

ROAD DATA ANALYSIS USING EXCEL

PROJECT OBJECTIVE

I have created a comprehensive view of road accidents for the years 2021 and 2022. The objective is to provide insights to stake holders on accident trends with respect to timeline and other factors such as vehicle type, light conditions, road type and surface.

DATASET

I imported the CSV file and did a variety of tasks, including applying filters, deleting duplicates, correcting errors, and putting the data into an easily analyzable format. It contains 307.974 million rows and 21 columns.

Source: <https://www.kaggle.com/datasets/data125661/india-road-accident-dataset>

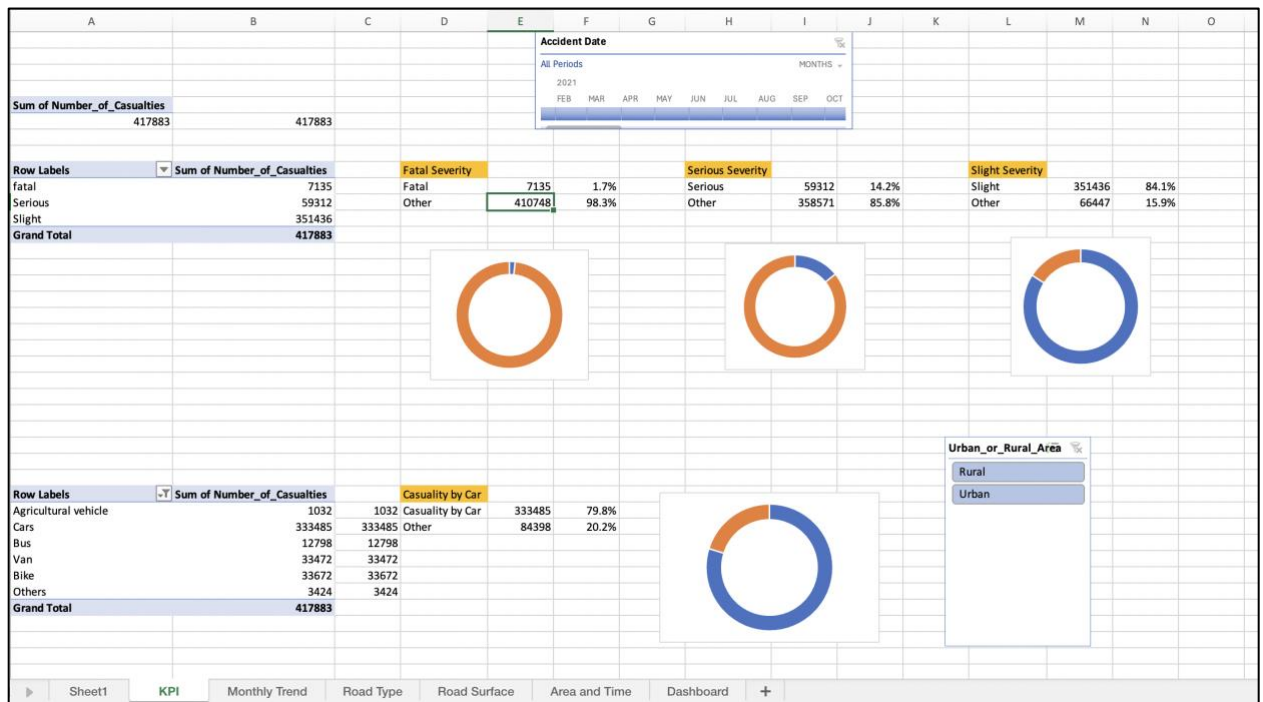
DATA PROCESSING:

I utilized the TEXT() function on the Date column to generate Year and Month columns for CY and PY casualties trendlines.

D2					fx	=TEXT(B2, "YYYY")
	A	B	C	D		
1	Accident_Index	Accident Da	Month	Year		
2	200901BS70001	1/1/21	Jan	2021		
3	200901BS70002	1/5/21	Jan	2021		
4	200901BS70003	1/4/21	Jan	2021		
5	200901BS70004	1/5/21	Jan	2021		
6	200901BS70005	1/6/21	Jan	2021		
7	200901BS70006	1/1/21	Jan	2021		
8	200901BS70007	1/8/21	Jan	2021		
9	200901BS70008	1/2/21	Jan	2021		
10	200901BS70009	1/7/21	Jan	2021		
11	200901BS70010	1/10/21	Jan	2021		
12	200901BS70011	1/7/21	Jan	2021		
13	200901BS70012	1/16/21	Jan	2021		
14	200901BS70015	1/12/21	Jan	2021		
15	200901BS70016	1/9/21	Jan	2021		
16	200901BS70017	1/17/21	Jan	2021		
17	200901BS70019	1/25/21	Jan	2021		

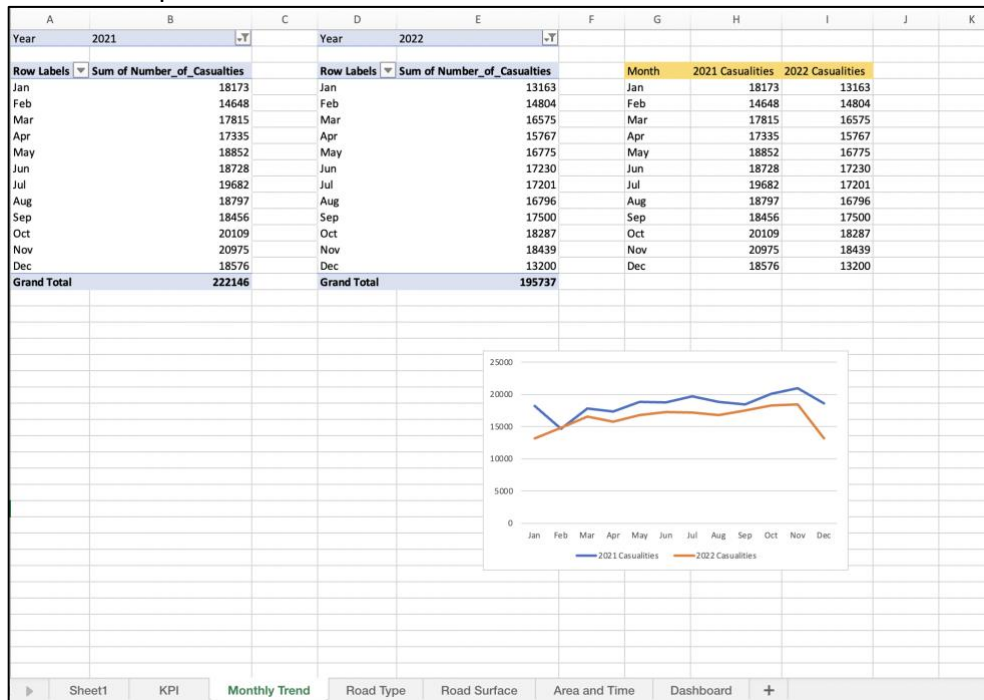
DATA ANALYSIS AND VISULIZATION

1. KPI – Sheet with Filter Panels and Causality Percentage with Severities.
 - a. Created Total Casualties Data using Pivot Table in Dashboard
 - b. Created a Doughnut chart to analyze the Total casualties & its percentage with respect to accident severity.
 - c. Consolidated similar type of vehicle type using Pivot Table analyze option – Calculate field.
 - d. Created a Doughnut chart to analyze the maximum casualties by Vehicle type, which was a Car.
 - e. Inserted different vehicle type icons through Illustration section and Created a data of Total casualties with respect to Vehicle Type



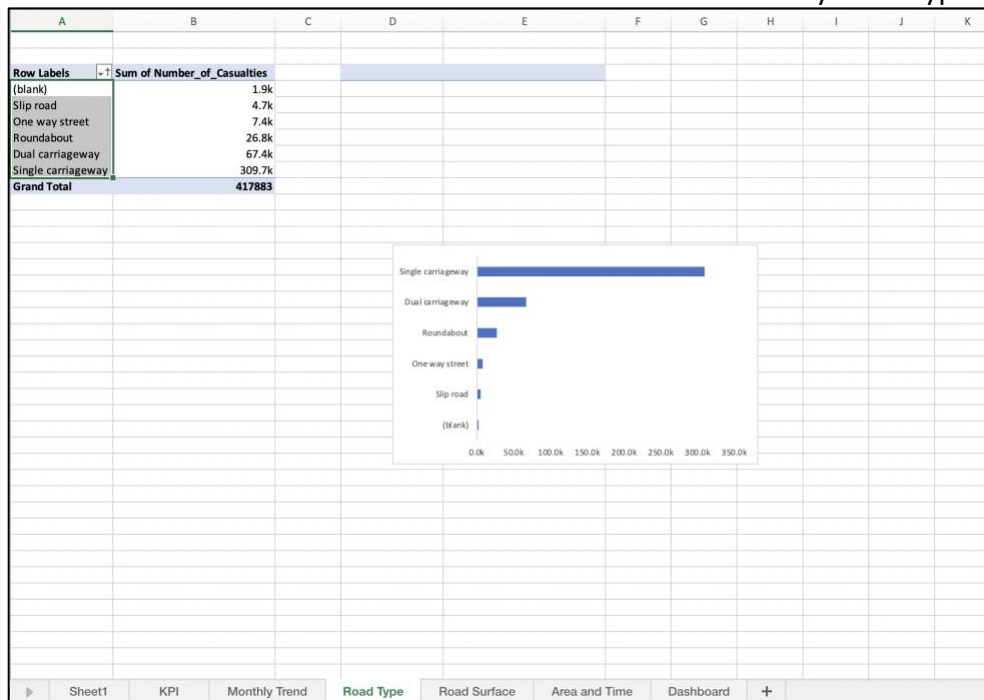
2. Monthly trend

- Created a Combo 2-D line chart to understand the Monthly trend representing comparison of casualties for CY and PY.



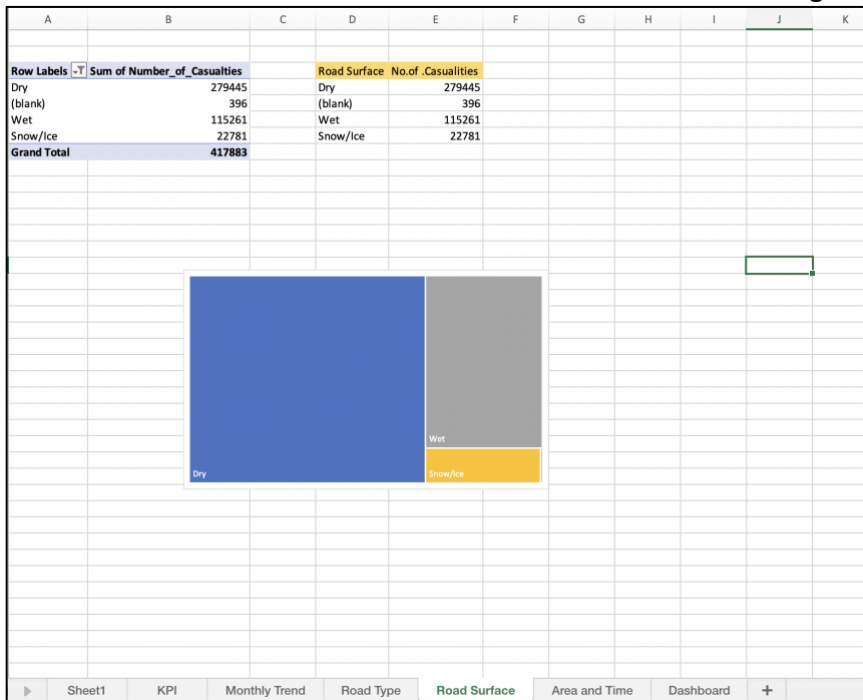
3. Casualties by Road Type

- Created a Bar Chart to know the maximum casualties by Road Type.



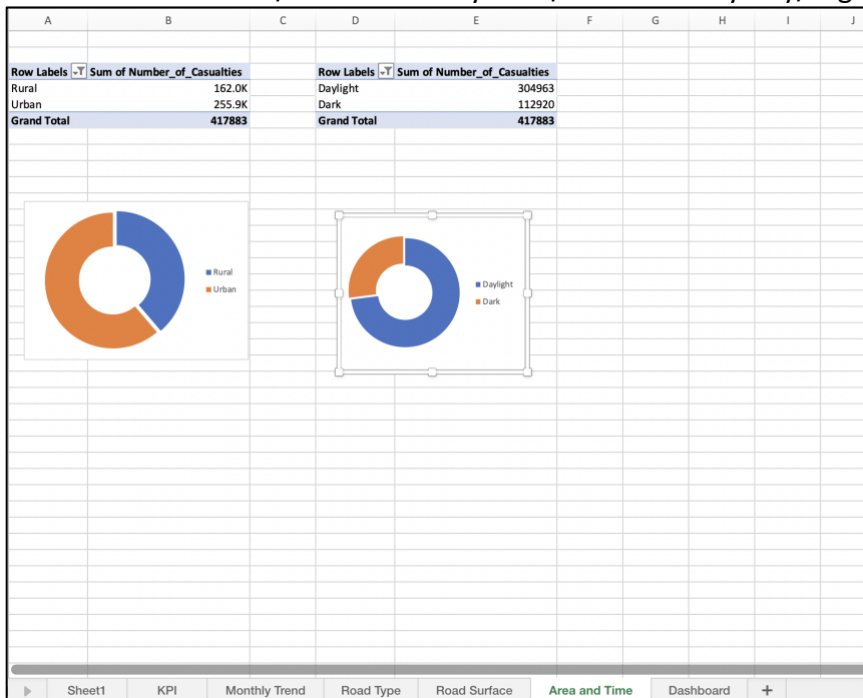
4. Distribution of total casualties by Road Surface

- Consolidated similar type of Road surface condition and Created a Treemap chart to understand the Distribution of total casualties through types of Road Surface.



5. Distribution of total casualties by Area and Light Condition

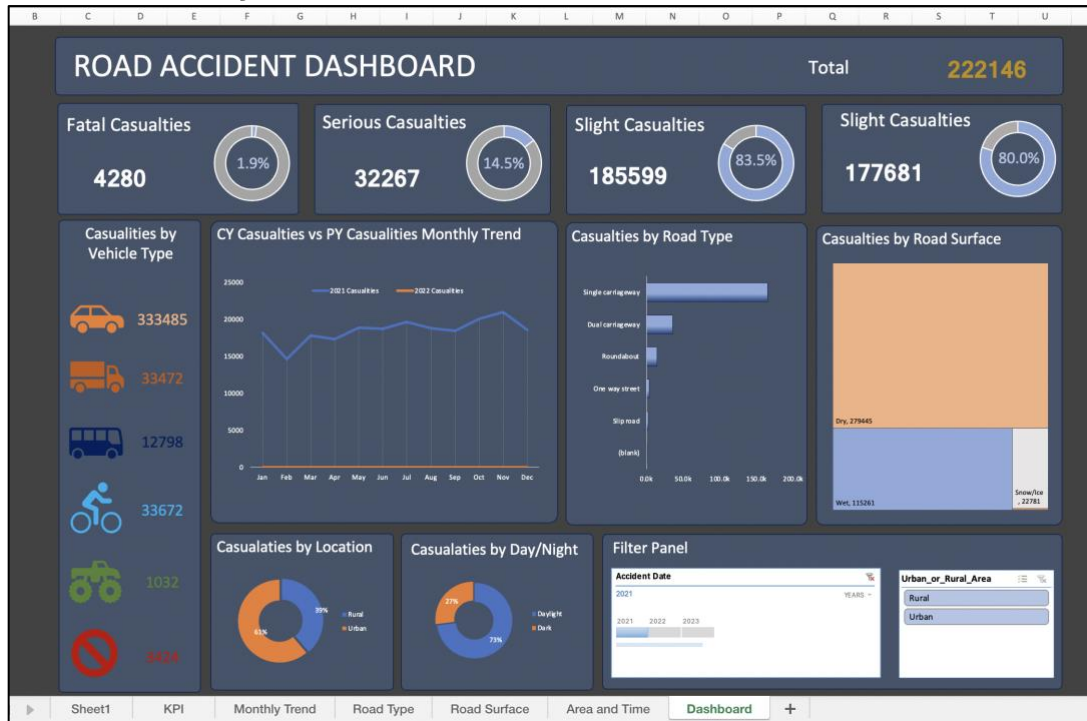
- Consolidated similar Light condition and Created doughnut chart to understand the relation b/w casualties by Area/Location & by Day/Night



DASHBOARD

I incorporated filter panels and set up connections to all necessary pivot tables. The Data Analysis sheet now consolidates all pivot table data, simplifying the process for new users, developers, or clients and providing a comprehensive overview of the gathered information.

Dashboard Analysis 2021



Dashboard Analysis 2022

