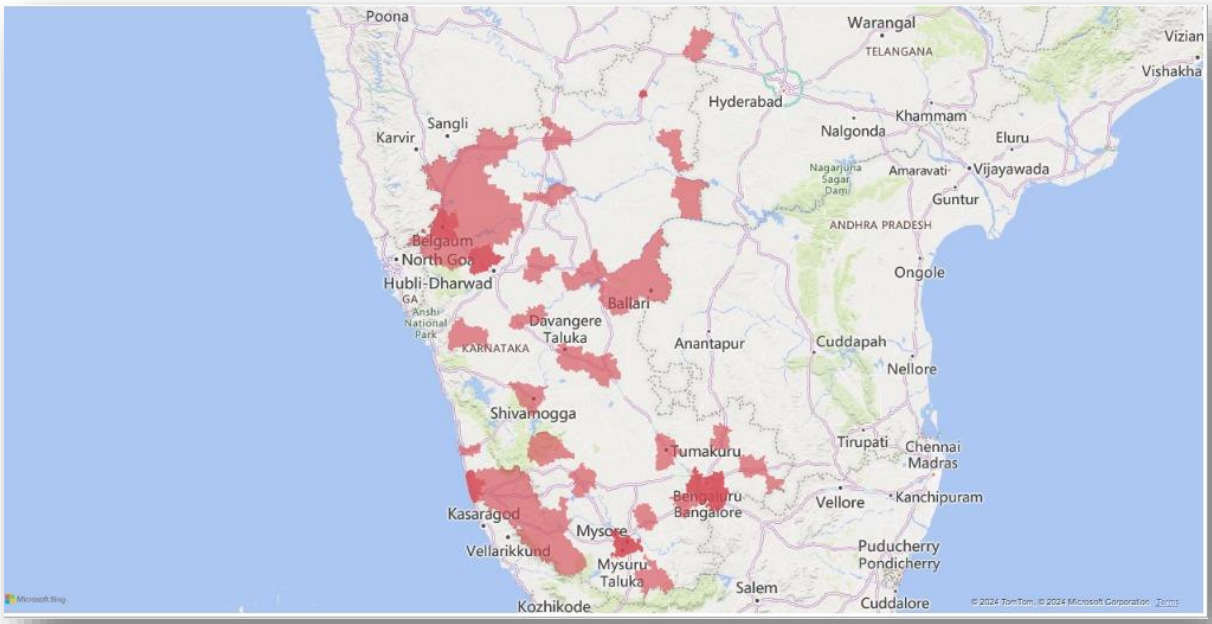
1) Analysis of Black spots of accidents as well as predicting future black spots (Grey Spots).

1. District wise Black spots mapping

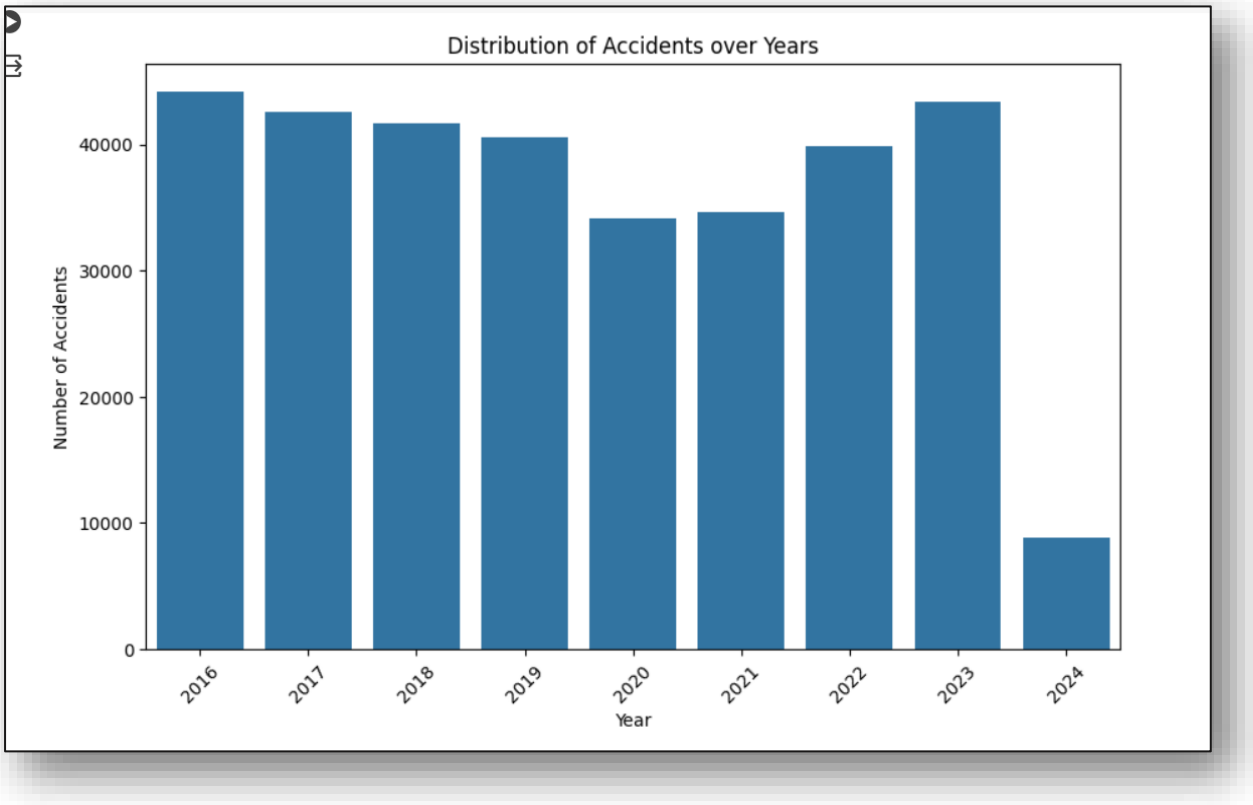


Conclusion – District-wise black spots are mapped in red, allowing for real-time prediction of blackspots within a 5 km distance.

Even our model can predict future blackspots based on the analysis data .

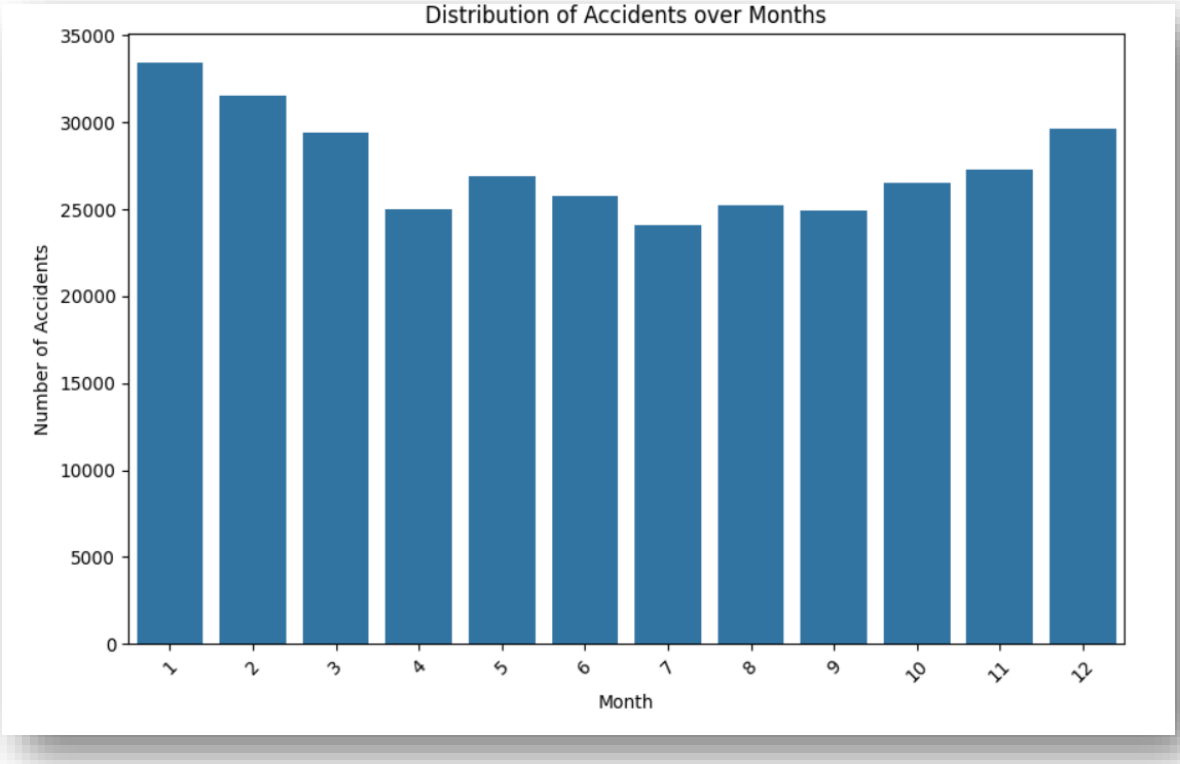
2) Analysis of the date and time of the accidents and predicting the probability of occurrence of such accidents.

1) Analysis of accident over years



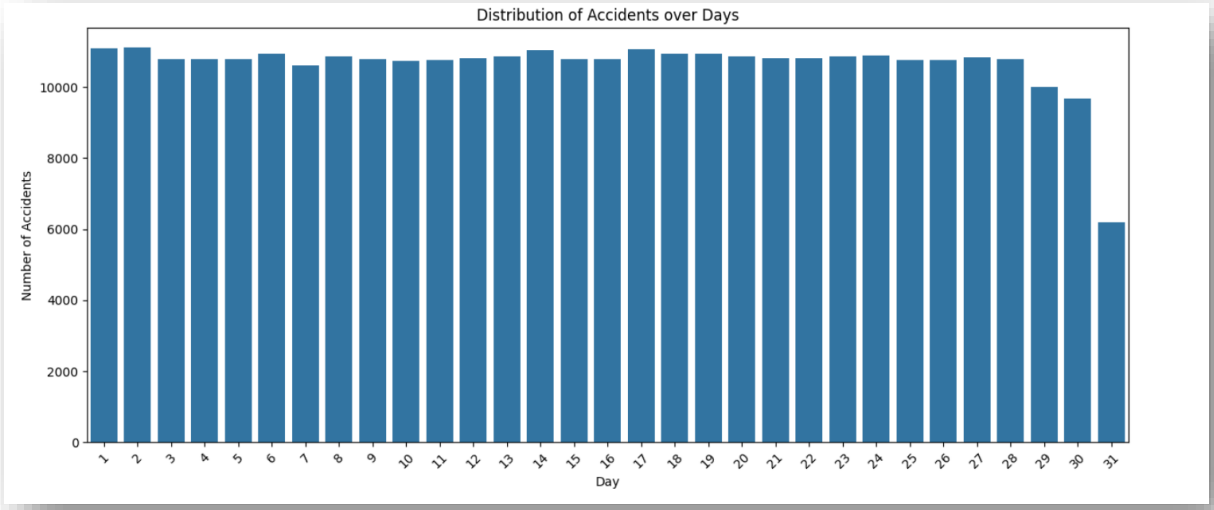
Conclusion – As we can see from analysis most accident occur more in 2023, 2016 and least in 2024.

2) Occurrences of accident over months



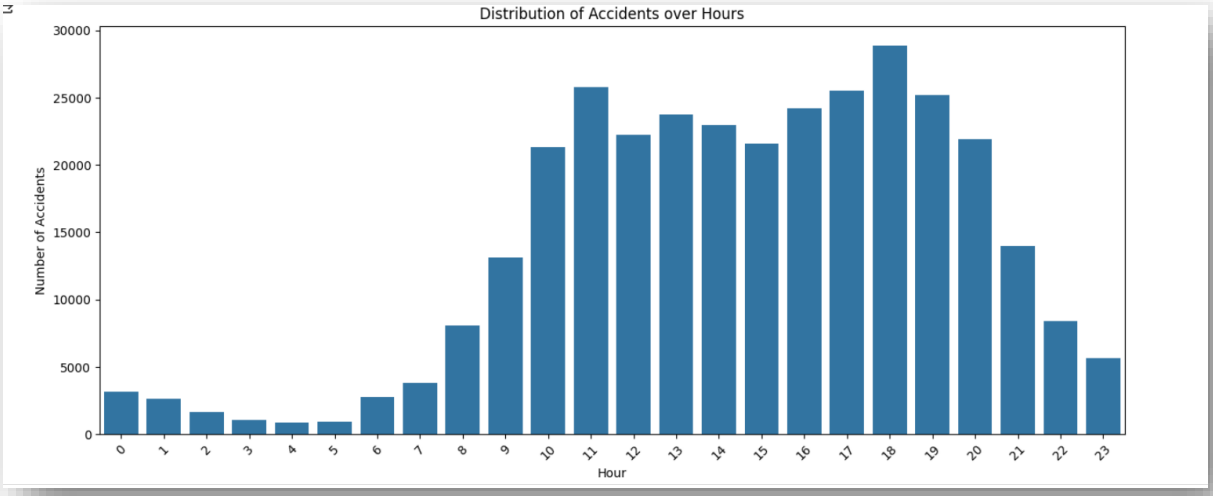
Conclusion- As we can see that the most of the accident occur in January, December and least in July.

3)Distribution accident over days



Conclusion – The distribution of accidents across days appears to be fairly uniform, except for the 31st day of the month, which is less common due to not being present in all months.

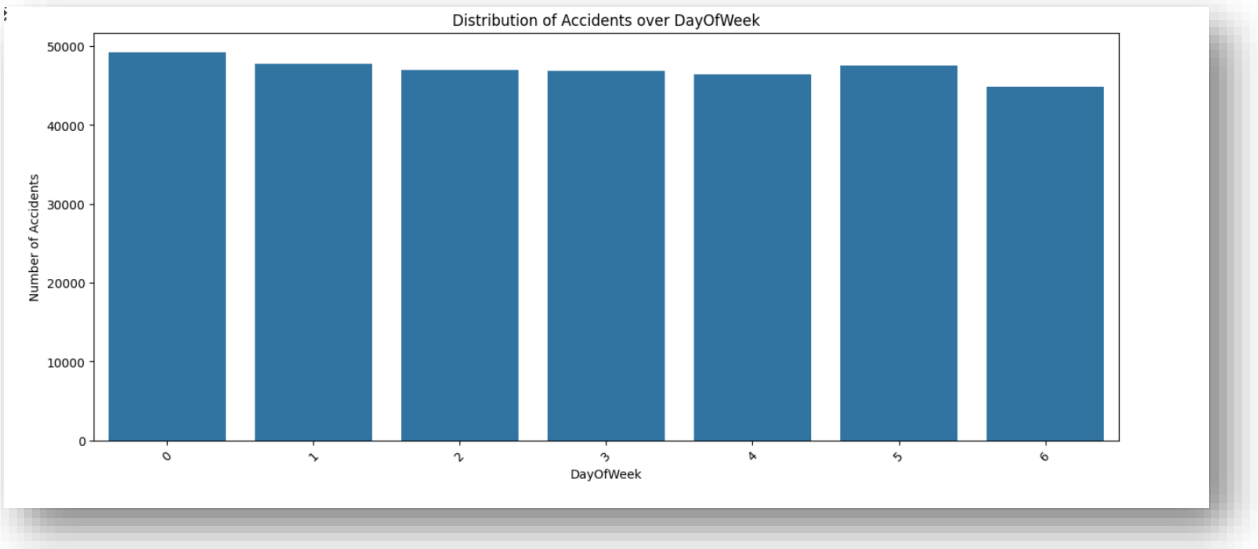
4) Occurrence of accident over hours



Conclusion -It was observed that most of the accident has happened in the office going time and at the time of coming back to home at evening.

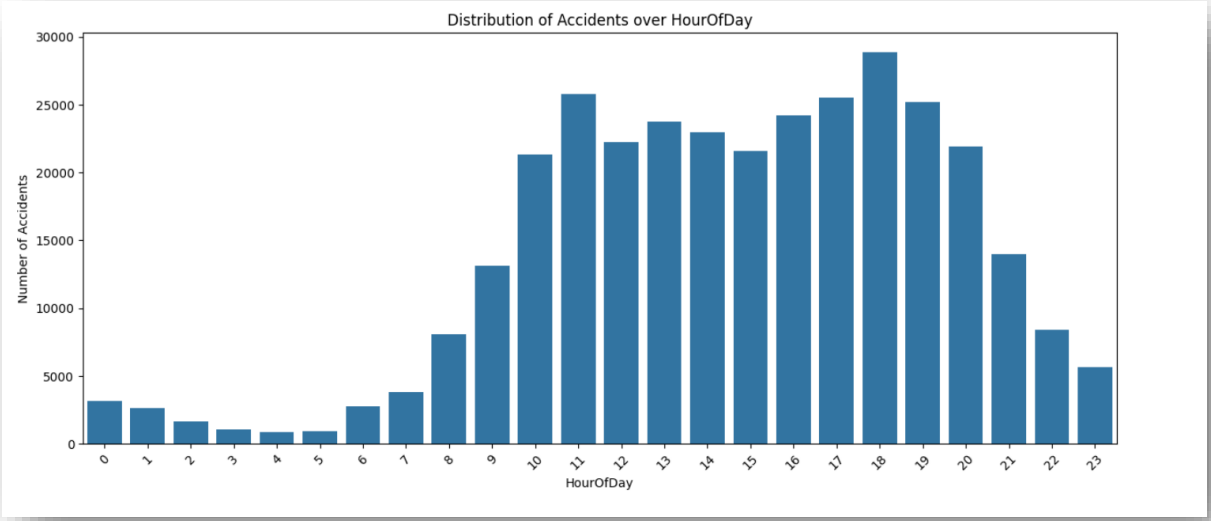
Also due to high traffic in afternoon it was observed that mostly accident happened in day time

5) occurrence of accident over days of weeks



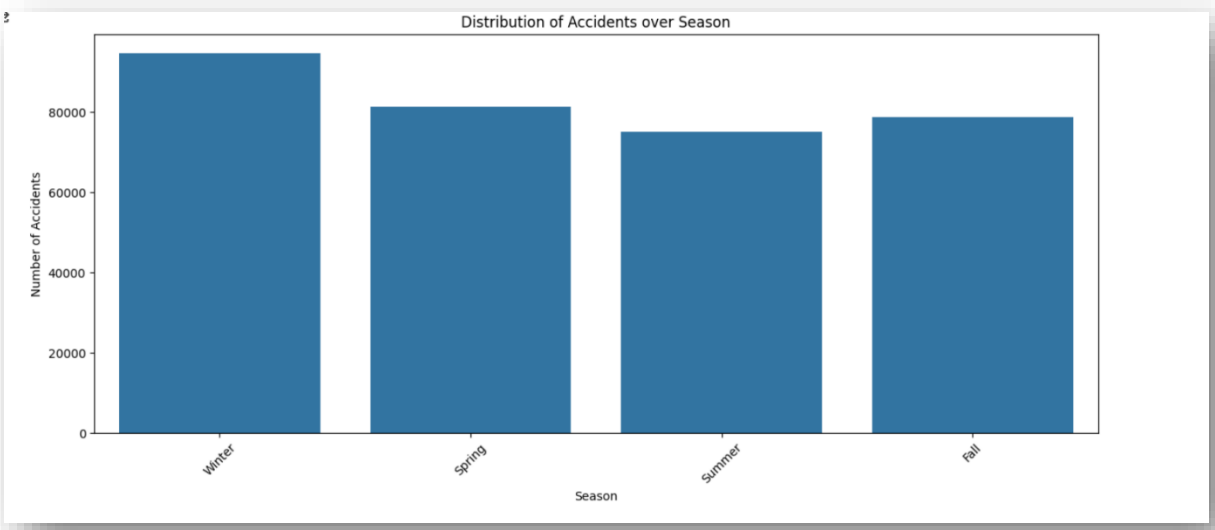
Conclusion – There is no specific day that has maximum number of accident happened. It was observed that all day has equal accident.

6) occurrence of accident over Hours of Days



Conclusion – There is no specific day that has maximum number of accident happened. It was observed that all day has equal accident.

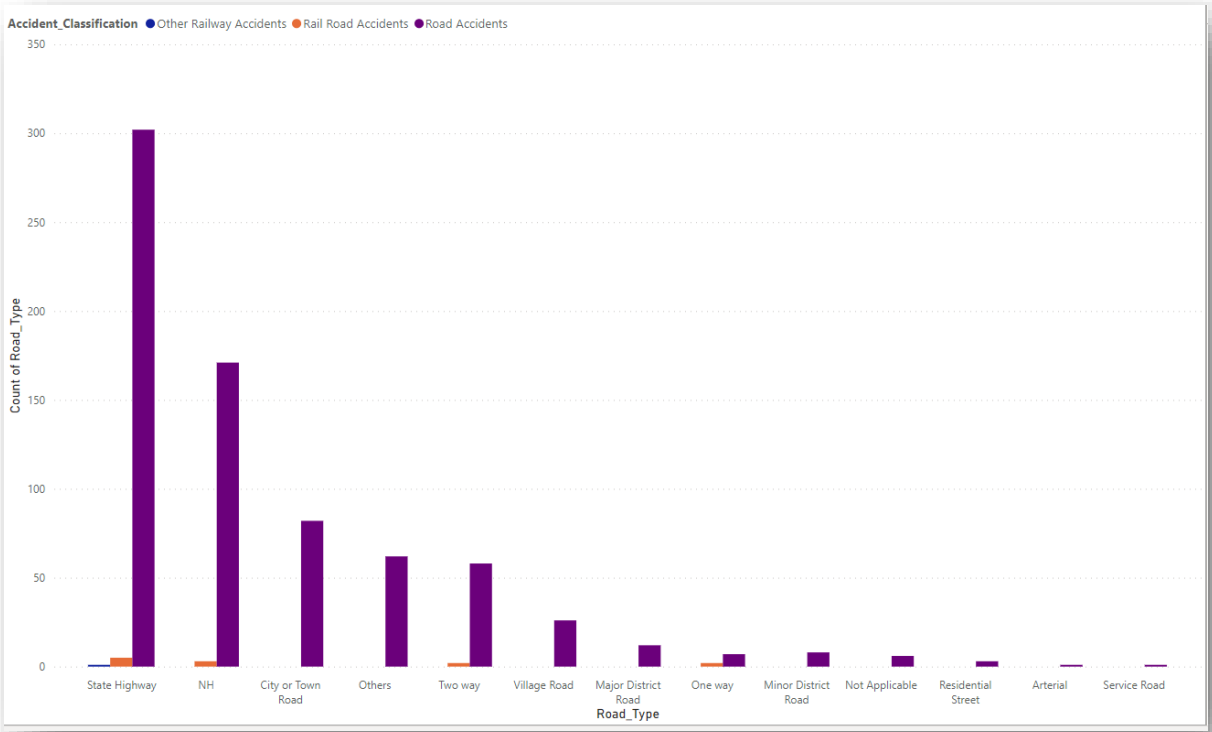
7) occurrence of accident over season



Conclusion- as we can see that most of the accident occur in winter

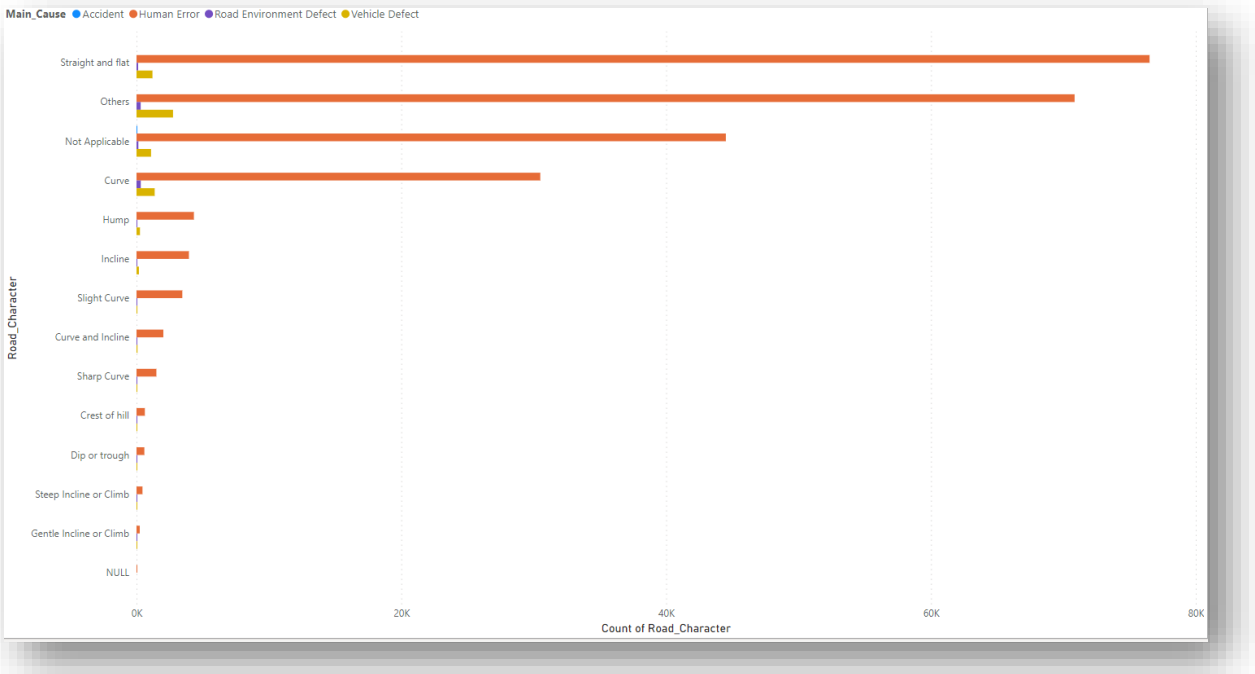
3)Analysis of the roads on which the accidents are taking place like National highways, state highways, village roads, etc

1) Count of Road_type by road _type and accident_classification



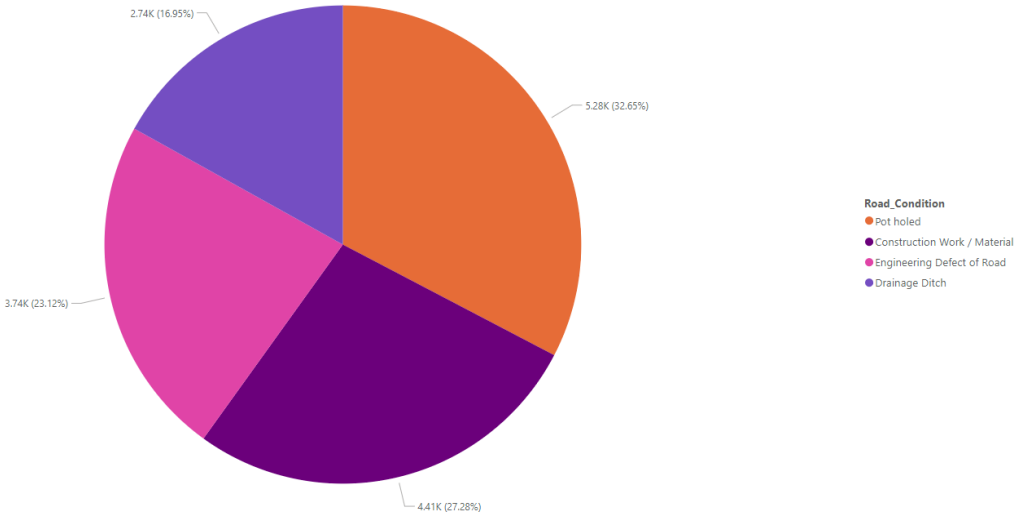
Conclusion - From the above analysis we can clearly see that most of the accident occur on national highway and state highway

2)count of road character by road character and main cause



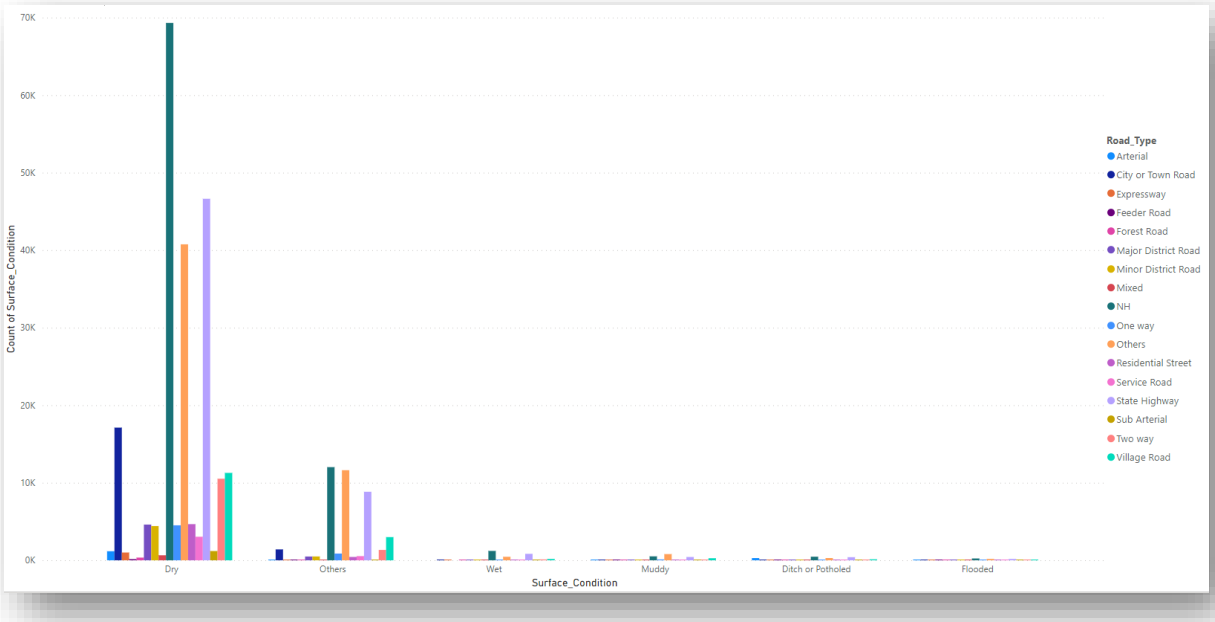
Conclusion – most of the accident have occurred on the straight and flat roads this means that most of the accident occur due to the human error.

3) Count of road condition by road condition



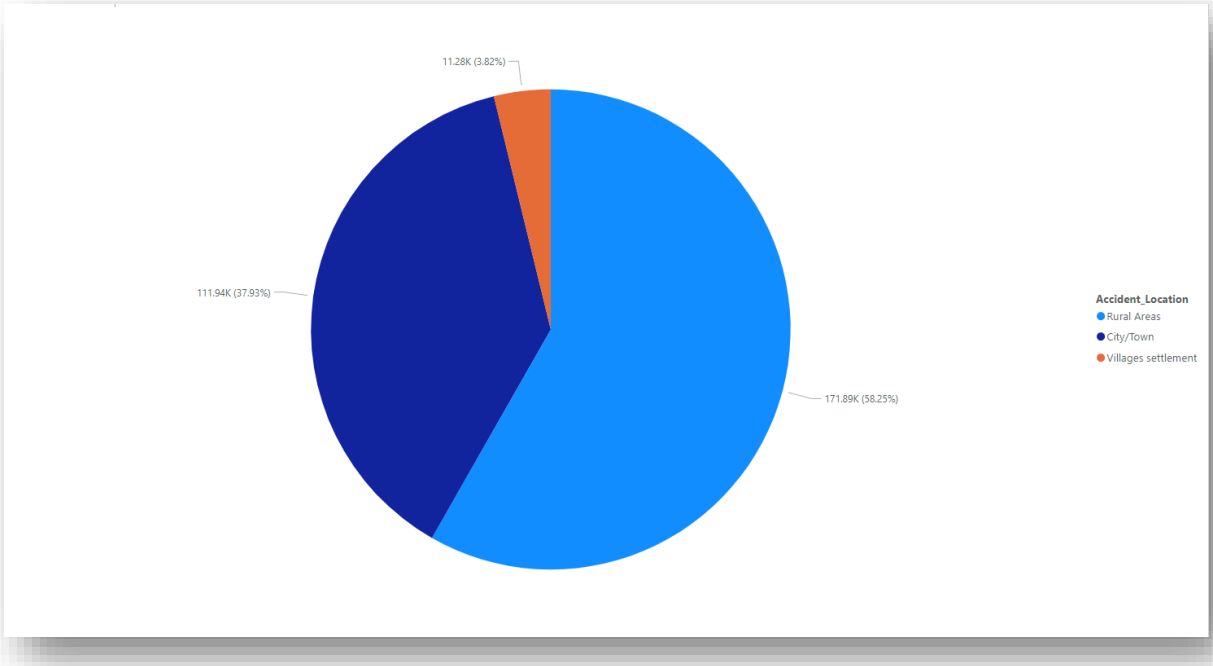
Conclusion – The road condition don’t apply to most of the cases this show that road condition do not contribute to most of the accident .

4) **Count of Surface_Condition by Surface_Condition and road _type**



Conclusion – we can clearly see that accident have occurs on dry surface condition this ensure that weather condition in karnataka do not affect the accident .

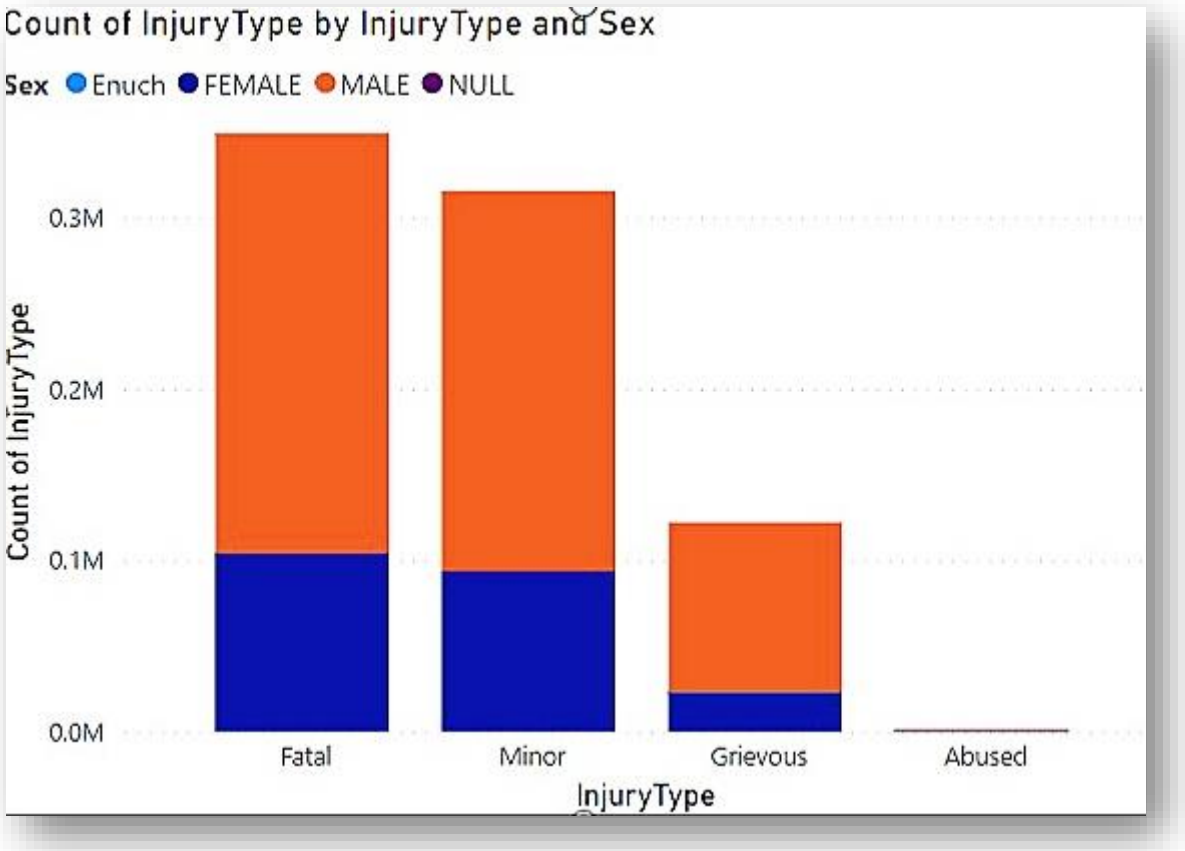
5)Count of accident_location by accident_location



Conclusion -Most of the accident occur in the highway going through rural areas.

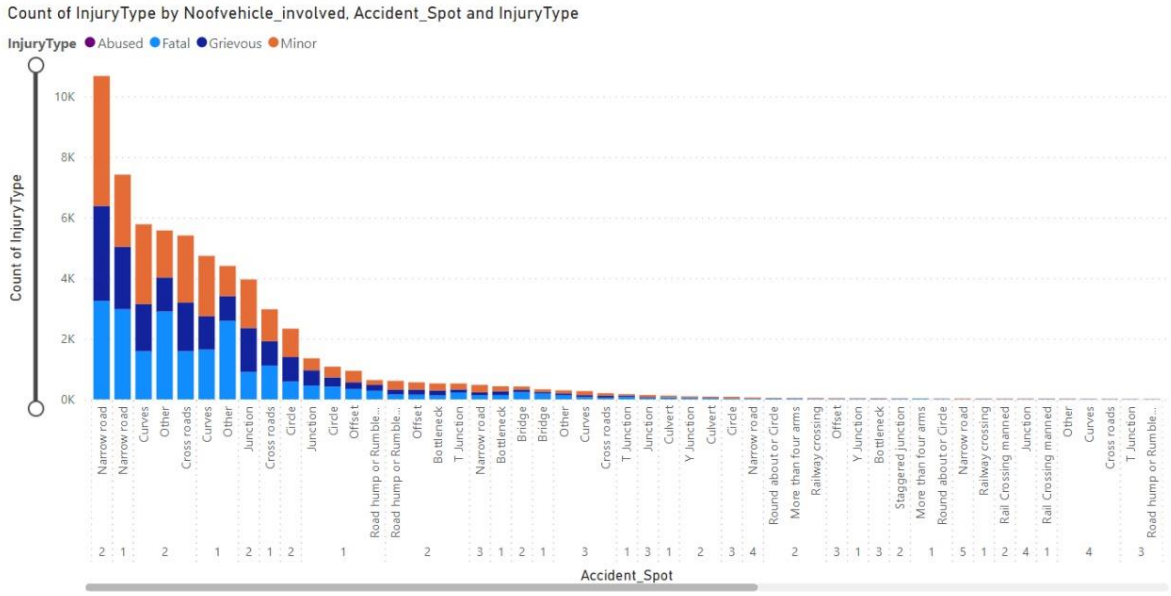
4)Contributing factors for multiple injuries/fatalities and solutions.

1) Count of Injury by Injury type and sex



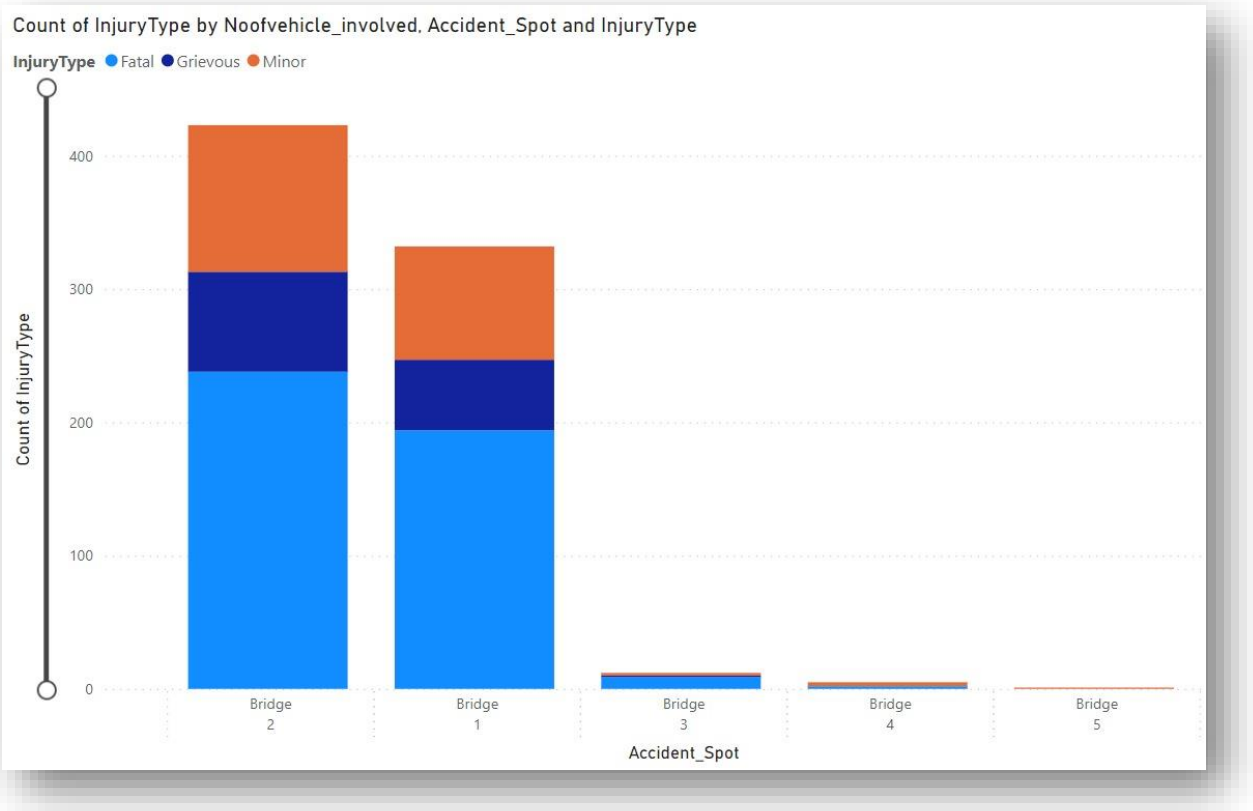
Conclusion- In this analysis males are more frequently injured in all type of injury.

2)Count of injury type by no of vehicle involved, accident spot and injury type



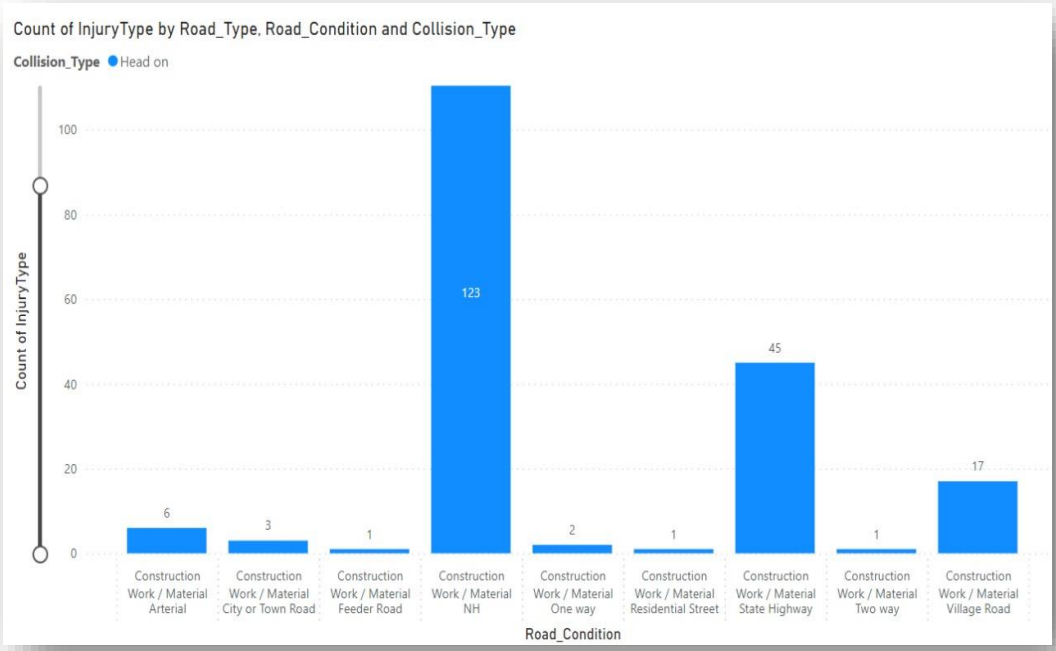
Conclusion – On narrow roads with the count of 2 vehicle , minor injuries occurred more frequently

3)Count of injury type by no of vehicle involved , accident spot and injury type



Conclusion- In this analysis the count of fatal injuries is higher by 2 vehicle compared to other types of injuries at the bridge accident spot .

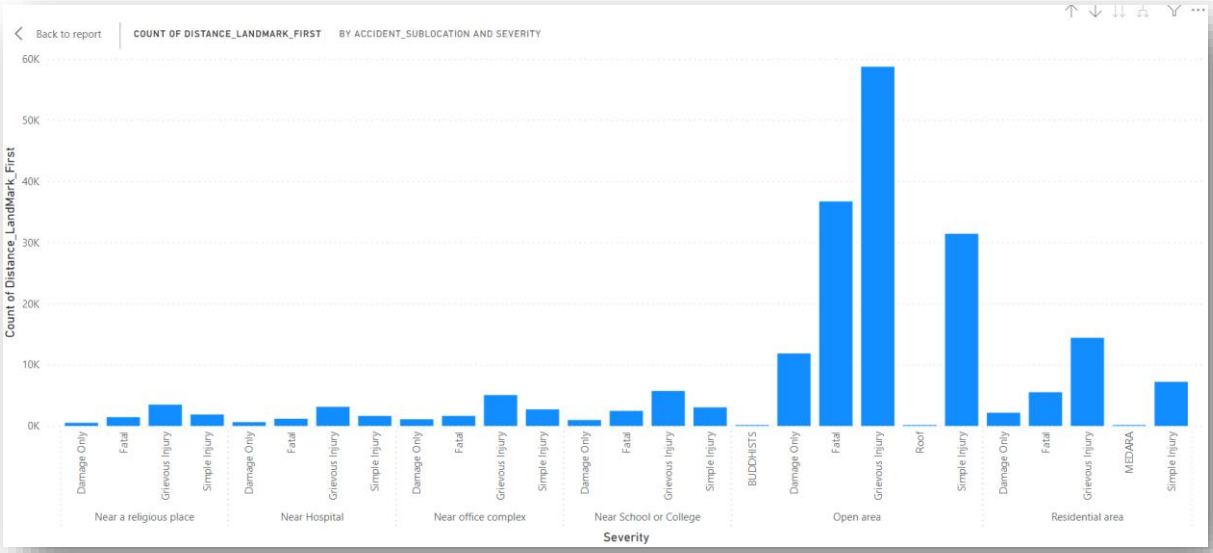
4)Count of injury by road type , road condition and collision type



Conclusion – Construction work on national highway poses a higher risk of fatal injuries compared depicted in the graph .

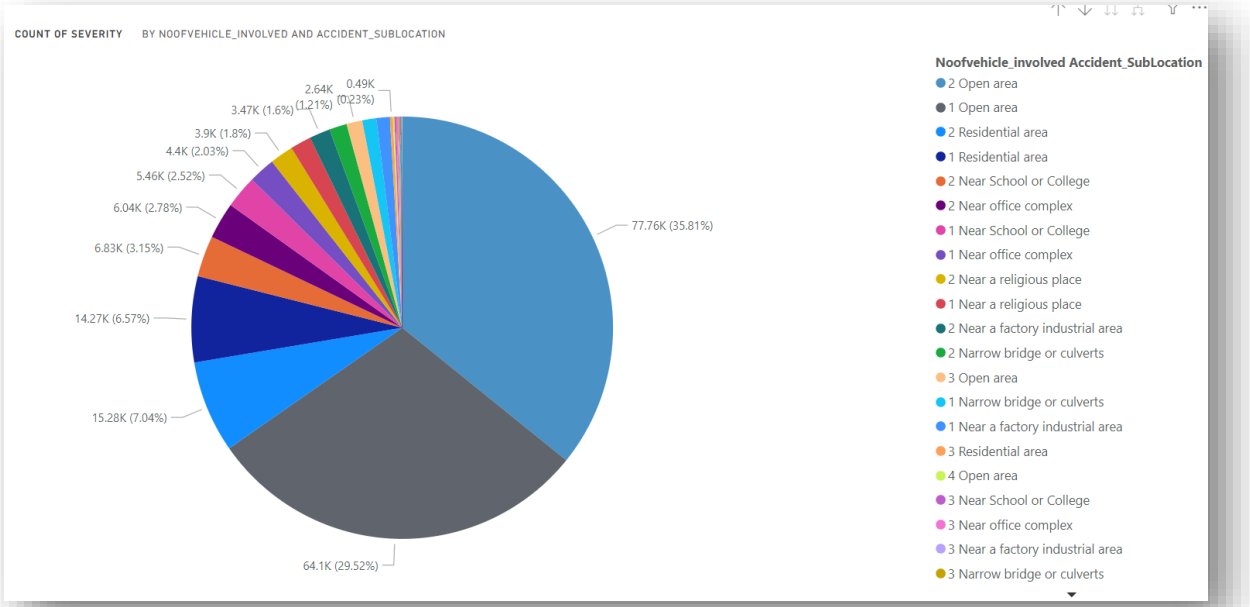
5)Analysis of landmarks near the accidents like the presence of railway crossings, schools, religious places, pubs, bars, office areas, residential areas, etc.

1)Count of distance landmark first by accident sublocation and severity



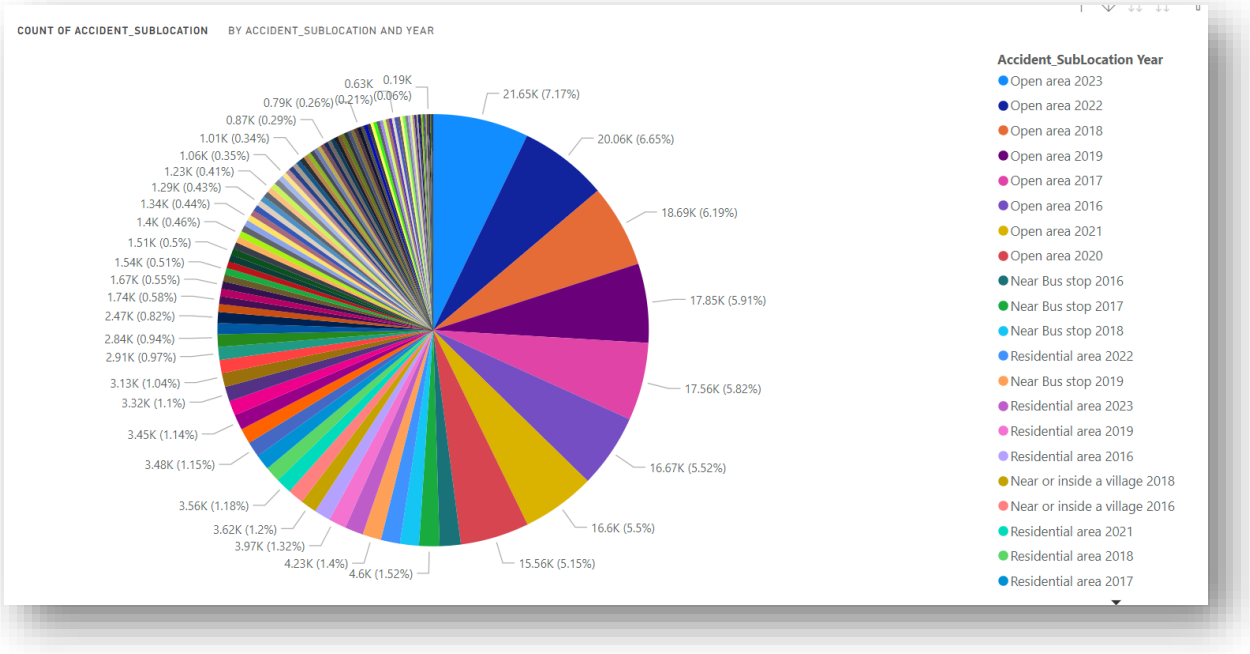
Conclusion- as we can see that most of the accident occur in open area where severity of accident is grievous injury

2) Count of severity by no of vehicle involved and accident sublocation.



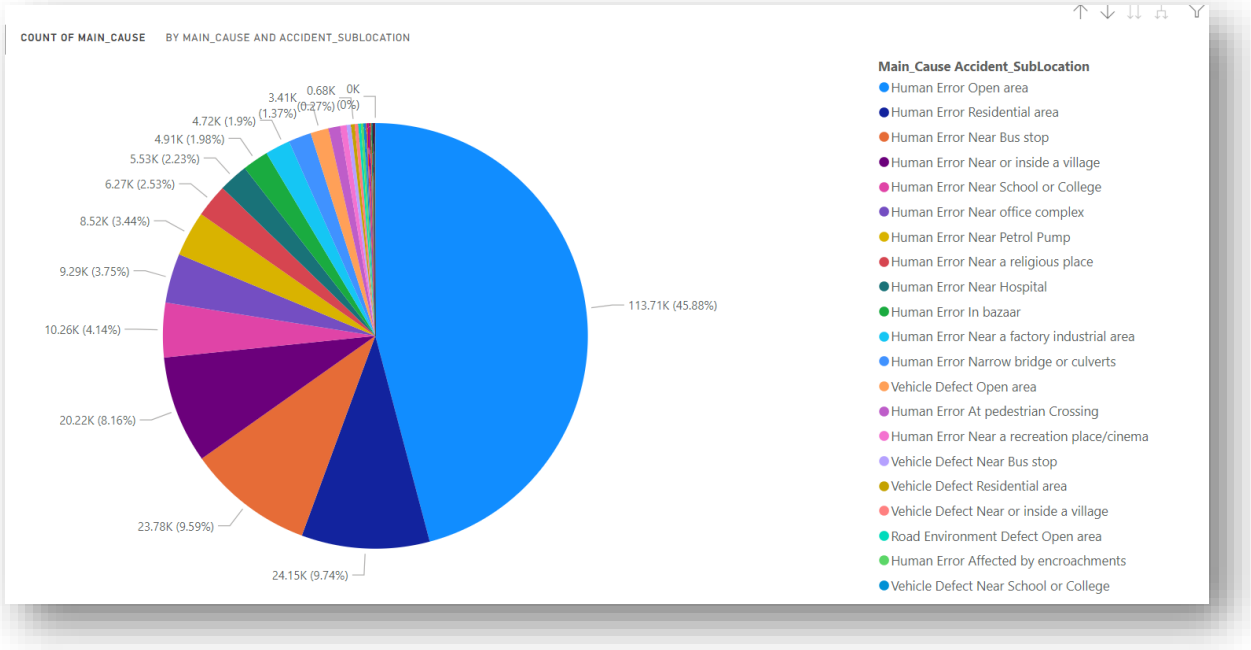
Conclusion – as we can see that accident occur more in open area where the cause was 2 vehicle involved .

3) Count of accident sublocation by accident sublocation and year.



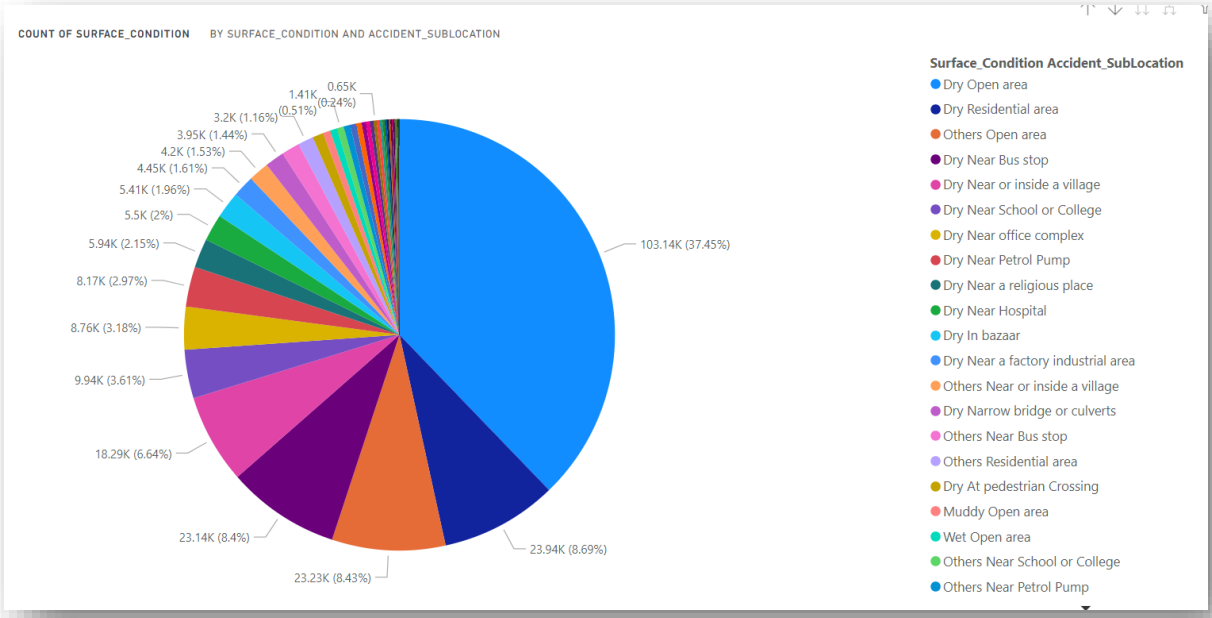
Conclusion – the most of the accident occur in 2023 where the landmark is open area .

4) Count of main cause by main cause and accident sublocation



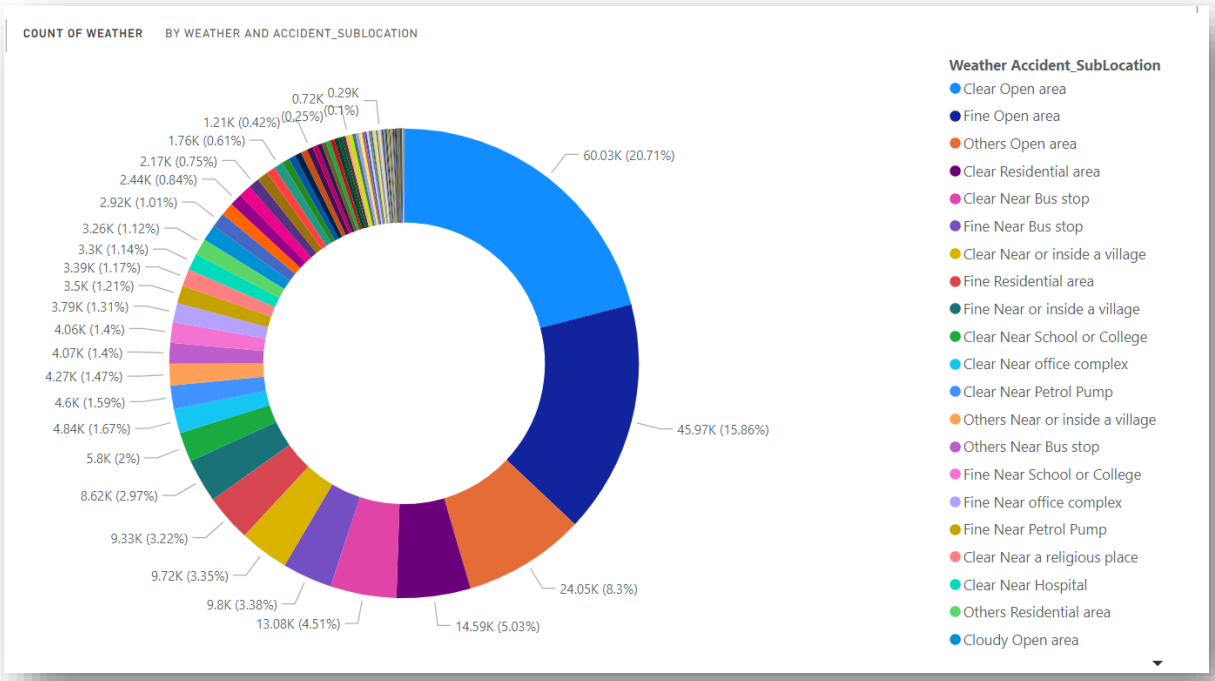
Conclusion – most of the accident occur due to human error in landmark open area .

5) Count of surface condition by surface condition and accident sublocation



Conclusion- accident occur in dry condition where accident location is open area.

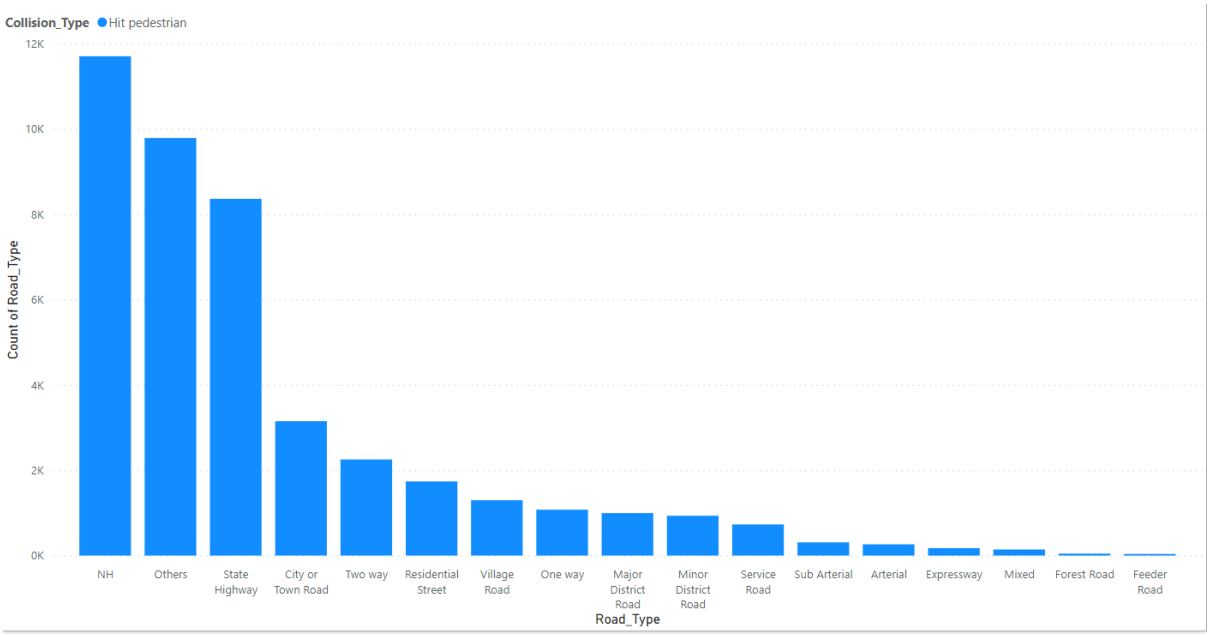
6)Count of weather by weather and accident sublocation



Conclusion- most of the accident occur where the weather is clear and landmark is open area.

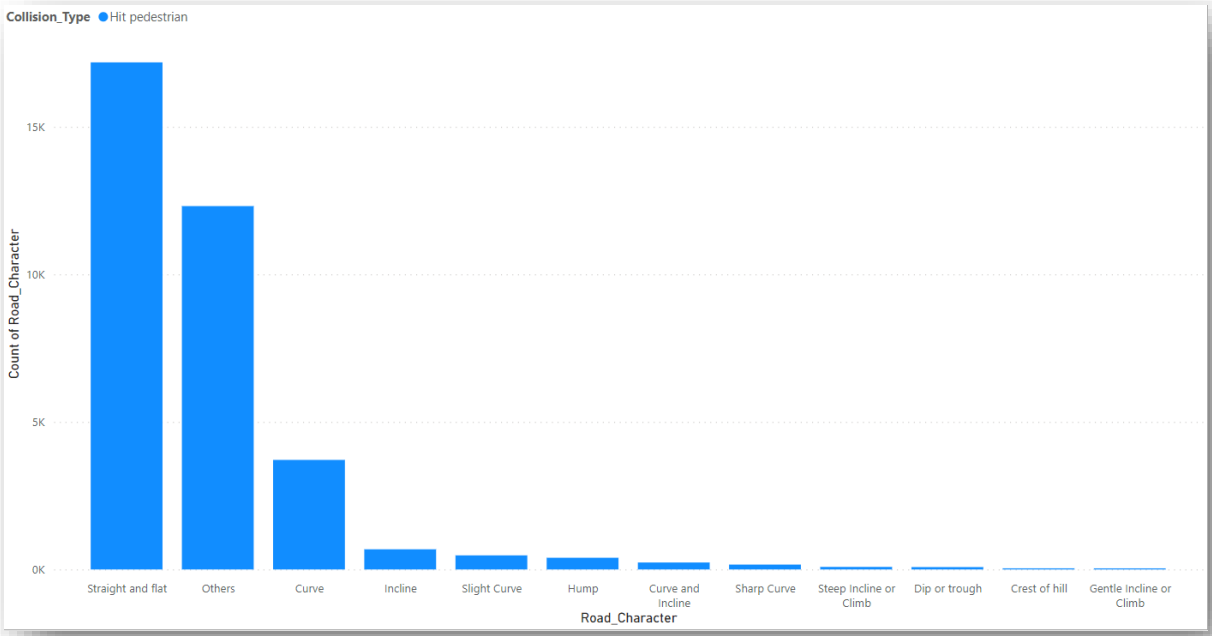
7)Analysis of pedestrian accidents and their behaviour.

1)Count of road type by road type and collision type



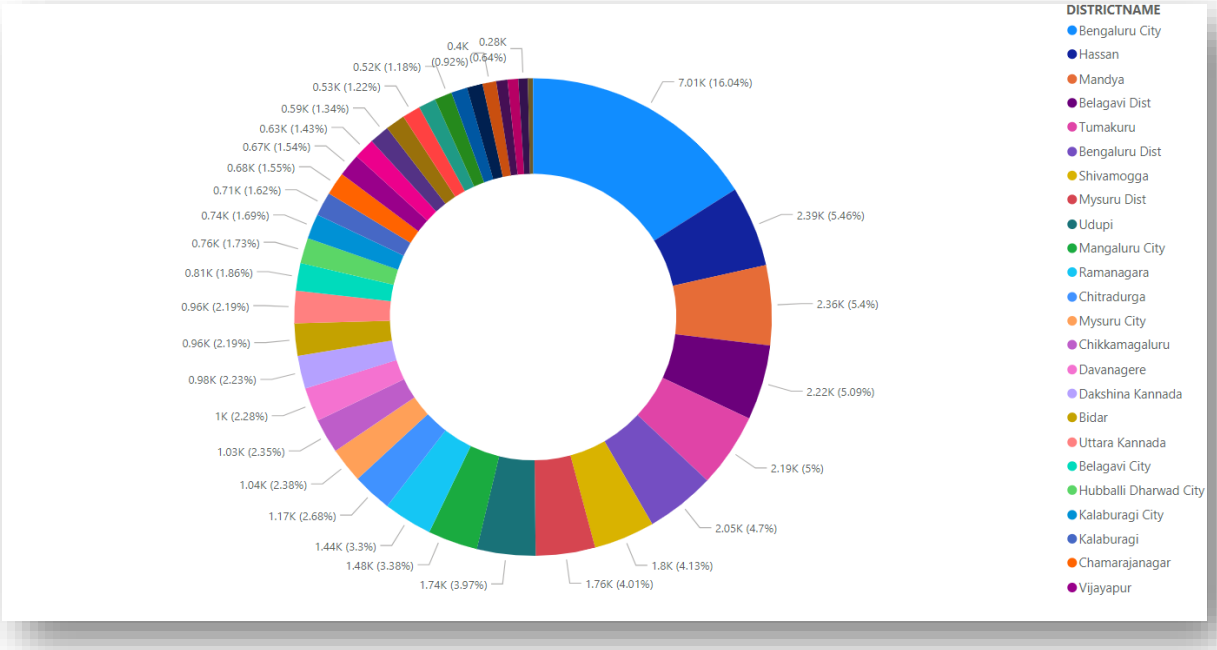
Conclusion- from the above graph we can clearly see that most of the pedestrian accident occur on road that are in cities and village .

2)Count of Road_character by Road_character and collision type



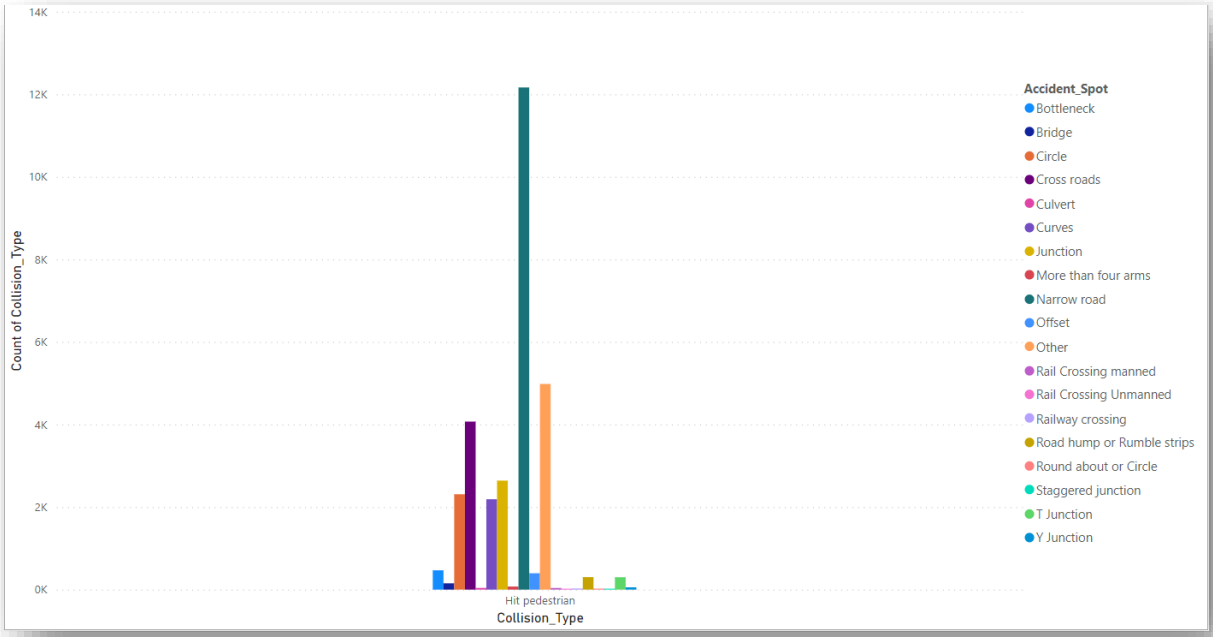
Conclusion – Most of the pedestrian accident have occurred on straight flat road and occur on national and state highway

3)Count of collision type by district name



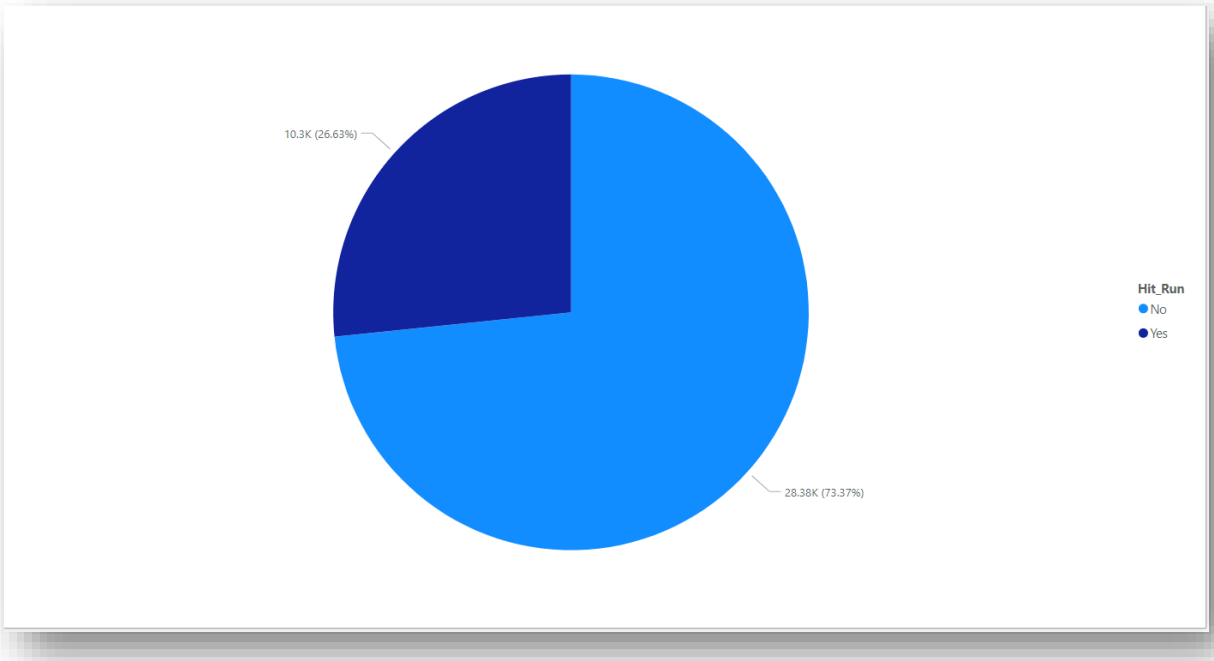
Conclusion-most of the pedestrian accident occur in Bangaluru and we can see that most of the hit pedestrian cases do not belong to hit class run

5) Count of collision type by collision type and accident spot



Conclusion-most of the hit pedestrian cases have occurred on narrow road so on these narrow roads we need have some improvement like foot path

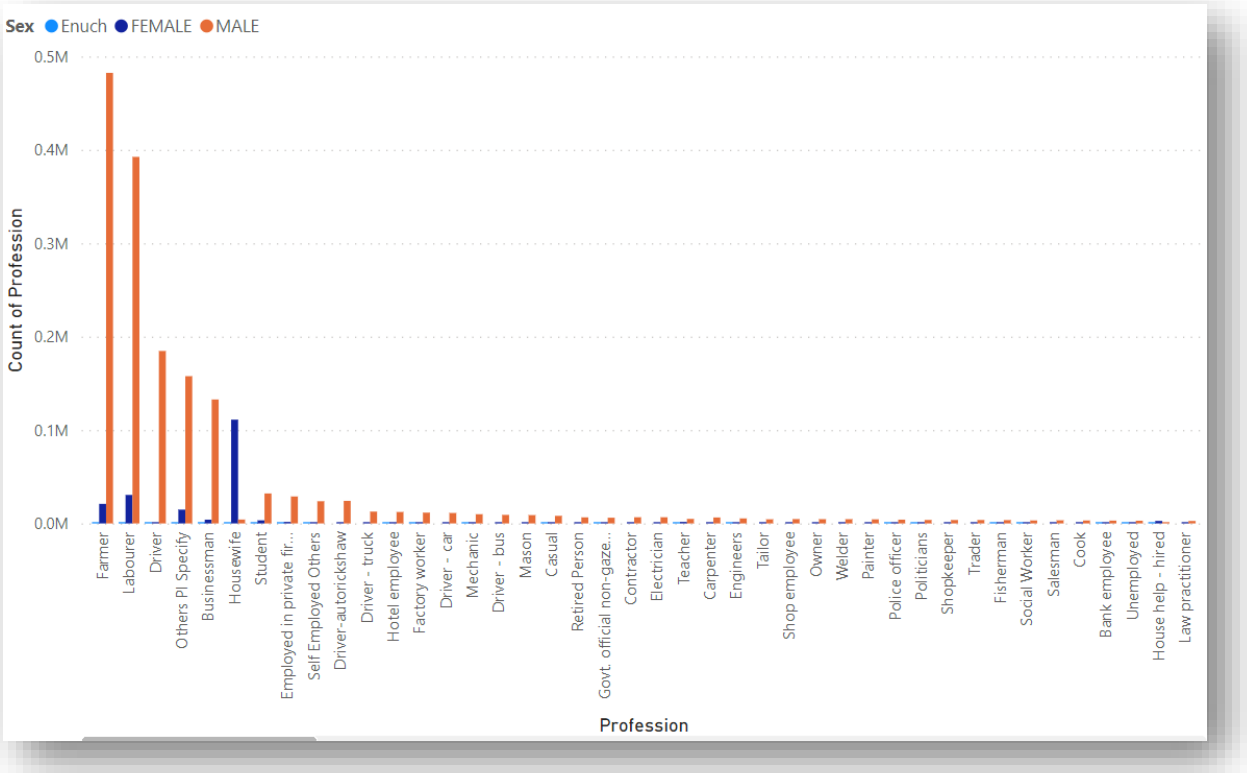
5) Count of collision type by Hit run



Conclusion - the hit run is not been affected by the pedestrian accident

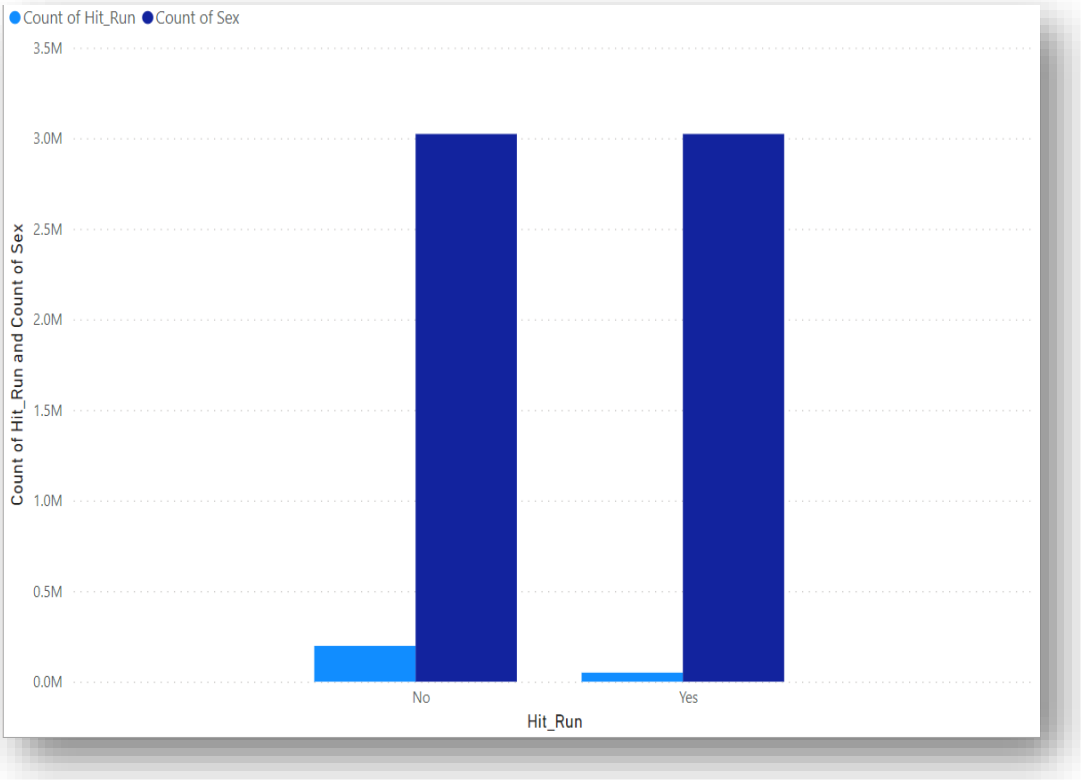
9)Analysis of the accused based on gender, age, and behaviour.

1) Count of profession by profession and sex



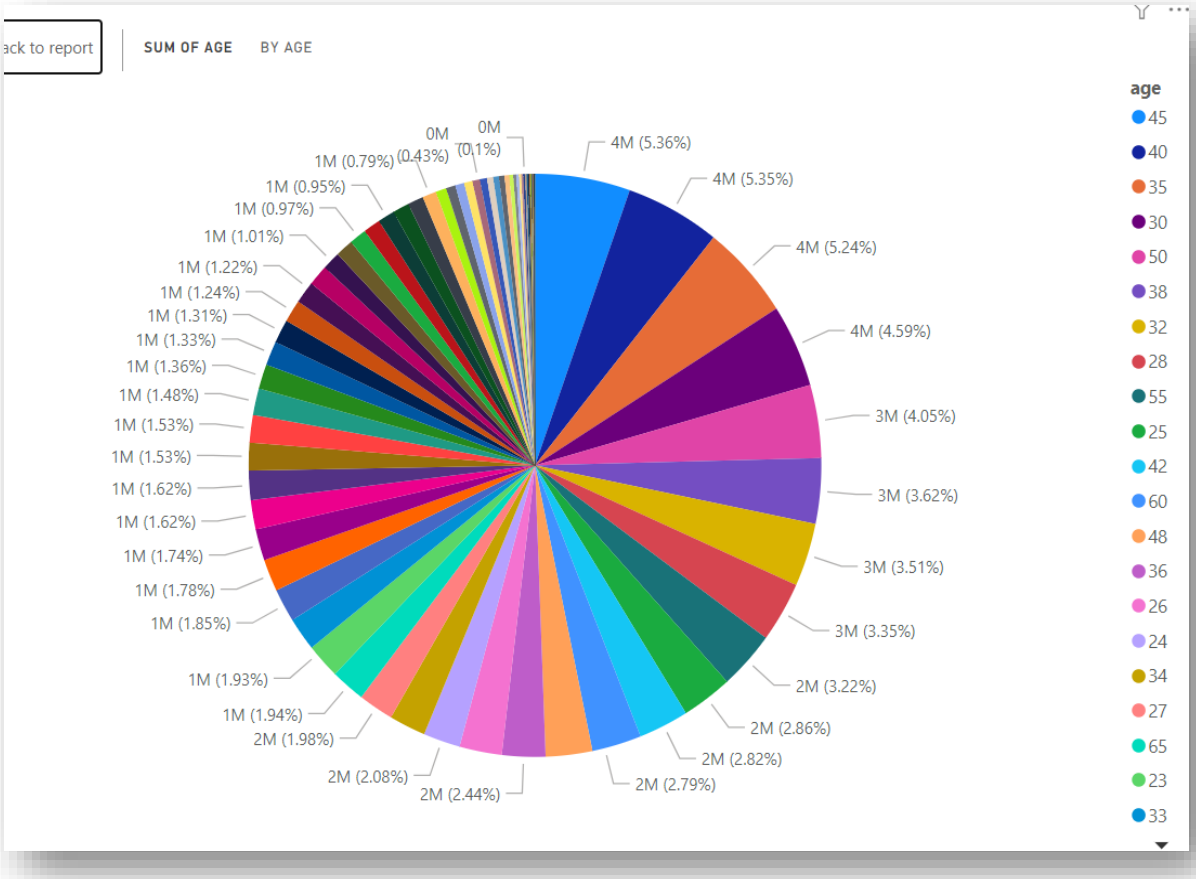
Conclusion- **As male has highest count of profession than female and enuch there is most probability that accused are most of the male which mostly belong to farmer class.**

2)Count of hit run and count of sex



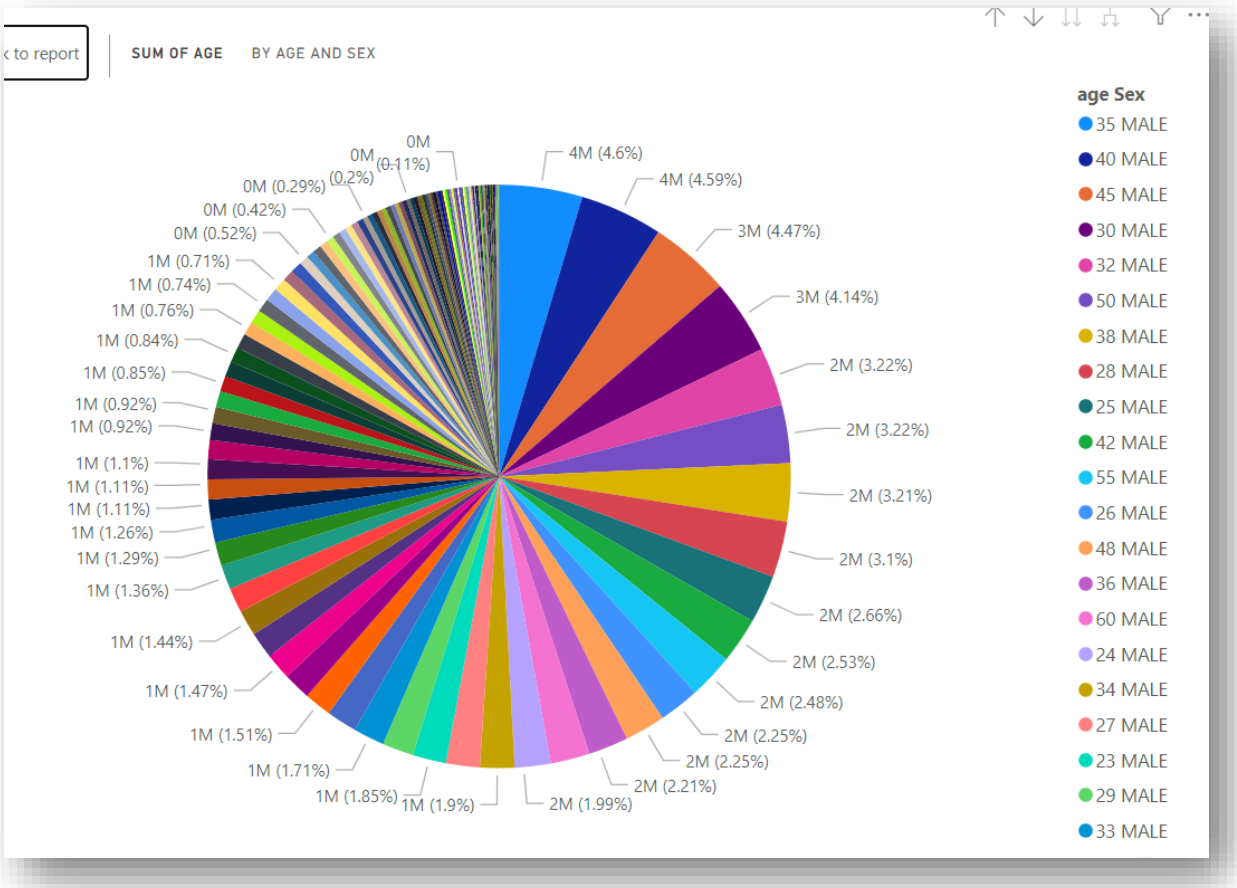
Conclusion- Count of Hit_Run and total Count of Sex are negatively correlated with each other as the accused are not hit_run.

3)Sum of age by age



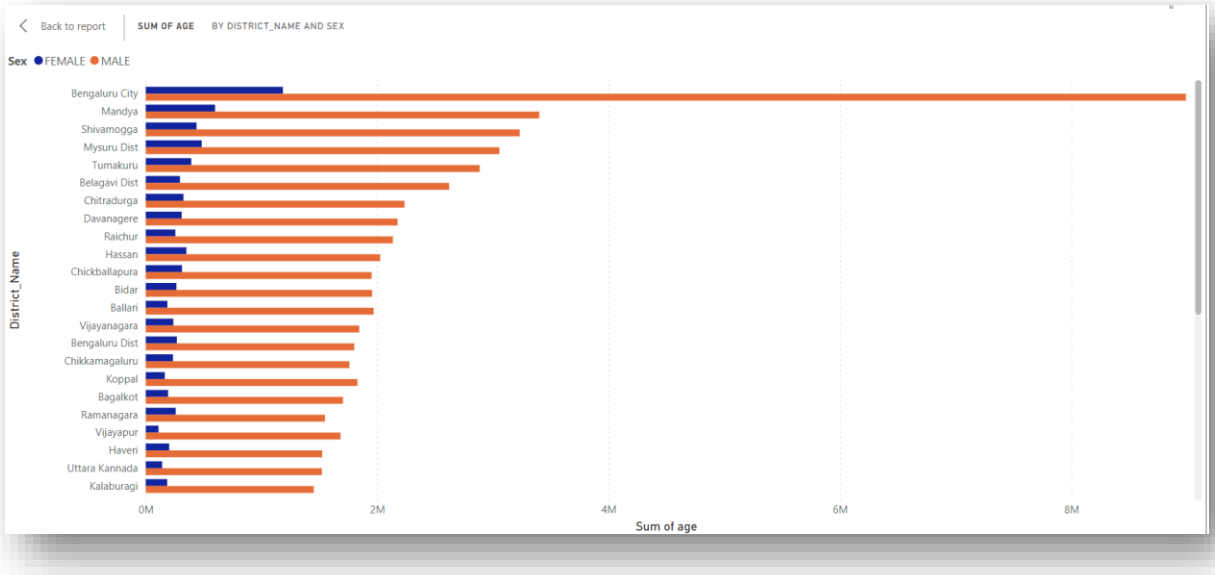
Conclusion – as we can see that the age group 45 are more accused

4)Sum of age by age and sex



Conclusion-MALE had the highest Sum of age and 35 and 40 age group are more accused

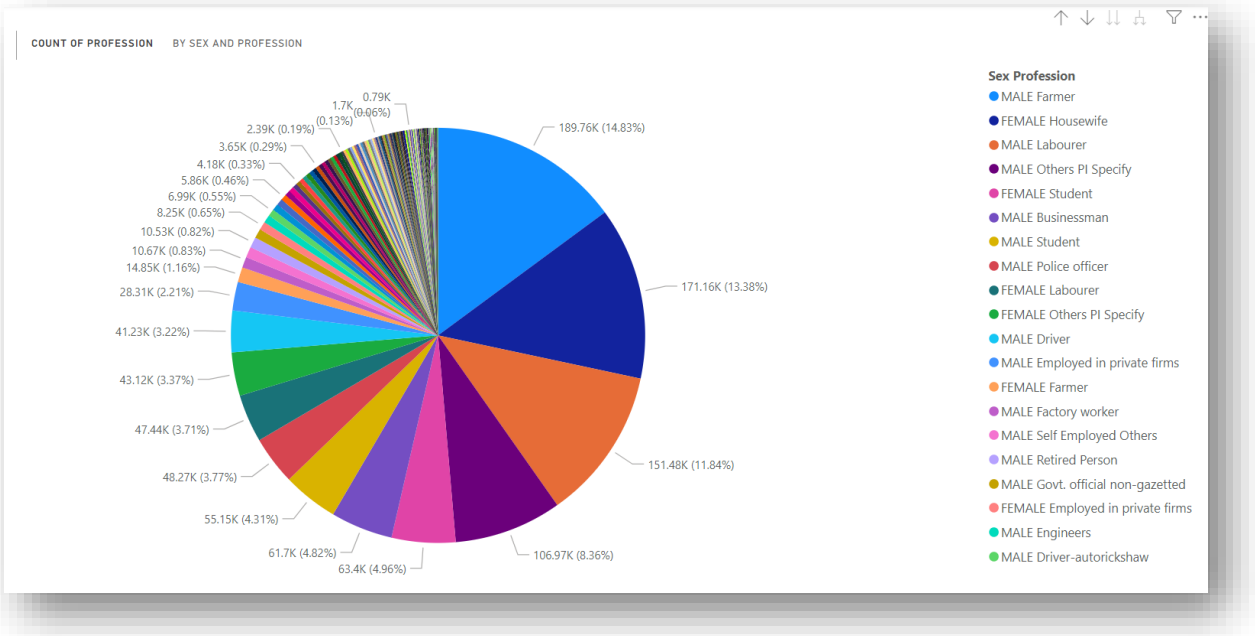
5)Sum of age by district name and sex



Conclusion - Total Sum of age was higher for MALE than FEMALE. Bengaluru City in Sex MALE are more accused than female followed by mandya .

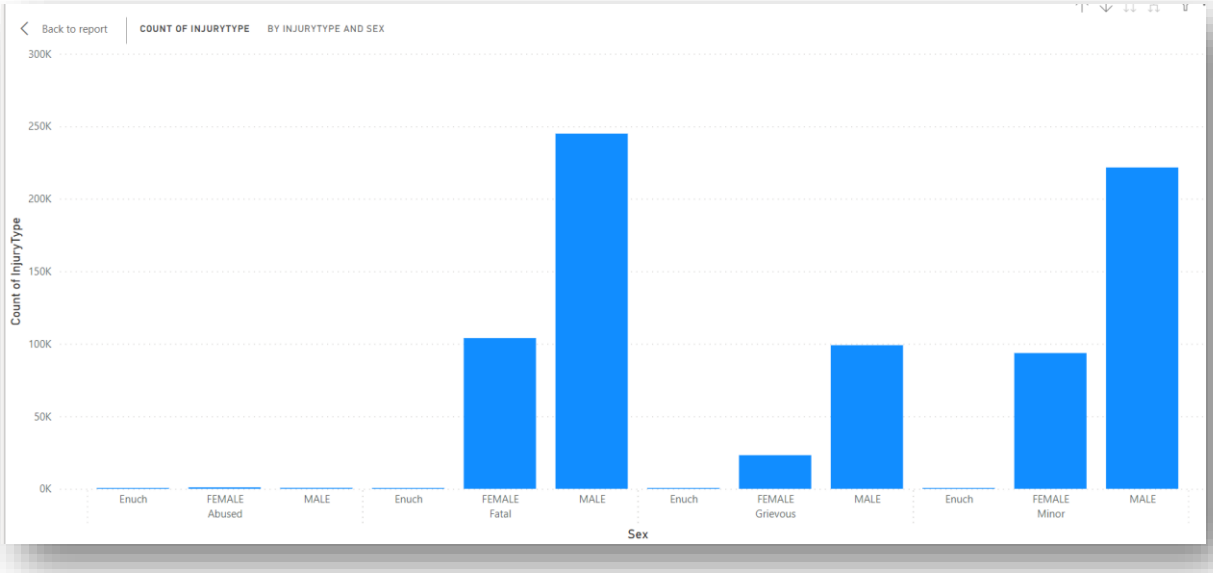
9 b)Analysis of the victim based on gender, age, and behaviour.

1) Count of profession by sex and profession



Conclusion- as we can see that the more victim are male belong to farmer class followed by female belong to housewife class.

2)Count of Injury type by injury type and sex

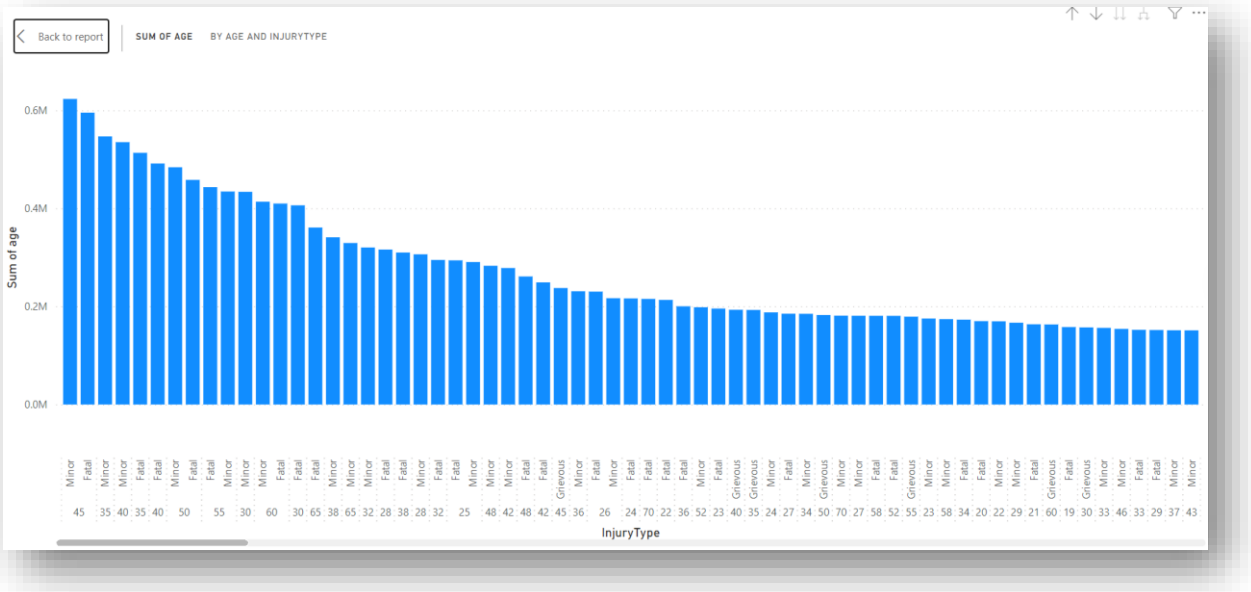


Conclusion – Male has highest count of injury type

Fatal in Sex MALE made up 31.07% of Count of InjuryType.

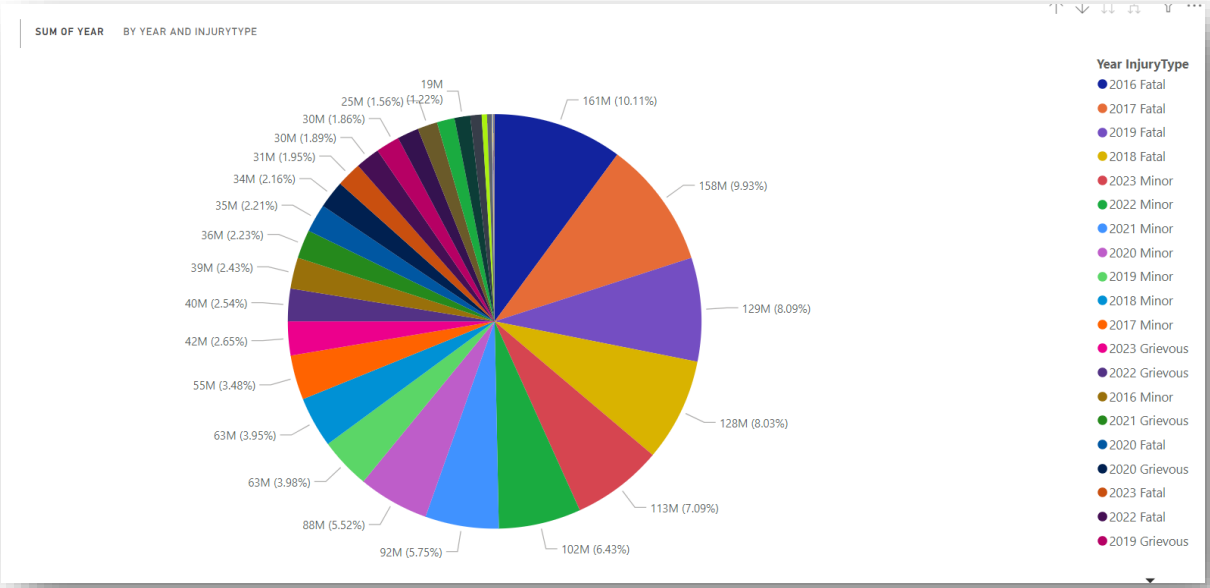
followed by minor injury in male as compared to female an d enuch.

3)Sum of year by year and injury type



Conclusion – fatal has the highest injury count in year 2016 followed by minor and grievous

4) count of age by age and injury type



Conclusion - Fatal had the highest total Sum of age at followed by Minor, Grievous, and Abused. Age group of 45 has most of the fatal and minor accident