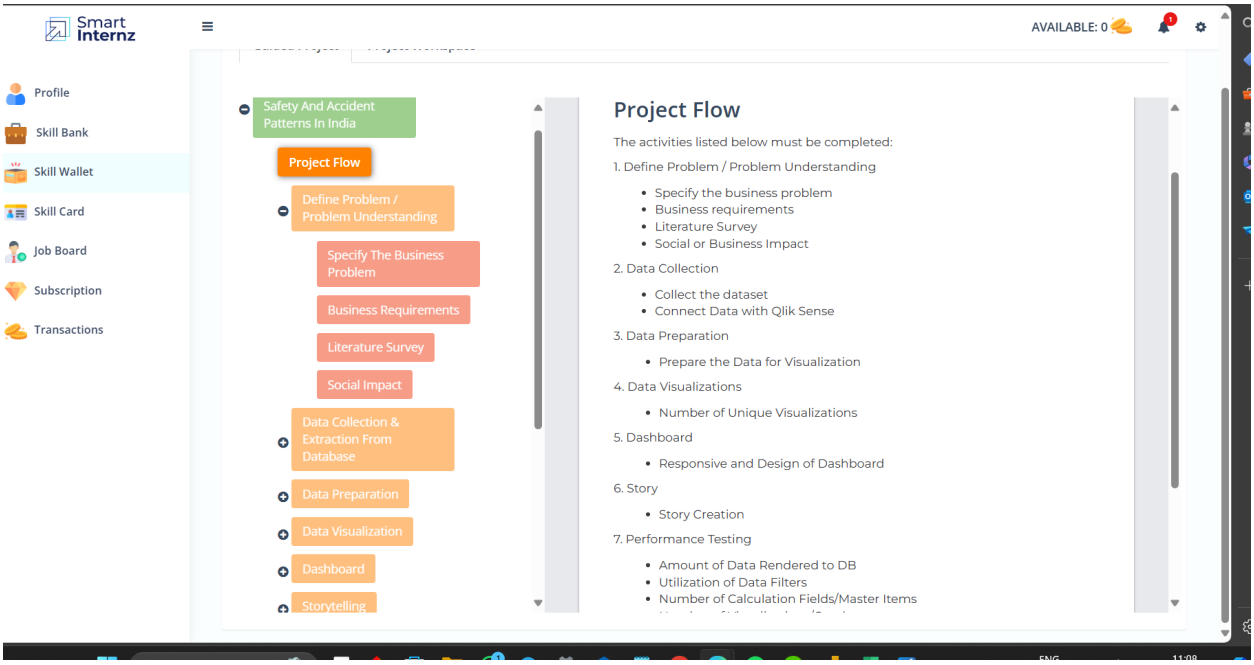
Qlik Analysis Of Road Safety And Accident Patterns In India.

1) Introduction 1.1 overview: My project is abouth Road accidents that are occuring in all over states in india and by that data what are insights that I have find out to reduce accidents and measures that can be taken to minimize the percentage accidents.And what are the main reasons for occuring the accidents.

1.2 purpose:The use of this project is that we can understand or analyse the data and can find what are the reasons and causes for most of the accidents what can be done to reduce the accidents and save the lives of the people.

1.3 Technical Architecture:



2) Define Problem: Problem is due to advancements of vehicles for transportation decreases the time to travel but the safety of the people has been put into question.Quality of the roads,safety road signs,traffic signals and footpaths has not been developed and maintained. They lead to increases the road accidents.

Business requirements: By creating visualizations and dashboards that helps to know the defaluts and reasons for occuring the accidents, then we can imporve the protocols regarding the accidents and road safety measures.

Literature survey: By collecting the data from various resources and studying the data , we can understand more about the accidents and road safeties. Refering many data providing sources can help us to learn various insights from the various sources that can help us project to built in a way of meaningful manner and useful way.

3) Data collection: we can collect the dataset from this link : https://www.kaggle.com/datasets/aryakittukrishnasai/road-accidents-in-india.

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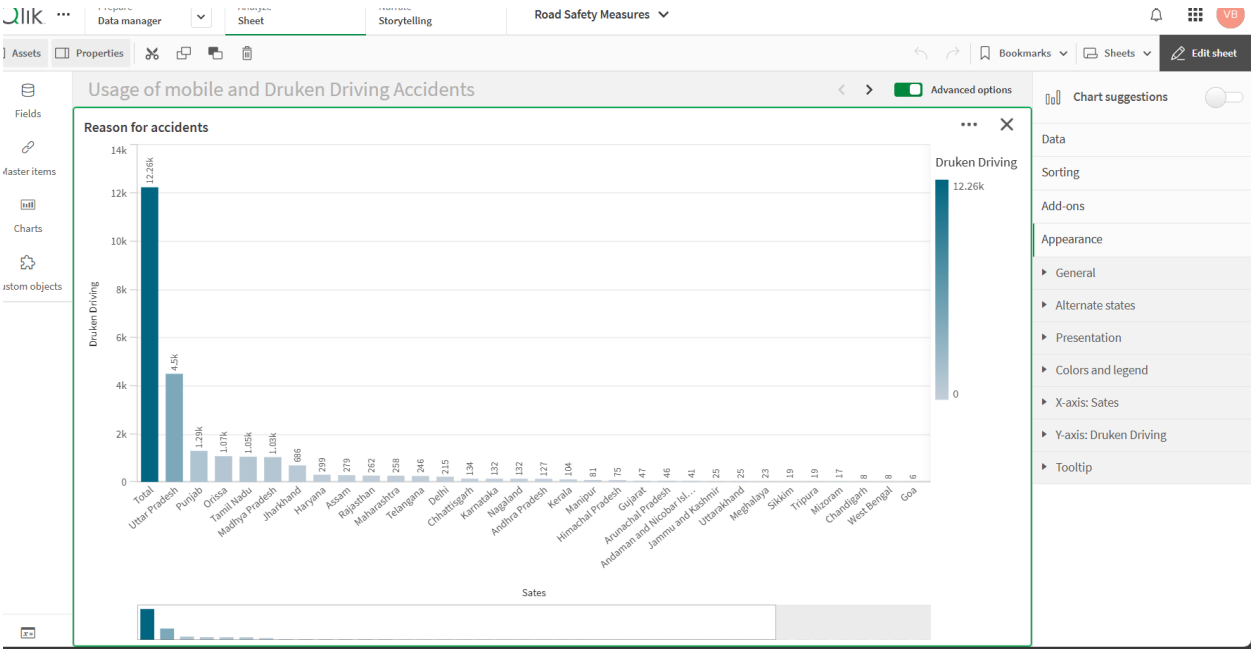
4) Data preparation for visualization and connecting data with qlik:Then we have to open qlik cloud and sign into your account and cilck on add new on top right side corner of the page and click on new analytics app. Then enter an name for the project and click on create. Then click on Files and other resources and select the file and it will take you to your pc and select the datasets that you already downloaded. After downloading the dataset , it will be in the format of zipfile, unzip the file by extract all , then select the data set and click on next. After that click on data manager on top left and combine the relevant data and click on apply all on top right corner with violet color button and click on load data.

5) Data Visualizations: ***Accidents due to Drunken Driving consider bar graph and select states in dimensions and drunken driving as measures . we will get this bar graph and highest acccidents are in Uttar Pradesh.***



=>State-wise Mobile Phone Usage:

consider Table and select states in field and use of mobile phones as expression. we will get this table.

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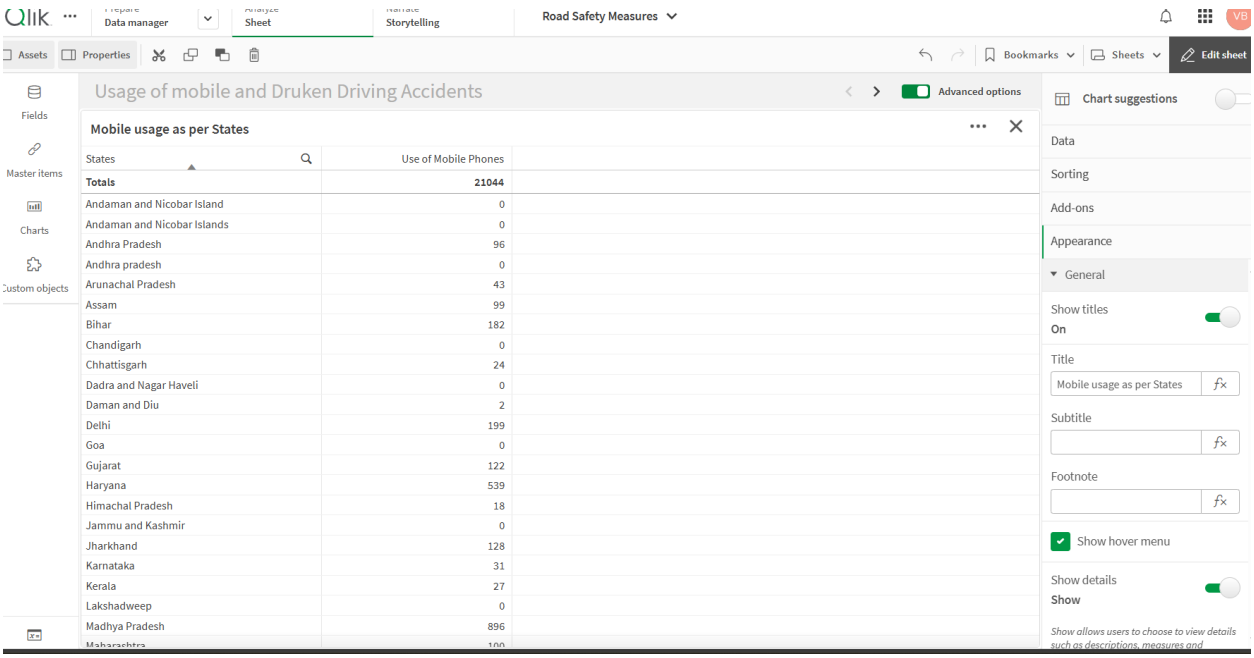
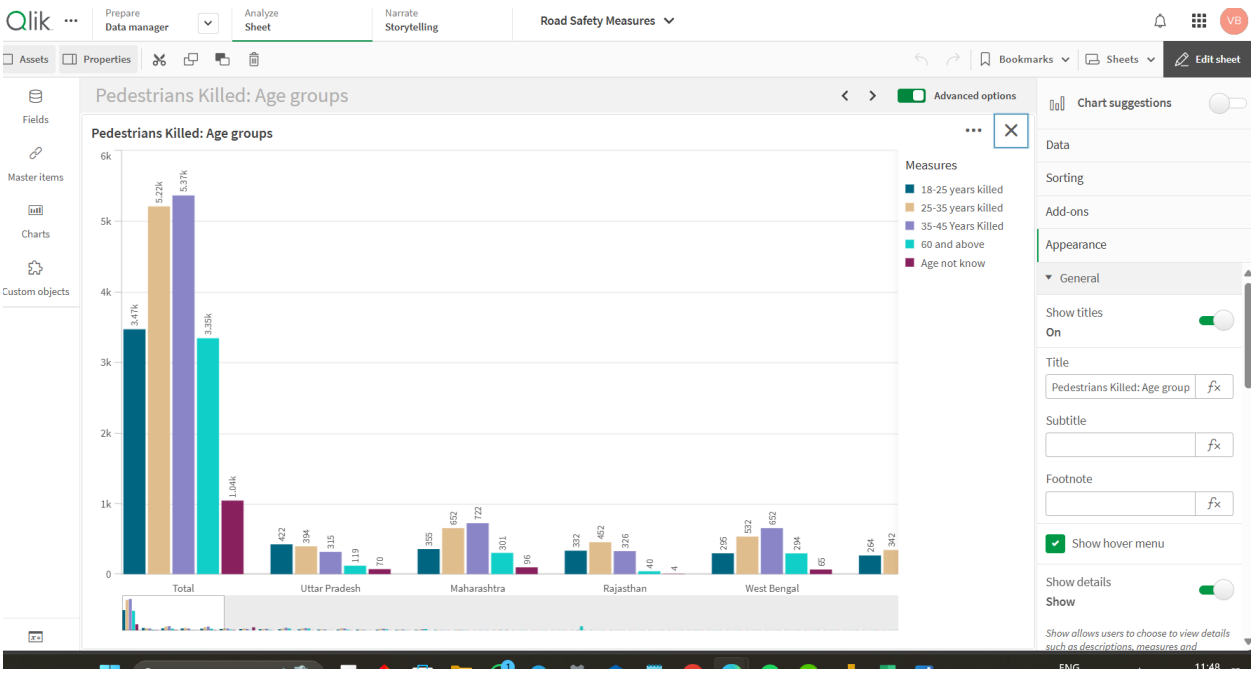


=>Pedestrians Killed: Age groups

consider bar graph and select states in Dimension and drunken driving as measures . we will get this bar graph



=>Vehicle Contribution towards Total Accidents:

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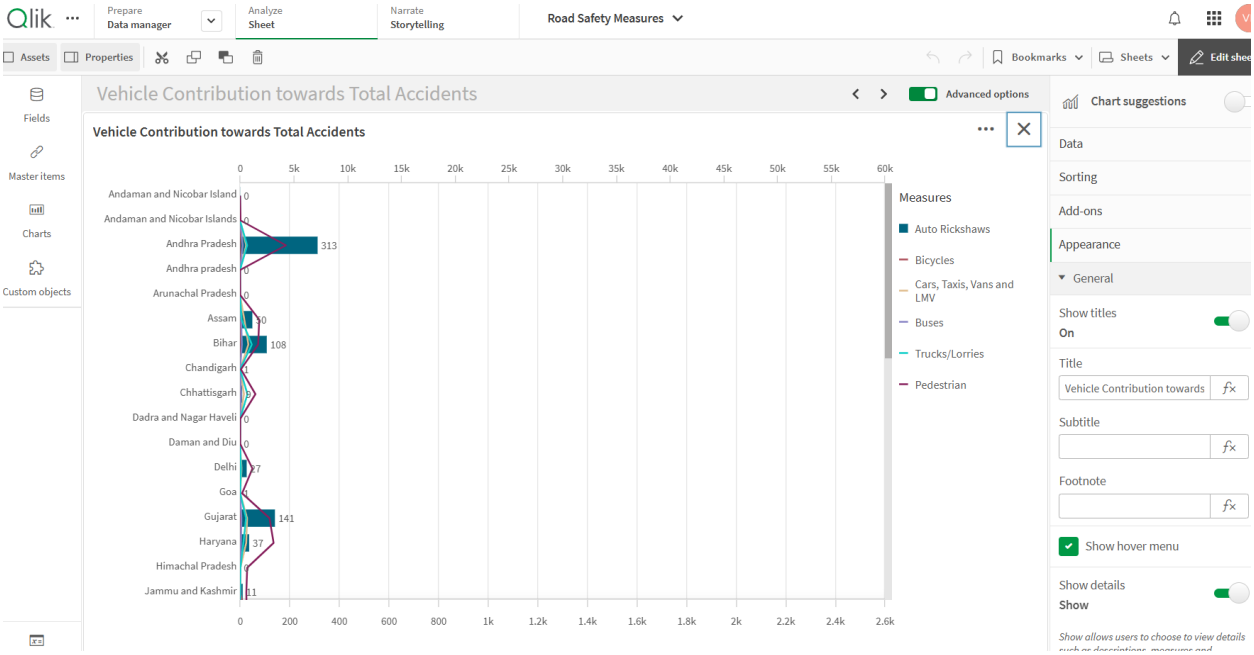
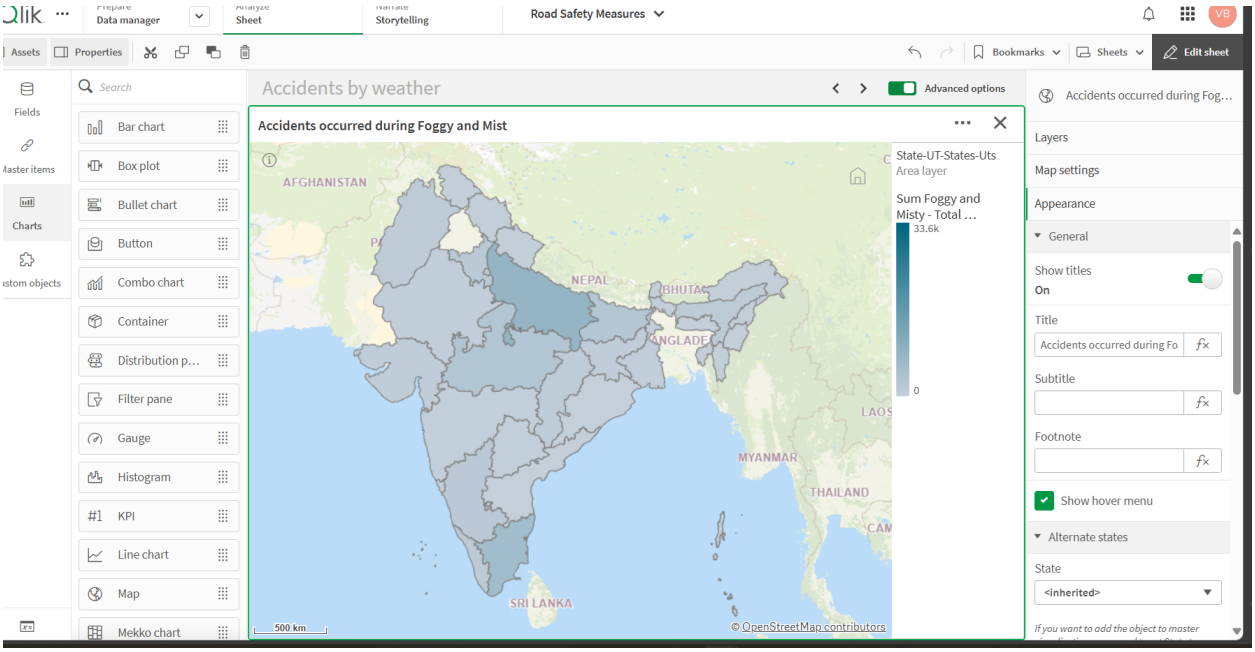
consider bar and line graph and select states in Dimensions and vehicles as measures . we will get this bar and line graph



=>Accidents by Weather Type:

consider map and select states in Dimensions and Foggy and misty as measures . we will get this map



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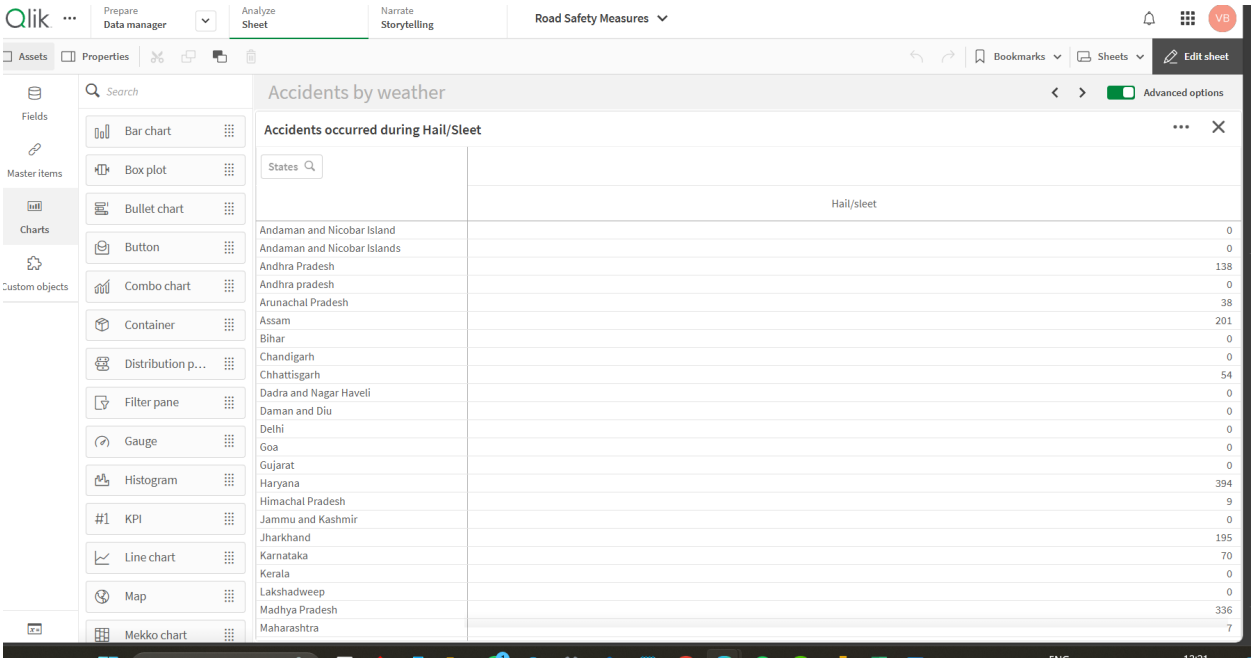
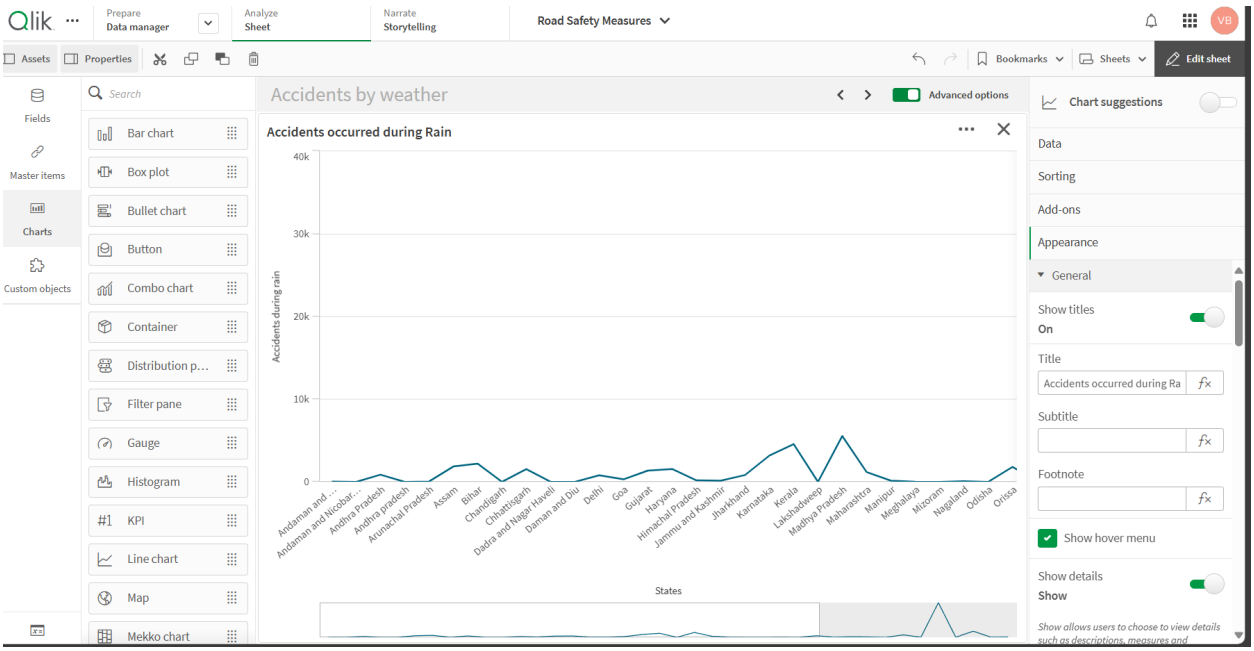
consider table and select states in Dimensions (row) and sum(Hail/sleet) as measures . we will get this table.



consider Line chart and select states in Dimensions (line) and Rainy as measure. we will get this line chart



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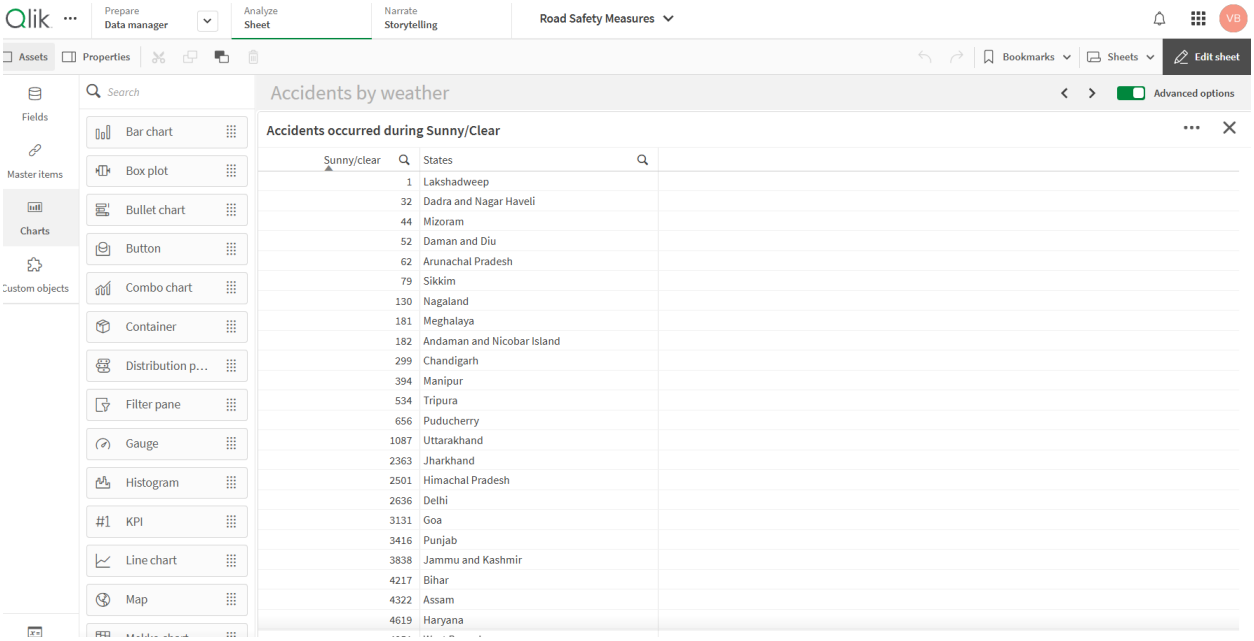
consider table and select states in columns and sunny . we will get this table.



Sunny/clear	States
1	Lakshadweep
32	Dadra and Nagar Haveli
44	Mizoram
52	Daman and Diu
62	Arunachal Pradesh
79	Sikkim
130	Nagaland
181	Meghalaya
182	Andaman and Nicobar Island
299	Chandigarh
394	Manipur
534	Tripura
656	Puducherry
1087	Uttarakhand
2363	Jharkhand
2501	Himachal Pradesh
2636	Delhi
3131	Goa
3416	Punjab
3838	Jammu and Kashmir
4217	Bihar
4322	Assam
4619	Haryana

=>Pedestrians Killed: Gender

consider Scatter plot and select states in Dimensions (Bubble) and measures as x-axis as Female and y-axis as Male . we will get this plot

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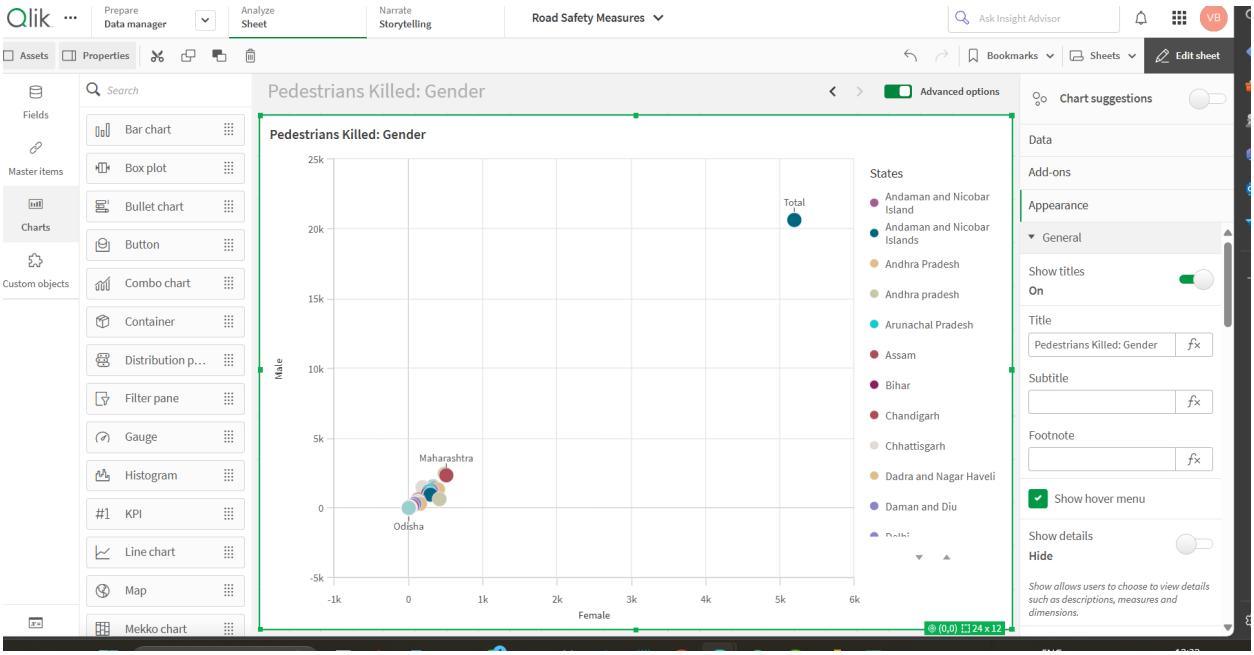
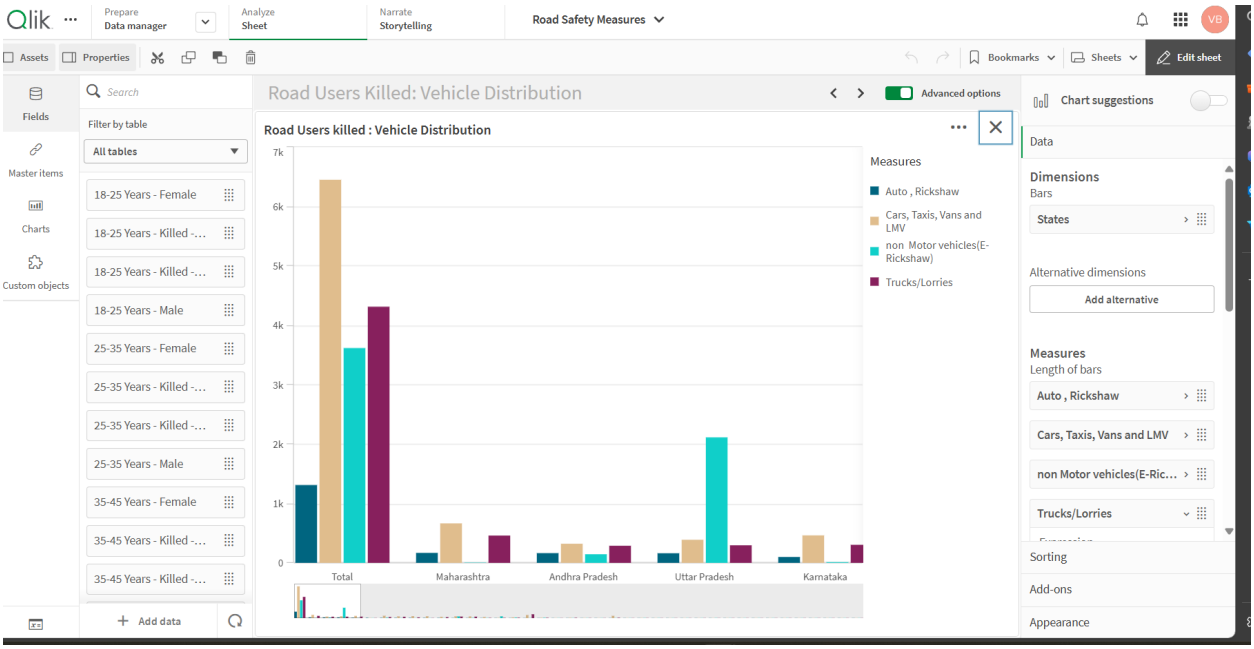


=>Road Users Killed: Vehicle Distribution

consider bar graph and select states in Dimension and different vehicles as measures . we will get this bar graph



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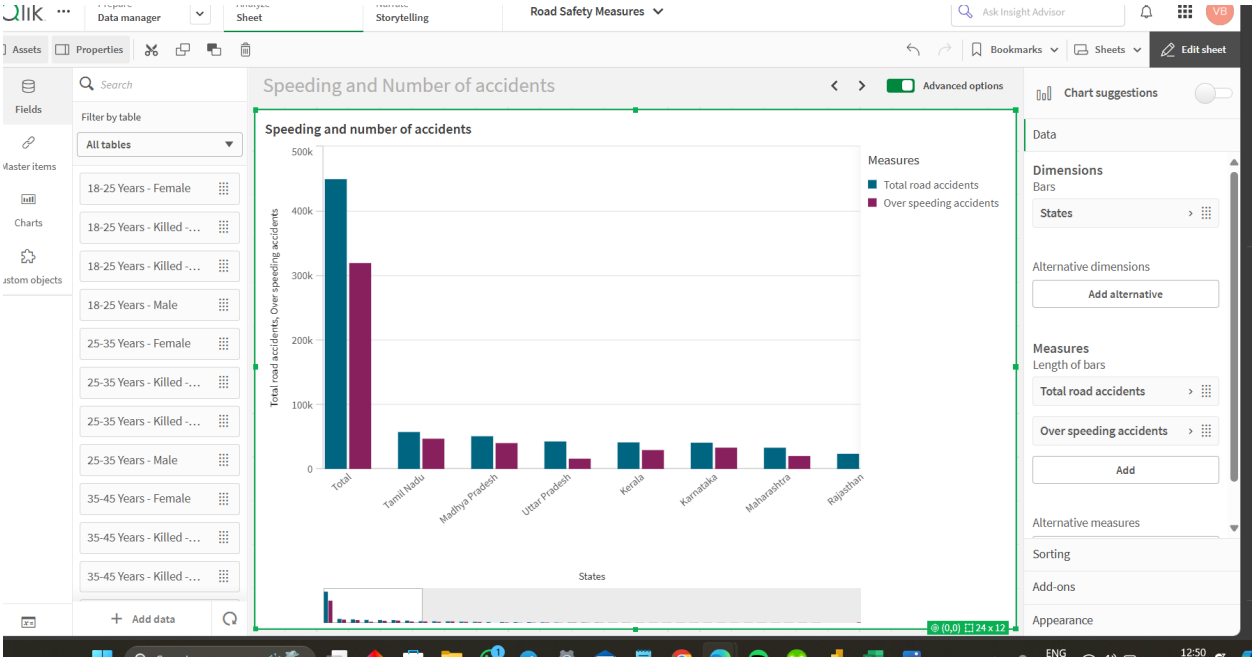
=>Correlation - Speeding and Number of accidents

consider Bar graph and select states in Dimensions (Bar) and measures as Total road accidents and over speeding accidents . we will get this bargraph



=>Minors Killed across the country:

consider Bar Graph and select states in Dimensions and Female and male below 18 as measures . we will get this bargraph

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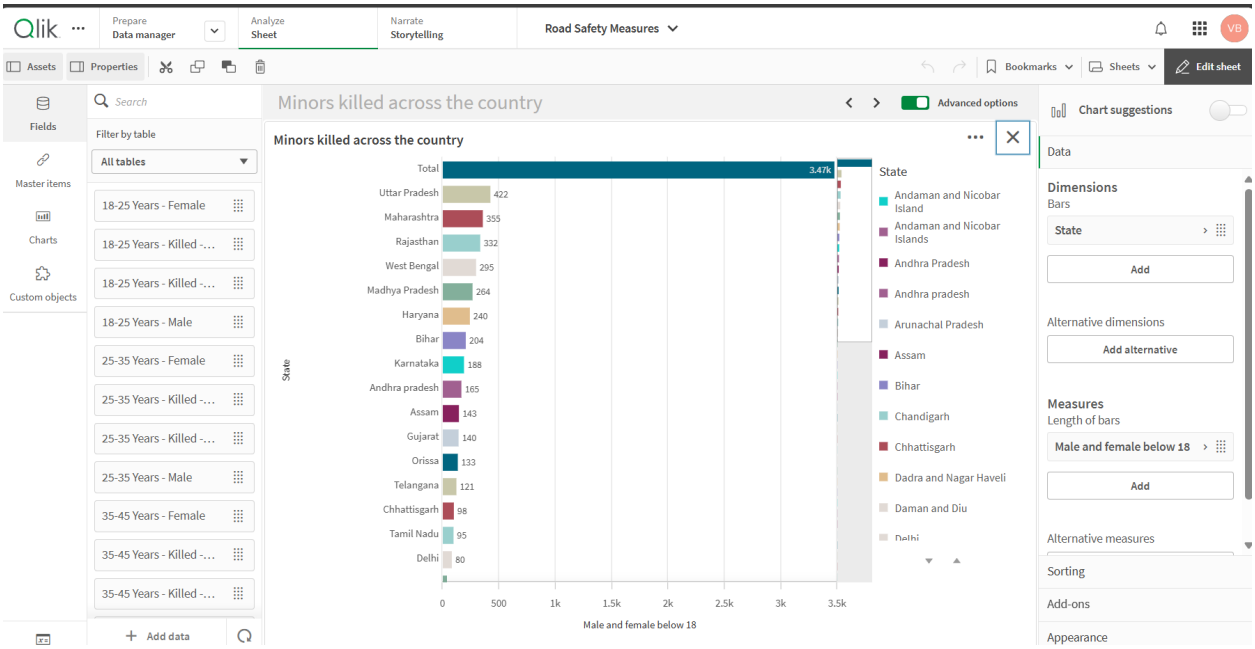

6) Dashboard :

select treemap and *select states in Dimensions and Jumping redlight killed as measures . we get the treemap varied state by dimension as color and select KPI and measure as Jumping redlight persons injured ,*

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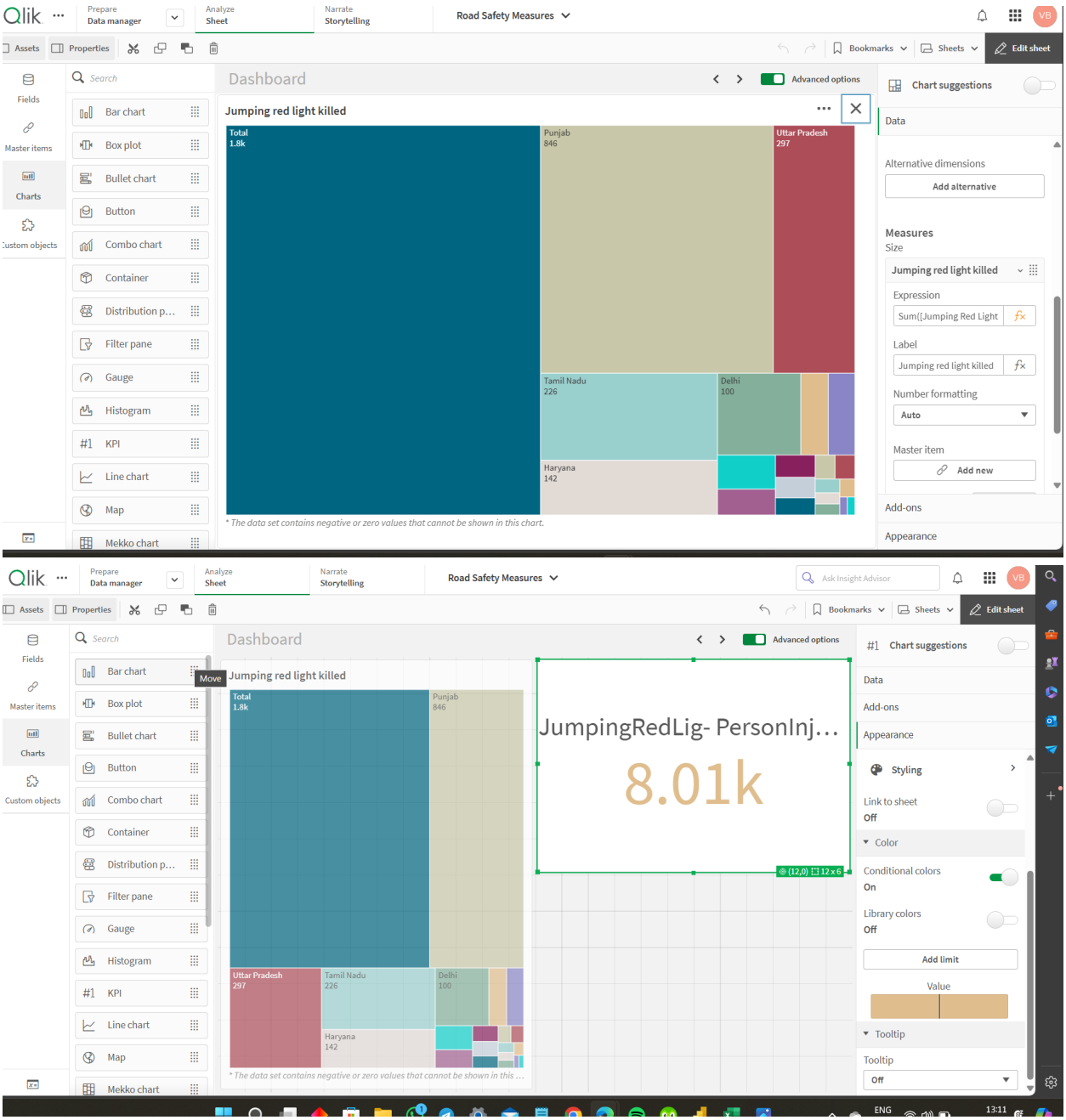

7)Story telling:

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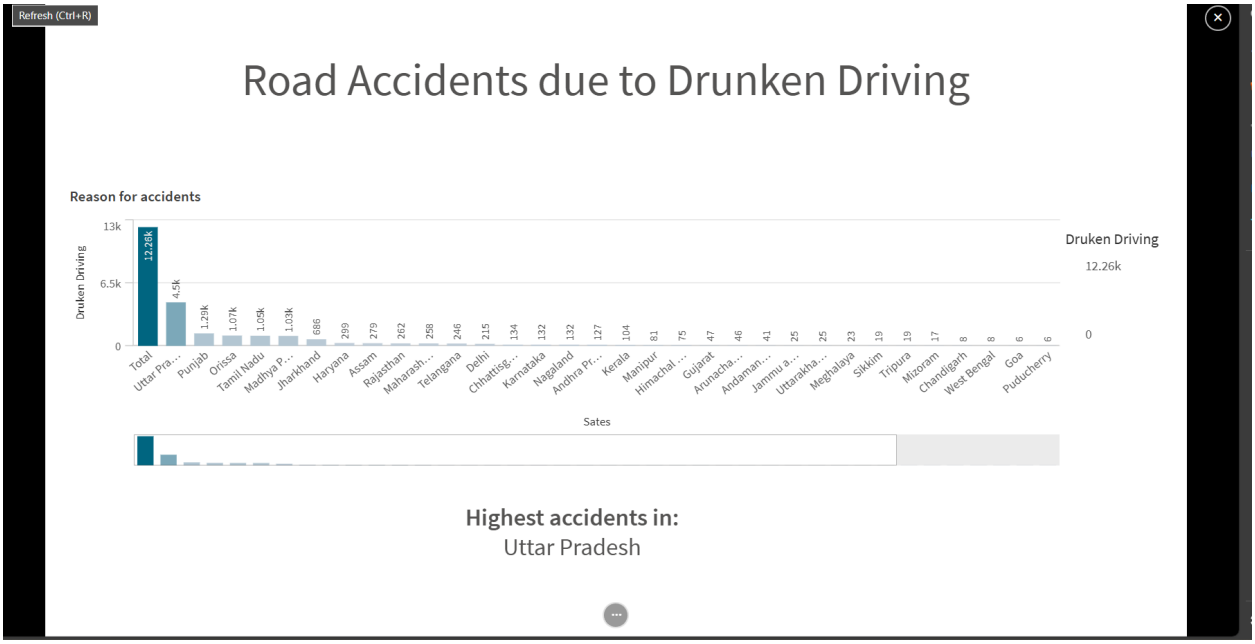

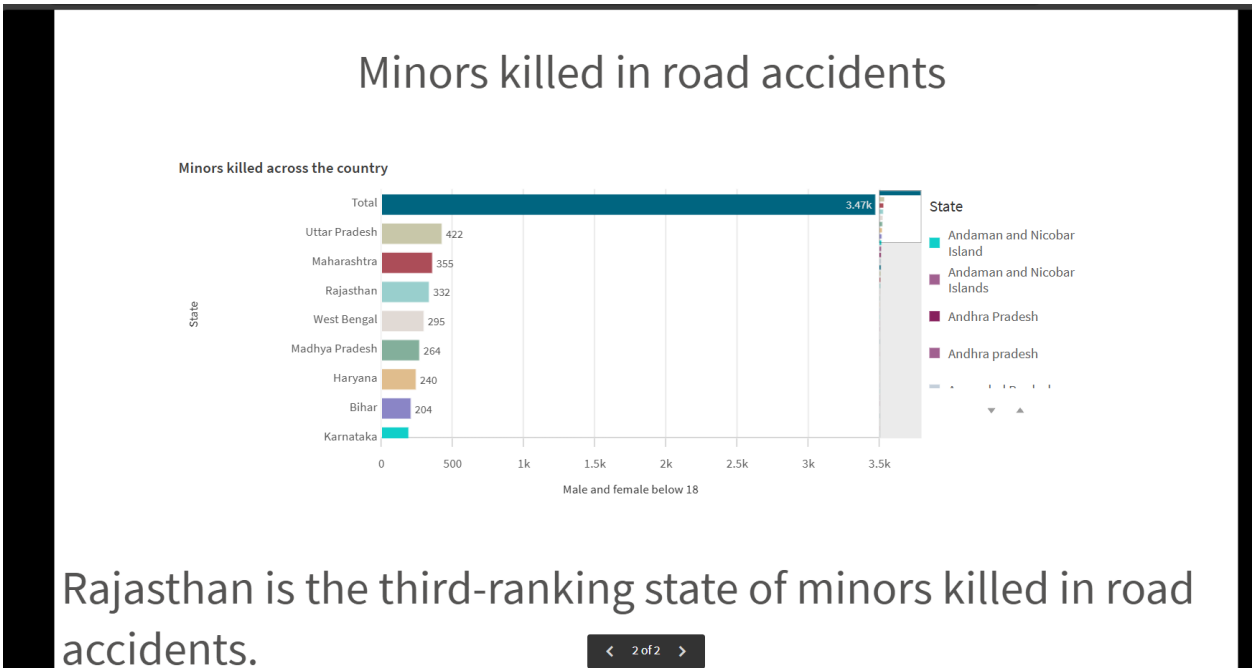

8) Performance testing:

Data Filters: Considered top 5 and last 10 of the states with highest and lowest values.

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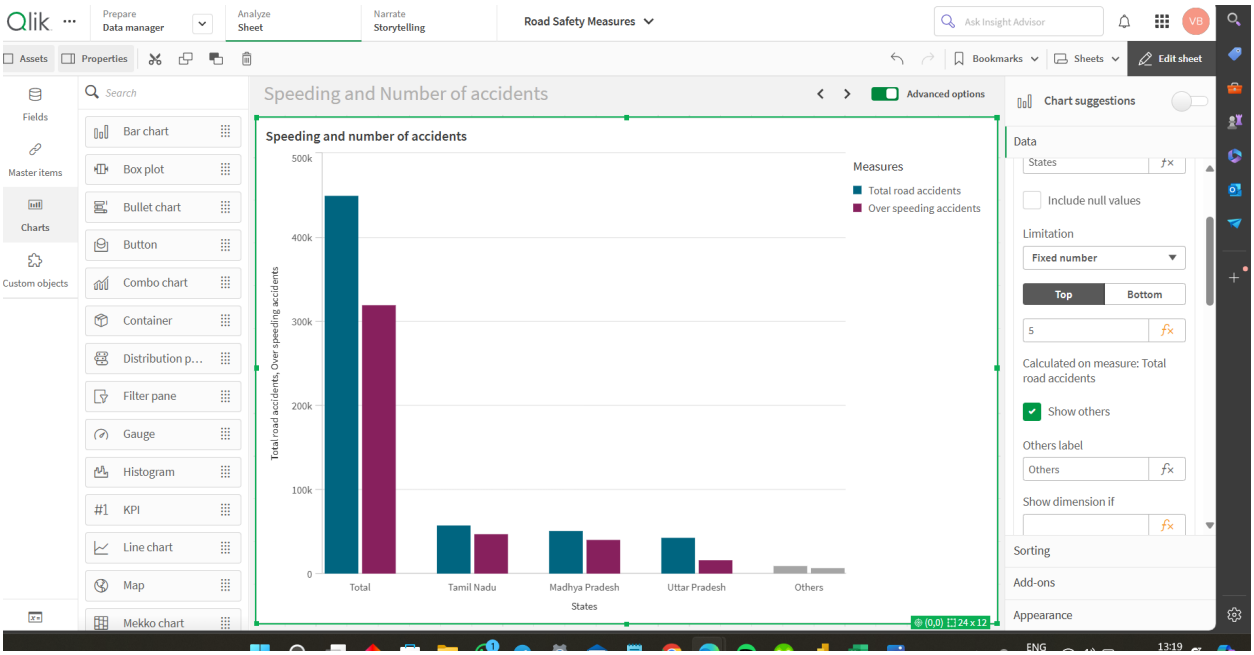

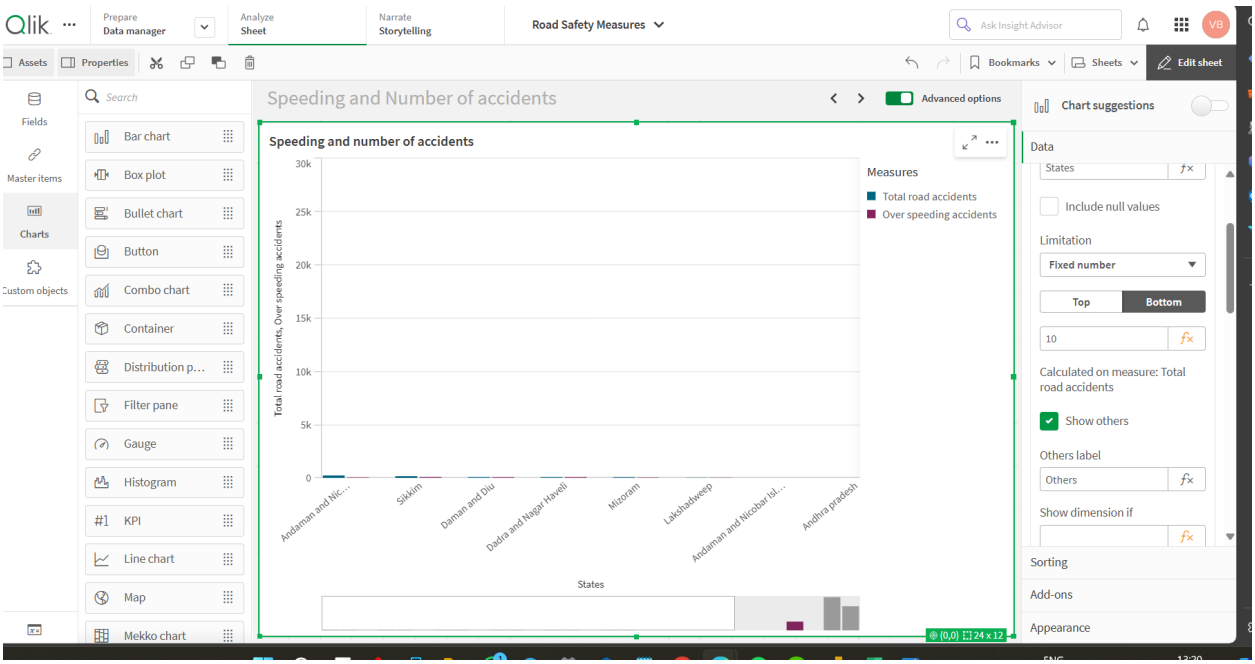

Master field:

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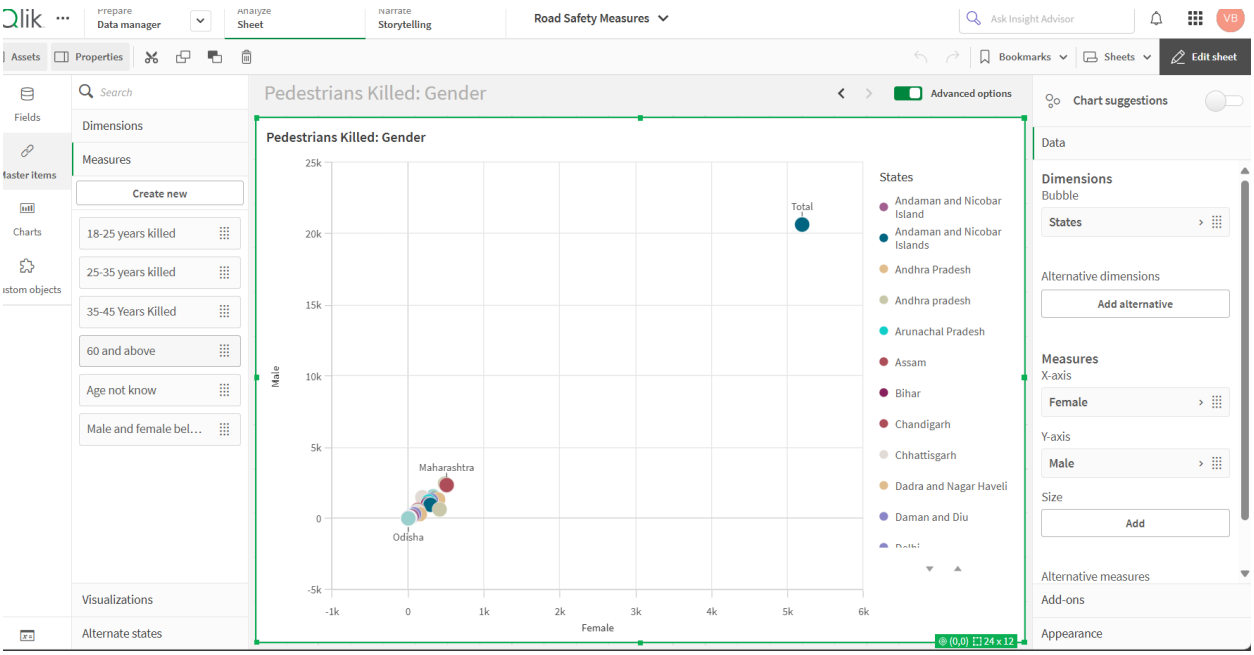

Number Of Graphs/ Visualizations:

1) Accidents due to Drunken Driving
2)State-wise Mobile Phone Usage
3)Pedestrians Killed: Age groups
4)Accidents by Weather Type
5)Pedestrians Killed: Gender
6)Road Users Killed: Vehicle Distribution
7)Correlation - Speeding and Number of accidents
8)Minors Killed across the country
9)Vehicle Contribution towards Total Accidents

Conclusion:

I will conclude by saying most of the accidents are occuring due to many factors like roads are not properly layed, traffic signals ,footpaths, lack of awareness regarding helmet and seatbelt importance . By improving infrasturcutres of bridges ,roads ,highways and traffic police duties and patrolling gonna decrease the accidents and emergency serivces should have to reach the accident area as soon as possible, by following and implementing all above aspects we can see an wide range of change in downfall of accidents as days go by.