the developed dashboard and story with the web application

Project Flow

To accomplish this, we must complete all the activities listed below,

- Data collection
  - Collect the dataset or create the dataset
- Database /Spreadsheet Connection
  - Understand the dataset
  - Import Dataset into the database
  - Connect Tableau Desktop to Database server.
- Visualizing and analyzing data
- Understand the Data and the Business Questions
- Based on the Business questions develop the different visualizations
- Dashboard
  - Develop the Dashboard
- Story
  - Develop the Storyboard
- Publishing to the Tableau Public & Web Application Integration
  - Developed Visualizations, Dashboard and story will be published to Tableau Public Account.
  - Once it is published, we will get the shareable links

- Develop a web application using HTML, CSS or Using Bootstrap
- Integrate the Visualizations, Dashboard and Story with the Web Application

Data Collection

Data collection is the process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer stated research questions, test hypotheses, and evaluate outcomes and generate insights from the data.

LINK:
https://drive.google.com/file/d/190Qmq27LeZZ_nWricP3Obl7ys_5otEsp/view?usp=sharing

Working With Dataset

Understand The Data

Data contains all the meta information regarding the columns described in the CSV columns.

Column Description of the Dataset:

- State: Name of the indian state where the data Belongs to.
- Year: Year ranges from 2001-2012, the complete field contains data for that year respectively.
- Type_code: Mojor classification of “Why Did People Commit Suicide”.
- Type: Subclassification of type code.
- Gender: Either the person committing suicide was a male/female.

- Age_group: What age group does the person belong to who commit suicide.
- Total: Count of people who committed suicide and has the common above 6 mentioned parameters.

Loading The Dataset

Before you can build a view and analyze your data, you must first connect Tableau to your data. Tableau supports connecting to a wide variety of data, stored in a variety of places.

The data might be stored on your computer in a spreadsheet or a text file, or in a big data, relational, or cube (multidimensional) database on a server in your enterprise.

In our case, we will be using a spreadsheet or text file for making our analysis. Watch the video to understand the connection of the dataset in Tableau.

Data Visualization

Data visualization is the process of creating graphical representations of data to help people understand and explore information. The goal of data visualization is to make complex data sets 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.

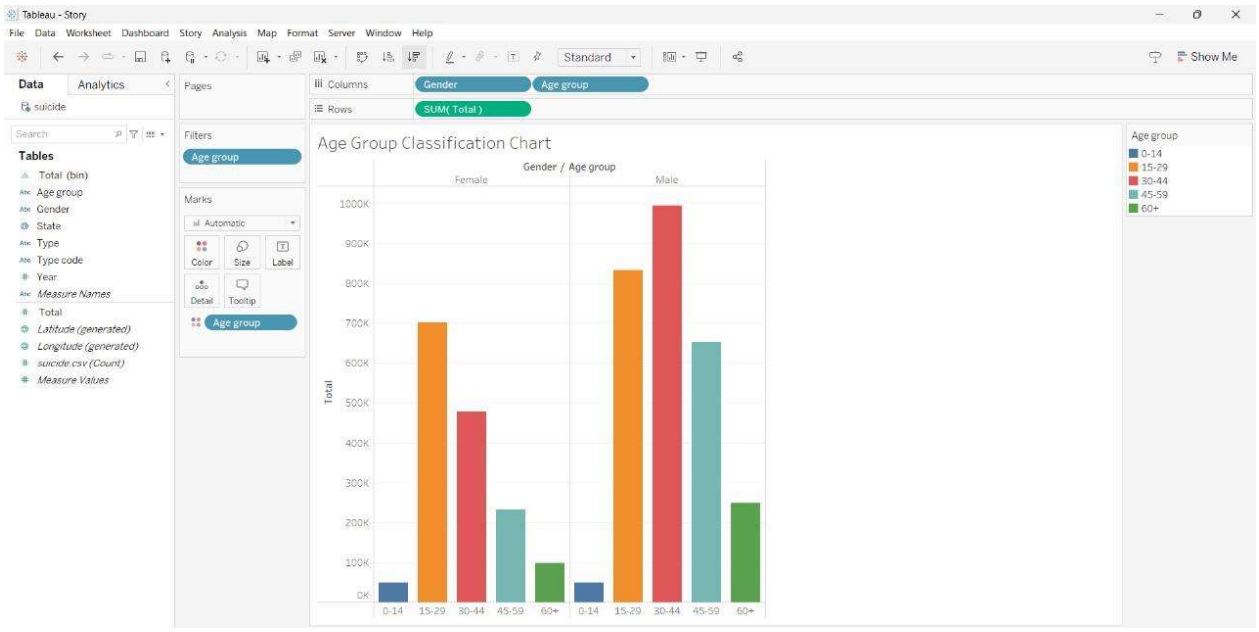
Visualizations Of Suicides in India

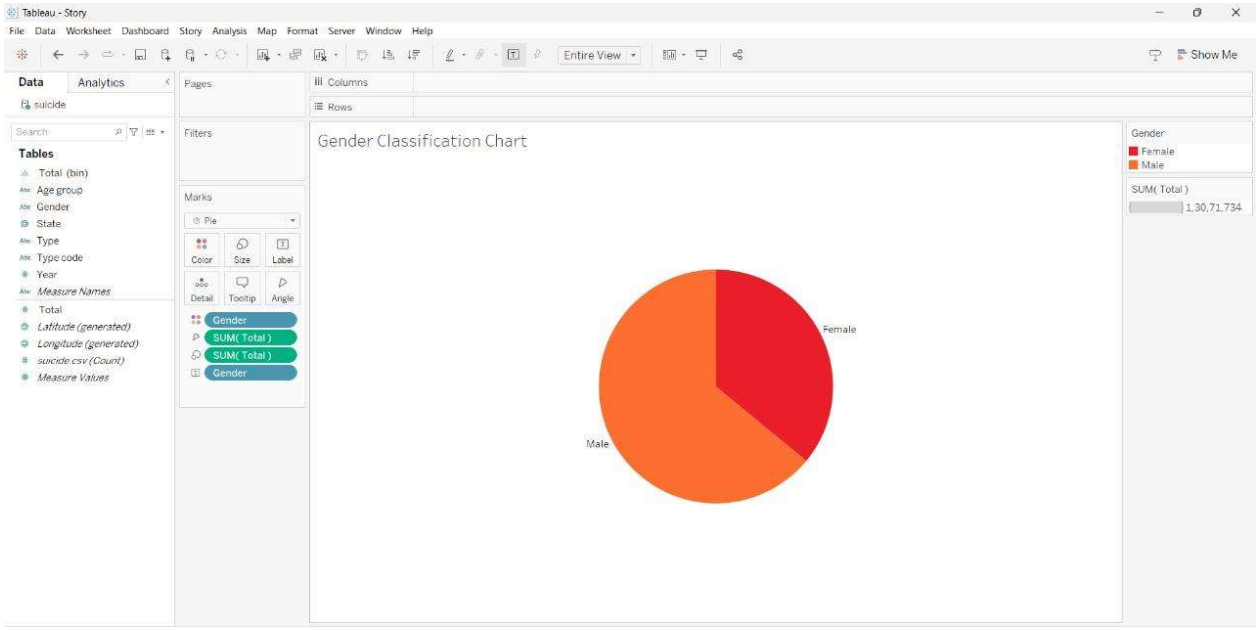
Using the suicides in india dataset, we plan to create a dashboard showing the facts about the types of people suicided per year in india. These visualizations help us to get a better understanding of the data in a single look, as well as is easily understandable to a layman.

Gender and age group classification

For visualizing the above, we will require the following data

- Gender
- Age



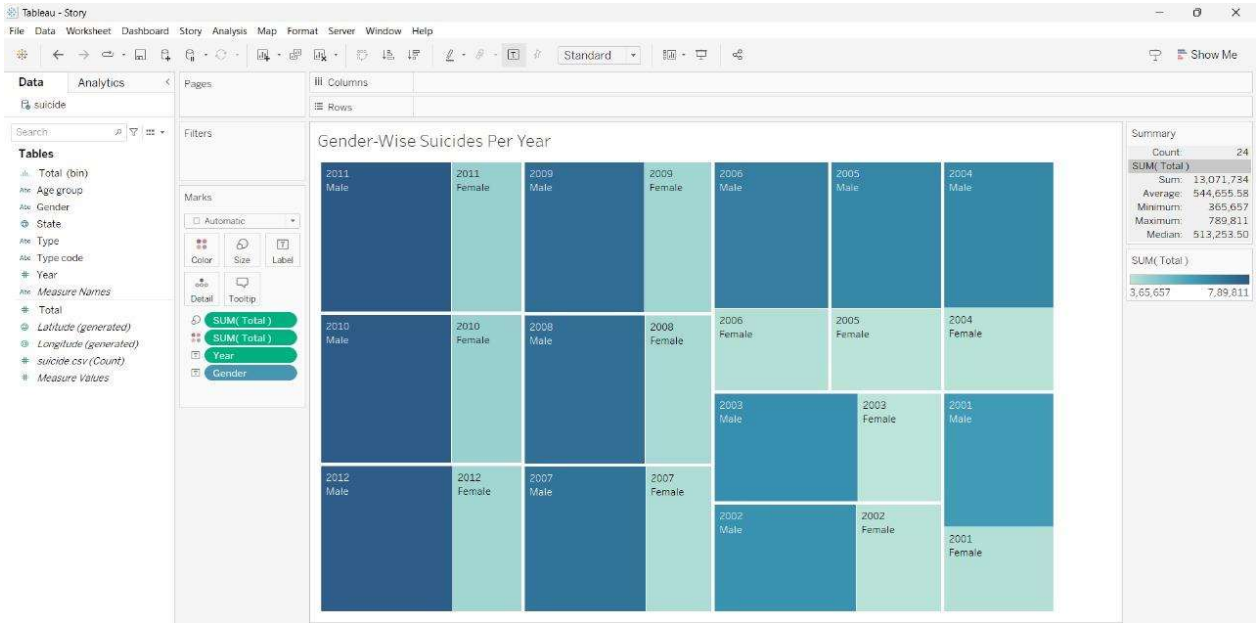


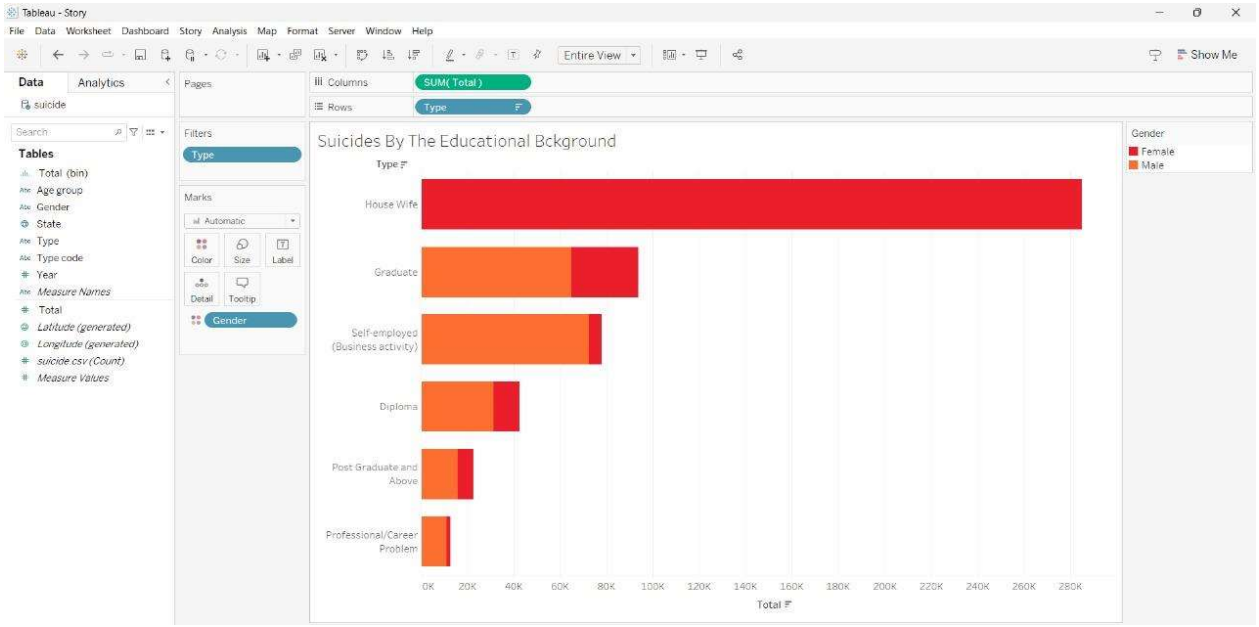
From this data, we will be plotting a “pie chart” to see the types of gender.

Refer to the video below to create the visualization for the above statement.

Gender-Wise Suicides Per Year

In this milestone, we will analyze the suicides of two gender.





SUICIDES BY THE EDUCATIONAL BACKGROUND IN INDIA:

The above chart or visualization is a horizontal bars. The bar chart represents the suicides of different people in India. Here we taken the different types of people like housewife,

graduate, self employee, diploma, post graduation and above, professional/carrer problem. Here the housewife has got the highest no of suicides in India when compared to the other people.

Dashboard

A dashboard is a graphical user interface (GUI) that displays information and data in an organized, easy-to-read format. Dashboards are often used to provide real-time monitoring and analysis of data and are typically designed for a specific purpose or use case. Dashboards can be used in a variety of settings, such as business, finance, manufacturing, healthcare, and many other industries. They can be used to track key performance indicators (KPIs), monitor performance metrics, and display data in the form of charts, graphs, and tables.

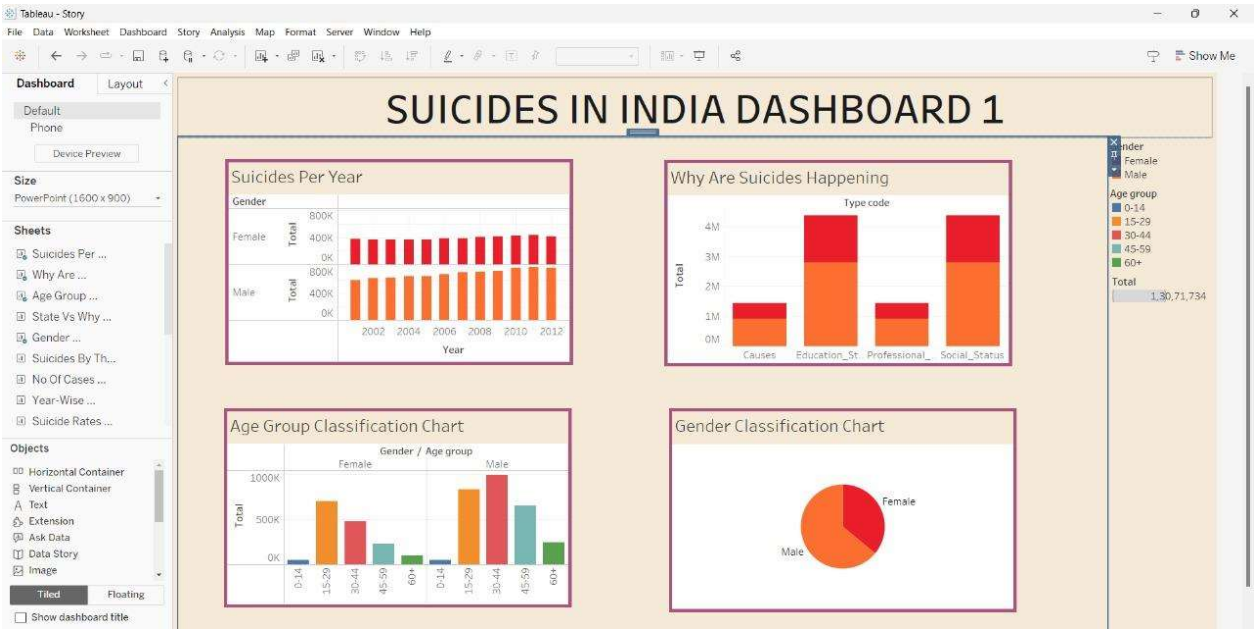
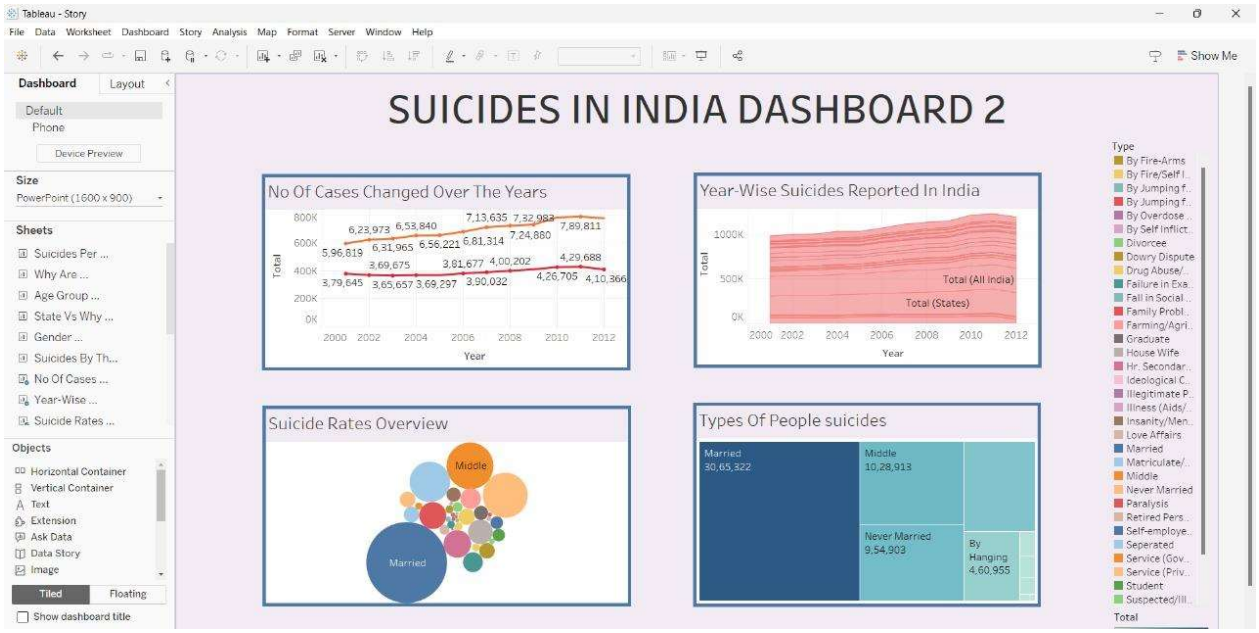


Tableau - Story
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Show Me
Dashboard
Layout
Default
Phone
Device Preview
Size
PowerPoint (1600 x 900)
Sheets
Suicides Per ...
Why Are ...
Age Group ...
State Vs Why ...
Gender ...
Suicides By Th...
No Of Cases ...
Year-Wise ...
Suicide Rates ...
Objects
Horizontal Container
Vertical Container
Text
Extension
Ask Data
Data Story
Image
Tiled
Floating
Show dashboard title
SUICIDES IN INDIA DASHBOARD 1
Suicides Per Year
Gender
Female
Male
Total
800K
400K
0K
2002 2004 2006 2008 2010 2012
Year
Why Are Suicides Happening
Type code
Total
4M
3M
2M
1M
0M
Causes
Education_St..
Professional_
Social_Status
Age Group Classification Chart
Gender / Age group
Female
Male
1000K
500K
0K
0-14
15-29
30-44
45-59
60+
Gender Classification Chart
Female
Male
Female
Male
0-14
15-29
30-44
45-59
60+
1,30,71,734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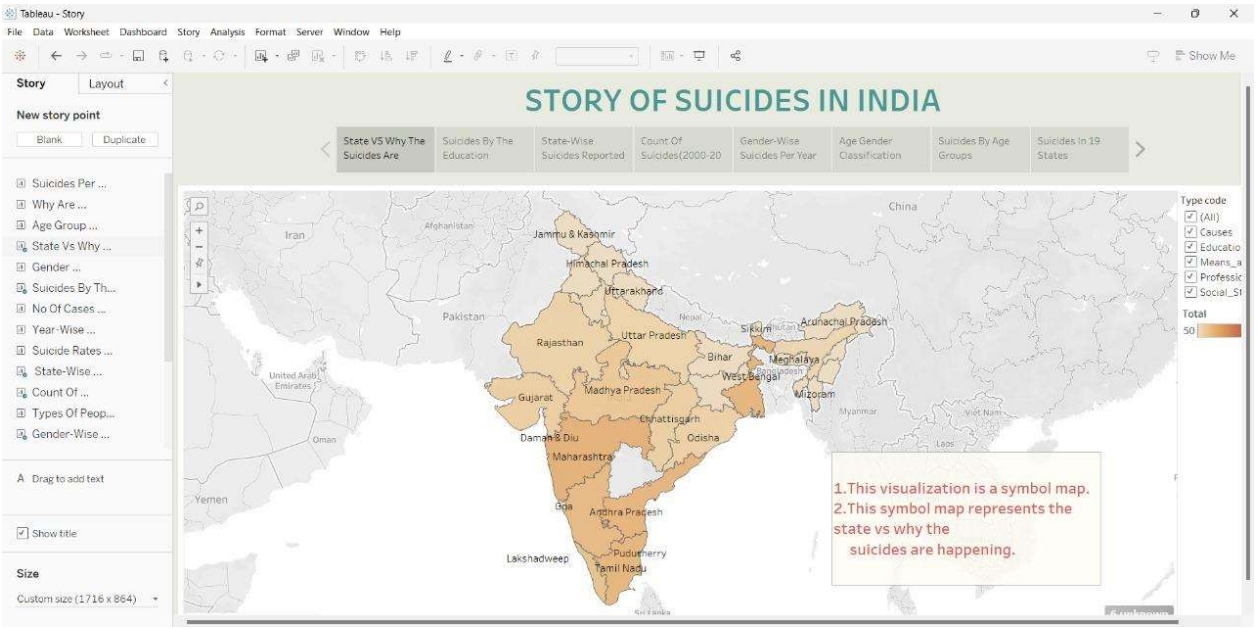
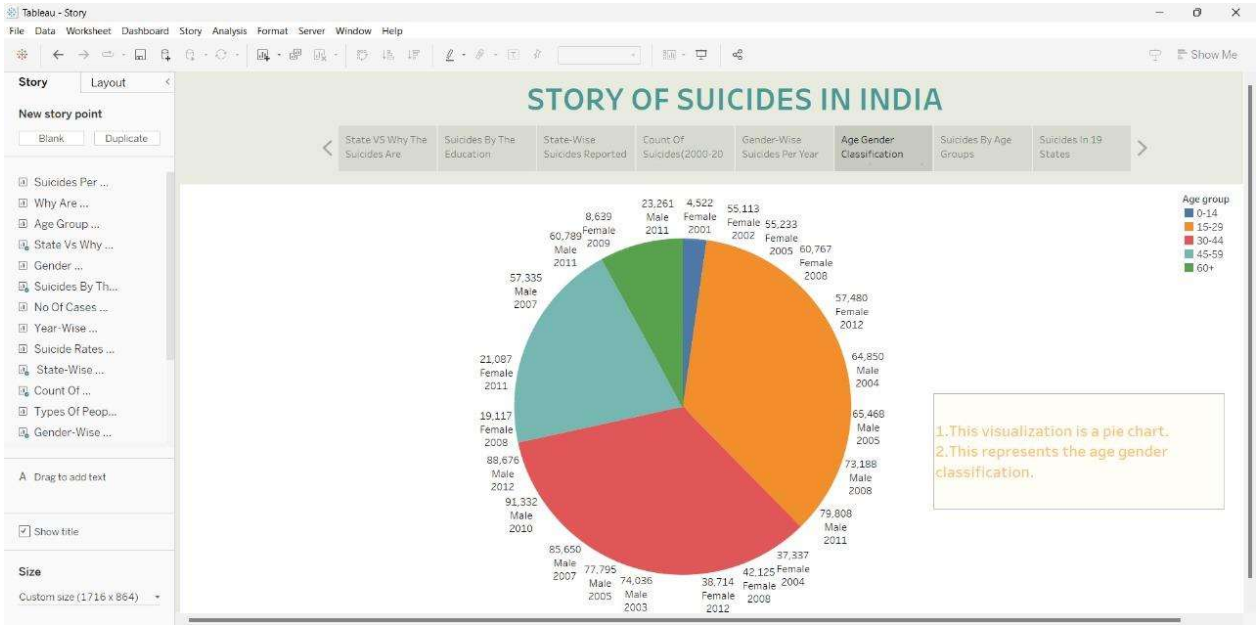
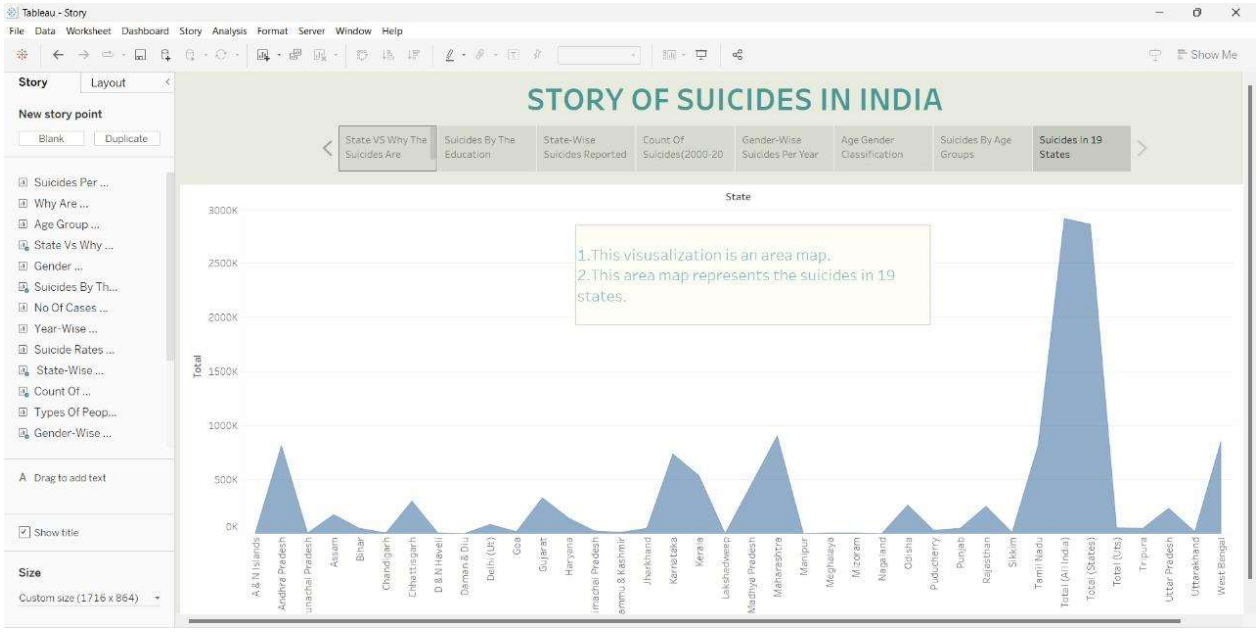
Year-Wise ...
Suicide Rates ...
Objects
Horizontal Container
Vertical Container
Text
Extension
Ask Data
Data Story
Image
Tiled
Floating
Show dashboard title
SUICIDES IN INDIA DASHBOARD 2
No Of Cases Changed Over The Years
Total
800K
600K
400K
200K
0K
6,23,973
6,53,840
7,13,635
7,32,982
7,89,811
5,96,819
6,31,965
6,56,221
6,81,314
7,24,880
3,69,675
3,81,677
4,00,202
4,29,688
3,79,645
3,65,657
3,69,297
3,90,032
4,26,705
4,10,366
2000 2002 2004 2006 2008 2010 2012
Year
Year-Wise Suicides Reported In India
Total
1000K
500K
0K
Total (All India)
Total (States)
2000 2002 2004 2006 2008 2010 2012
Year
Suicide Rates Overview
Middle
Married
Types Of People suicides
Married
30,65,322
Middle
10,28,913
Never Married
9,54,903
By Hanging
4,60,955
Type
By Fire-Arms
By Fire/Self I...
By Jumping f...
By Jumping f...
By Overdose...
By Self inflict...
Divorcee
Dowry Dispute
Drug Abuse/...
Failure in Exa...
Fall in Social...
Family Probl...
Farming/Agri...
Graduate
House Wife
Hr. Secondar...
Ideological C...
Illegitimate P...
Illness (Aids/...
Insanity/Men...
Love Affairs
Married
Matriculate/...
Middle
Never Married
Paralysis
Retired Pers...
Self-employe...
Seperated
Service (Gov...
Service (Priv...
Student
Suspected/Ill...
Total

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.





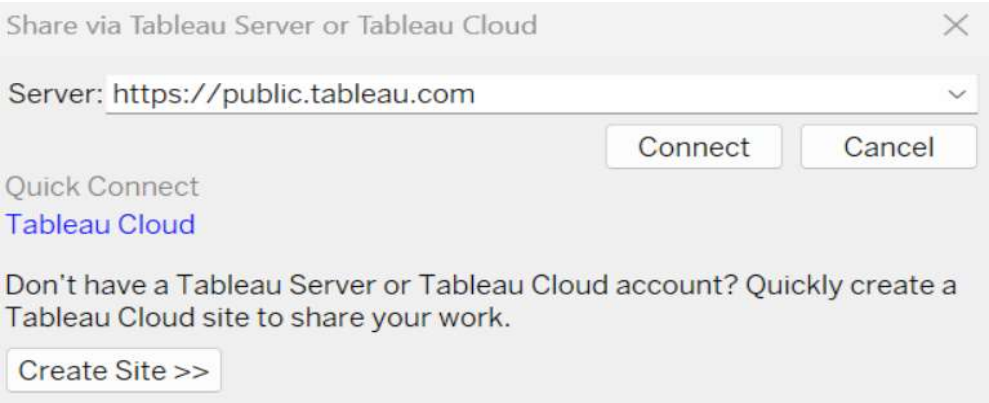


Publishing And Web Integration

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

Step 1: Go to Dashboard/story, click on the share button on the top ribbon

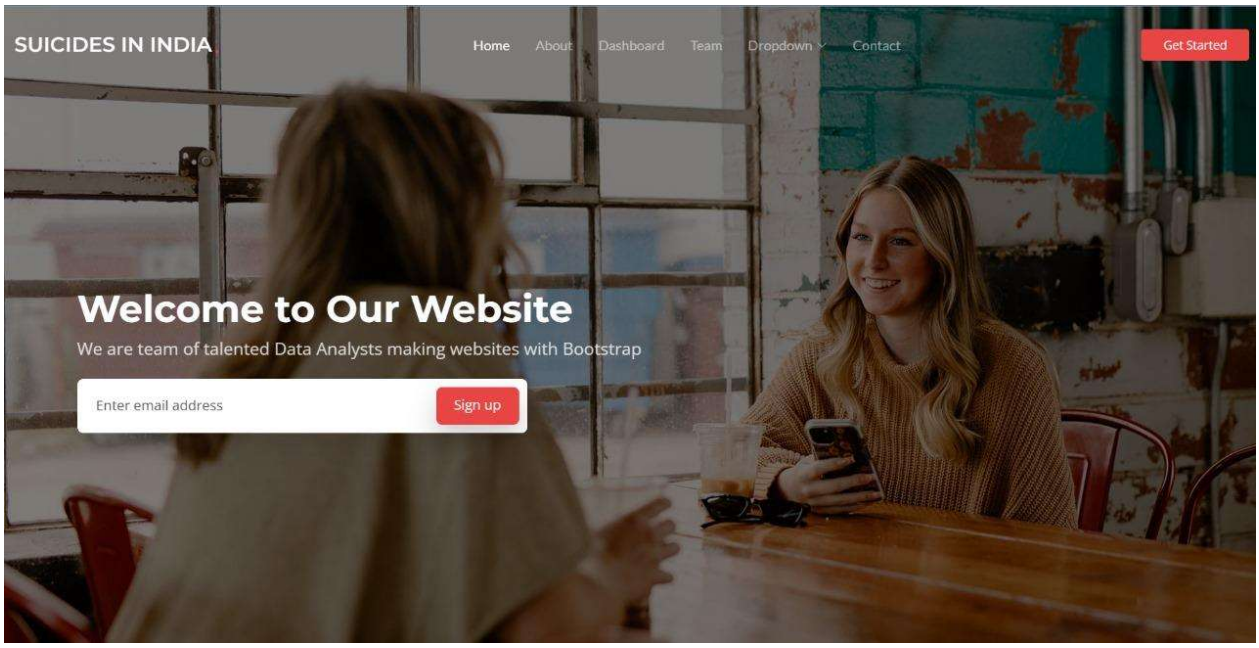


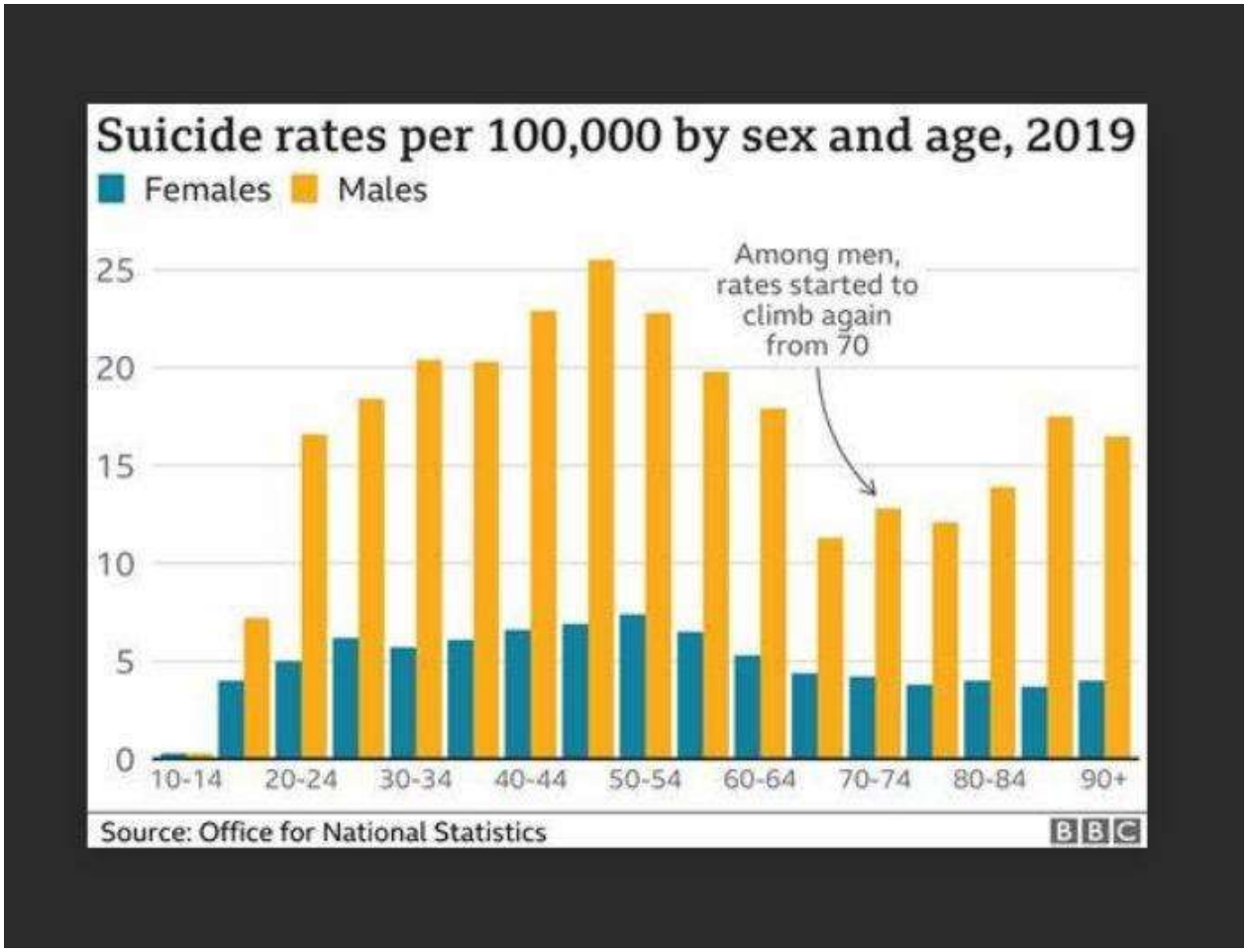
Step 2: Once you click on connect it will ask you for the tableau public username and password

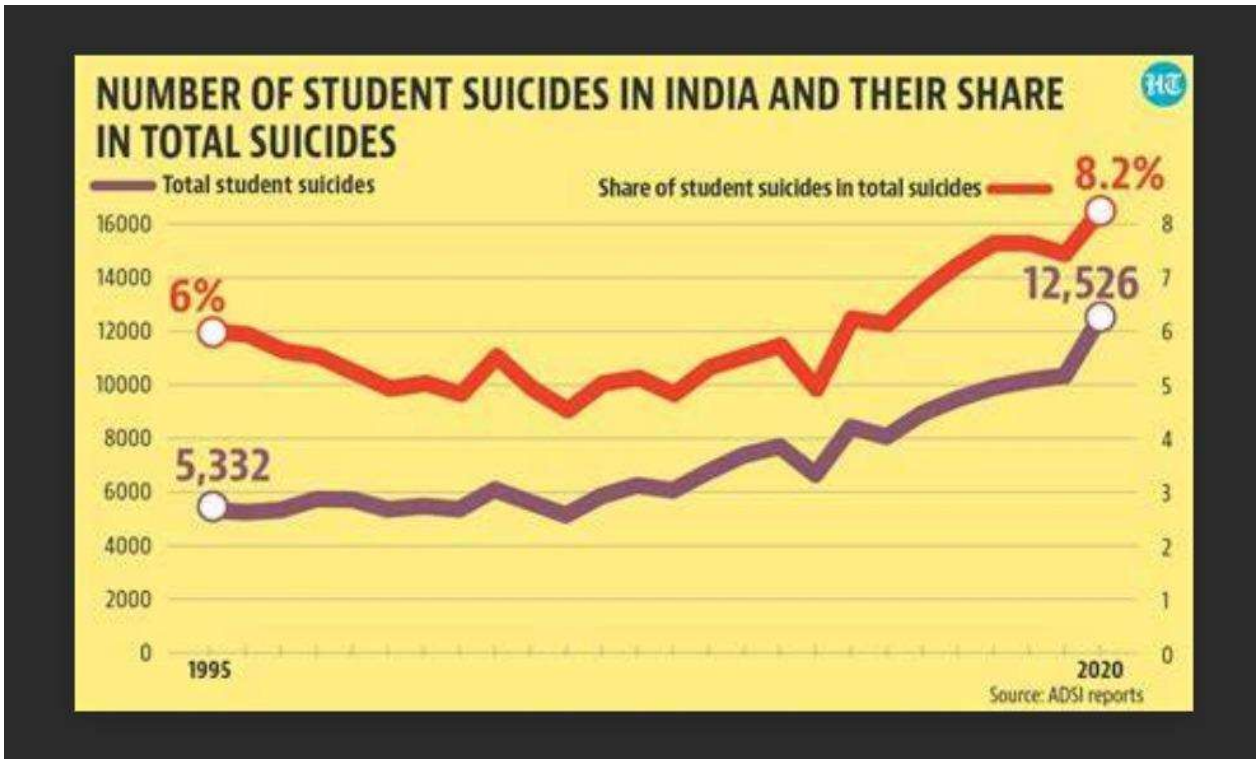
Once you login into your tableau public using the credentials, the particular visualization will be published into the tableau public

Note: While publishing the visualization to the public, the respective sheet will get published when you click on the share option.

Integrating In Web with Embedded Code


SUICIDES IN INDIA
Home
About
Dashboard
Team
Dropdown
Contact
Get Started
Welcome to Our Website
We are team of talented Data Analysts making websites with Bootstrap
Enter email address
Sign up


Suicide rates per 100,000 by sex and age, 2019
Females
Males
Among men, rates started to climb again from 70
25
20
15
10
5
0
10-14
20-24
30-34
40-44
50-54
60-64
70-74
80-84
90+
Source: Office for National Statistics
BBC


NUMBER OF STUDENT SUICIDES IN INDIA AND THEIR SHARE IN TOTAL SUICIDES
Total student suicides
Share of student suicides in total suicides
8.2%
6%
12,526
5,332
16000
14000
12000
10000
8000
6000
4000
2000
0
8
7
6
5
4
3
2
1
0
1995
2020
Source: ADSI reports