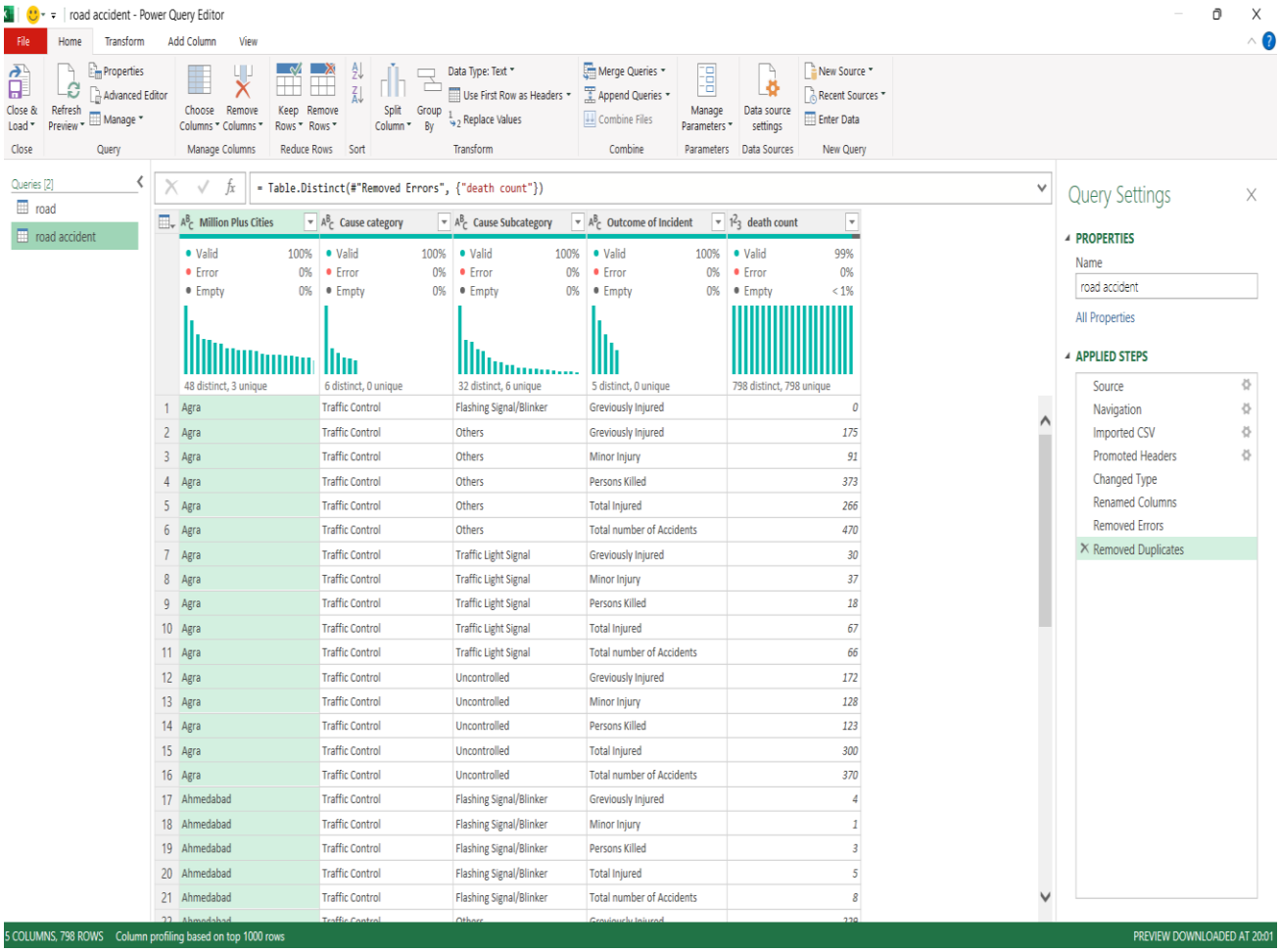
UNIFIED MENTOR- DATA ANALYTICS INTERNSHIP

PROJECT-2

Regulatory Affairs of Road Accident Data 2020 India

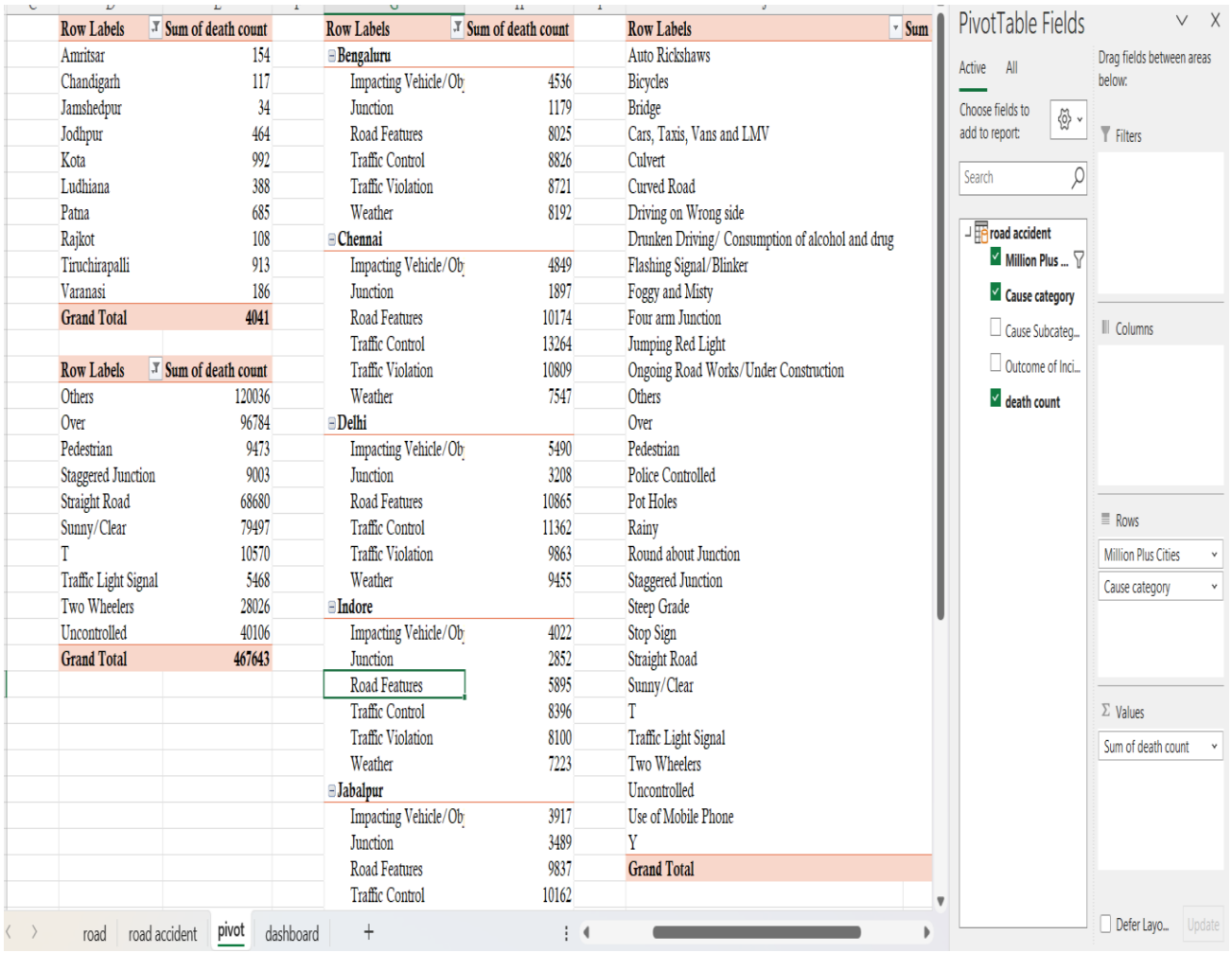
The project aimed to analyze road accident data with a focus on identifying key patterns in fatalities, injuries, and causes of death across various cities. The analysis provides insights for regulatory bodies to improve road safety and implement preventive measures.

Data Cleaning: The data was first cleaned to remove inconsistencies, missing values, and errors. This ensured accuracy in the analysis and visualizations, providing reliable insights.



Data Analysis:

- **Pivot Tables and Measures:** Pivot tables were created to summarize the data efficiently. Custom measures were added to enhance the analysis, such as the total number of fatalities, grievously injured, and majorly injured individuals.
- **Slicers:** Slicers were incorporated to allow dynamic filtering of data based on specific cities, helping us observe variations in accident outcomes city-wise. For instance, selecting Amritsar or Jabalpur updates the charts and measures accordingly, providing focused insights for each city.



Row Labels	Sum of death count
Amritsar	154
Chandigarh	117
Jamshedpur	34
Jodhpur	464
Kota	992
Ludhiana	388
Patna	685
Rajkot	108
Tiruchirapalli	913
Varanasi	186
Grand Total	4041

Row Labels	Sum of death count
Others	120036
Over	96784
Pedestrian	9473
Staggered Junction	9003
Straight Road	68680
Sunny/Clear	79497
T	10570
Traffic Light Signal	5468
Two Wheelers	28026
Uncontrolled	40106
Grand Total	467643

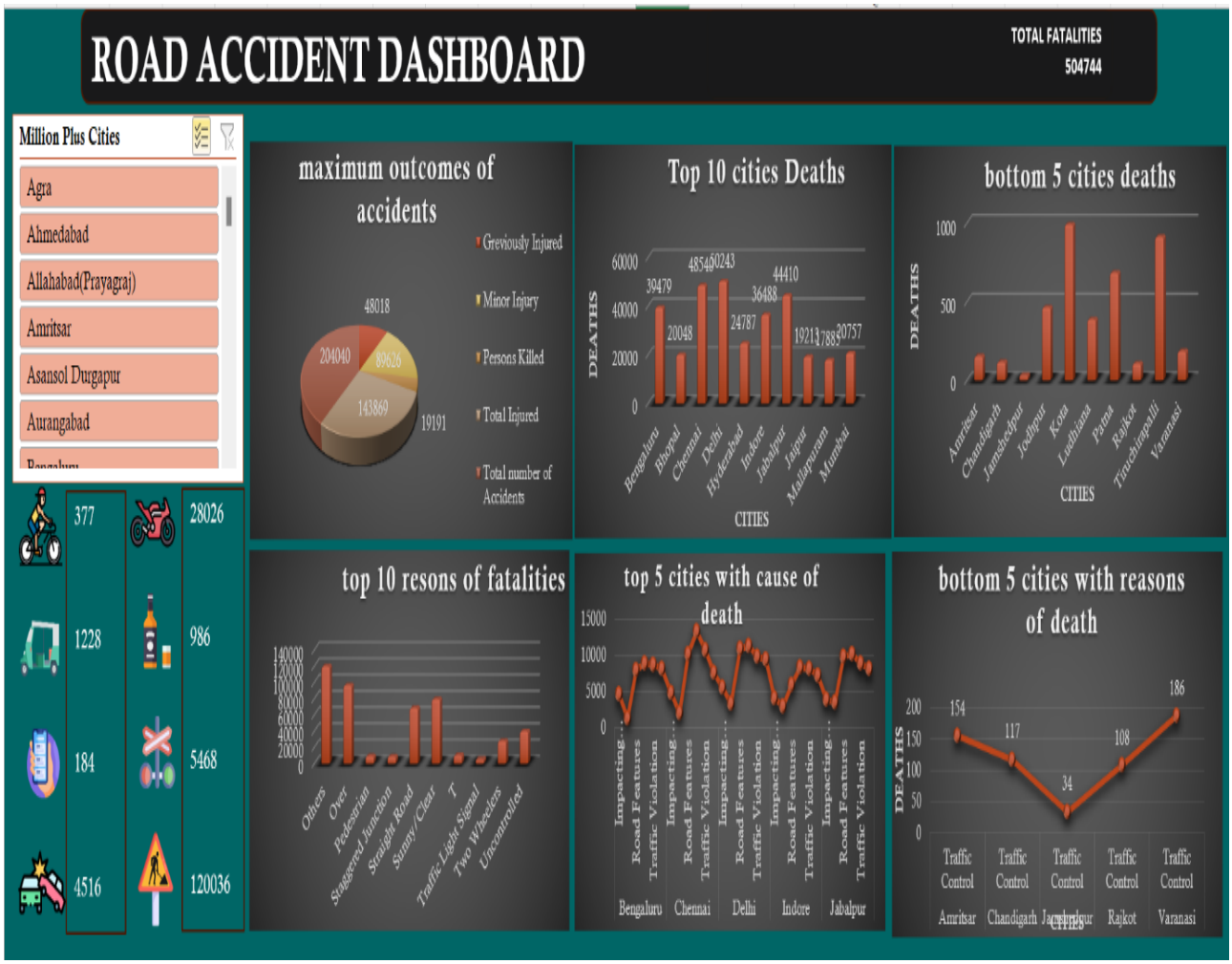
Row Labels	Sum of death count
Bengaluru	
Impacting Vehicle/Ob	4536
Junction	1179
Road Features	8025
Traffic Control	8826
Traffic Violation	8721
Weather	8192
Chennai	
Impacting Vehicle/Ob	4849
Junction	1897
Road Features	10174
Traffic Control	13264
Traffic Violation	10809
Weather	7547
Delhi	
Impacting Vehicle/Ob	5490
Junction	3208
Road Features	10865
Traffic Control	11362
Traffic Violation	9863
Weather	9455
Indore	
Impacting Vehicle/Ob	4022
Junction	2852
Road Features	5895
Traffic Control	8396
Traffic Violation	8100
Weather	7223
Jabalpur	
Impacting Vehicle/Ob	3917
Junction	3489
Road Features	9837
Traffic Control	10162

Row Labels	Sum
Auto Rickshaws	
Bicycles	
Bridge	
Cars, Taxis, Vans and LMV	
Culvert	
Curved Road	
Driving on Wrong side	
Drunken Driving/ Consumption of alcohol and drug	
Flashing Signal/Blinker	
Foggy and Misty	
Four arm Junction	
Jumping Red Light	
Ongoing Road Works/Under Construction	
Others	
Over	
Pedestrian	
Police Controlled	
Pot Holes	
Rainy	
Round about Junction	
Staggered Junction	
Steep Grade	
Stop Sign	
Straight Road	
Sunny/Clear	
T	
Traffic Light Signal	
Two Wheelers	
Uncontrolled	
Use of Mobile Phone	
Y	
Grand Total	

Pie Charts: Illustrated the distribution of accident outcomes (e.g., fatalities vs. injuries) across cities.

Bar Charts: Showcased the top 5 and bottom 5 cities with the highest and lowest fatalities due to accidents, highlighting cities that need immediate attention.

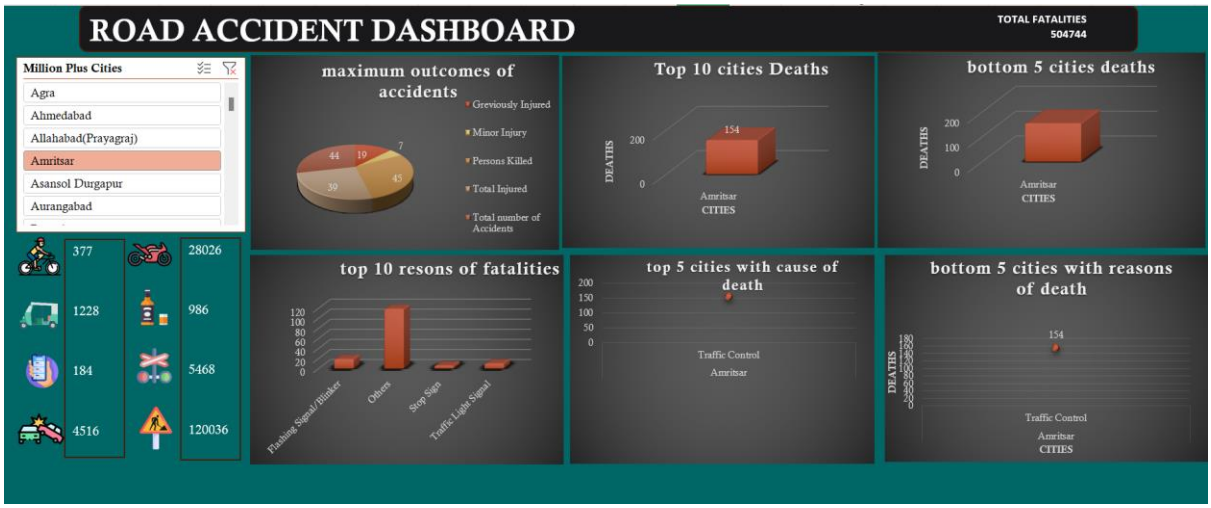
Line Charts: Tracked trends over time or across different causes of accidents.



Top 5 Cities: Cities with the highest number of fatalities were identified, offering potential areas for targeted intervention.

Bottom 5 Cities: Cities with the lowest fatalities were noted, possibly indicating effective road safety measures in place.

Top 10 Causes of Death: The most common reasons for road accidents leading to death were identified, such as speeding, drunk driving, and lack of seatbelt use.

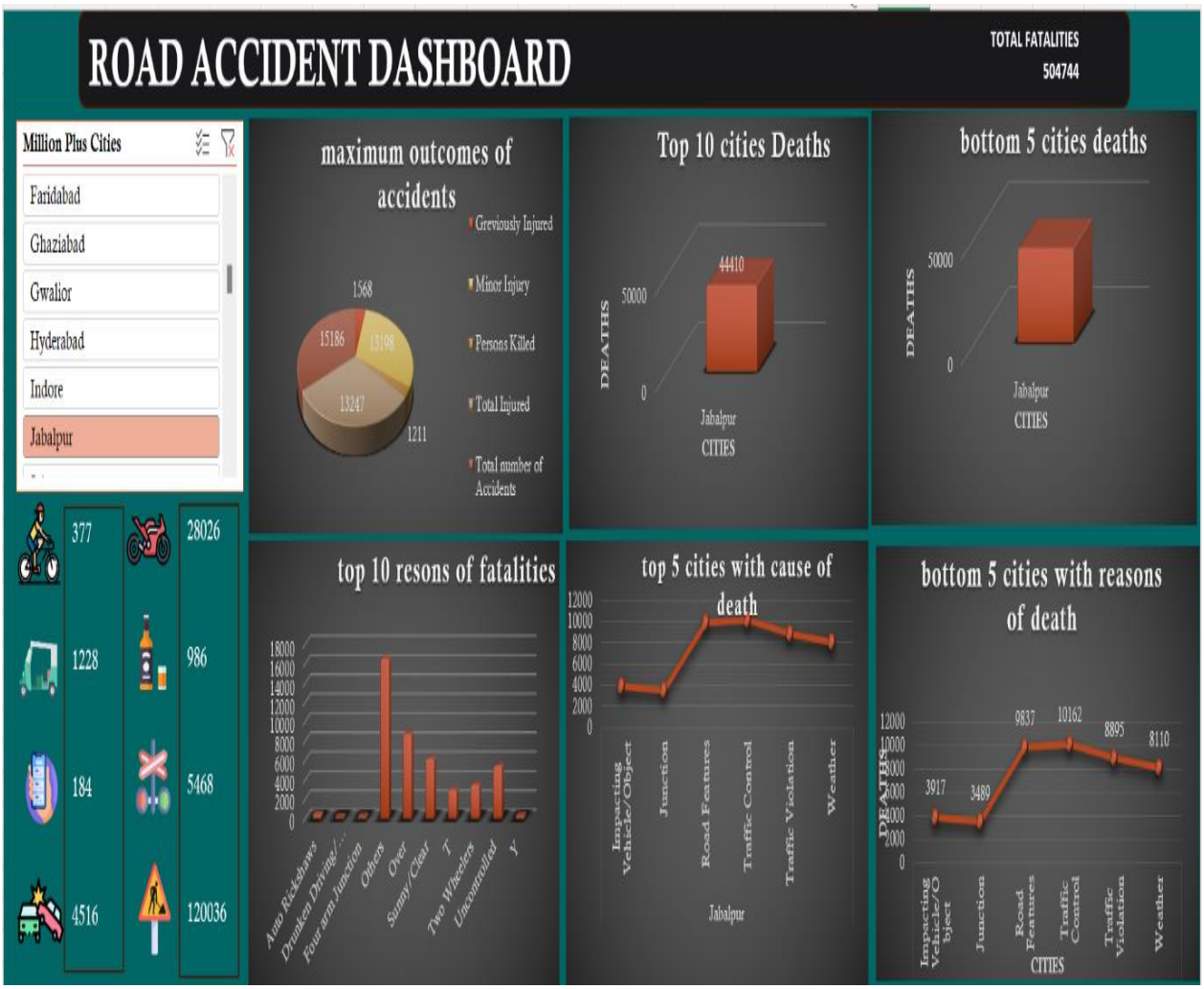


The analysis categorized accident outcomes into:

- Grievously Injured
- Majorly Injured
- Person Killed

This segmentation helps authorities focus on both injury prevention and fatality reduction.

The use of slicers allowed for city-specific analysis. For instance, selecting "Amritsar" or "Jabalpur" dynamically updated the charts and revealed localized insights into accident patterns, showing different trends based on geography.



Conclusion: This project highlights the critical need for targeted safety measures in high-fatality cities and emphasizes the importance of addressing common causes of road accidents. The findings provide a foundation for regulatory bodies to implement data-driven policies aimed at reducing road accident fatalities and injuries.

I am also attatching in here my github link

Thank you for taking the time to review this Regulatory Affairs in Road Accidents analysis presentation. I hope the insights and recommendations provided offer valuable perspectives.

-Swikriti Khare