ROAD ACCIDENTS IN INDIA

Introduction

India is a country having a high usage of vehicles. The vehicle consumption has drastically increased in the last 40 years from 6 million to 230 million vehicles. Due to the increasing rate of **9%** vehicles per year, the occurrence of road accidents has increased exponentially which in turn has hampered the road security of the people in India.

The aim of the project is to know the ambiguity in the traffic security conditions of the country that are causing the possible accidents.

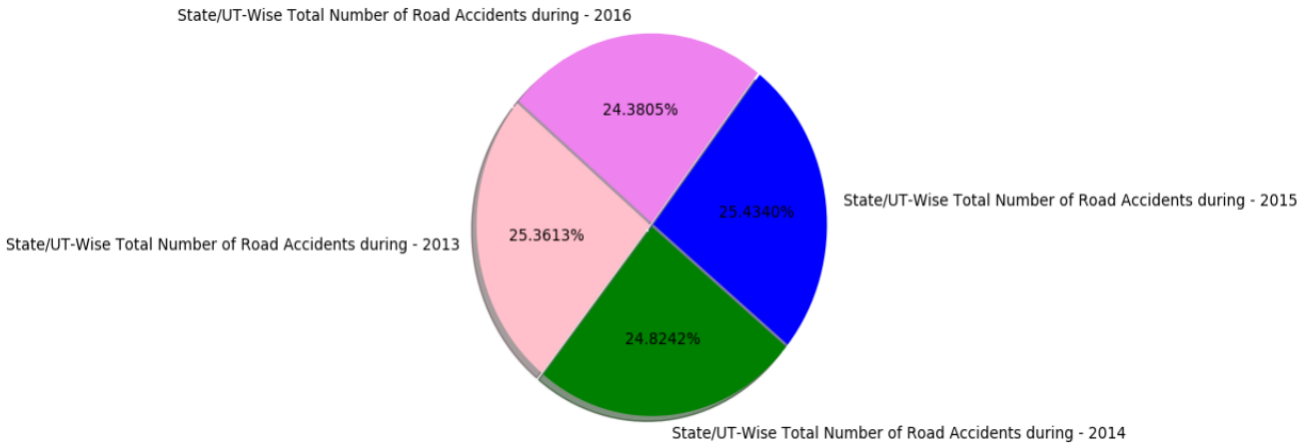
Data

The data for the project has been collected from Open Government Data Portal, an authorized portal by the Government of India. The data consists of multiple datasets sprawling over various parameters of judgements like type of vehicles, time of occurrence, natural/unnatural reasons of the accident etc.

Analysis

DF:

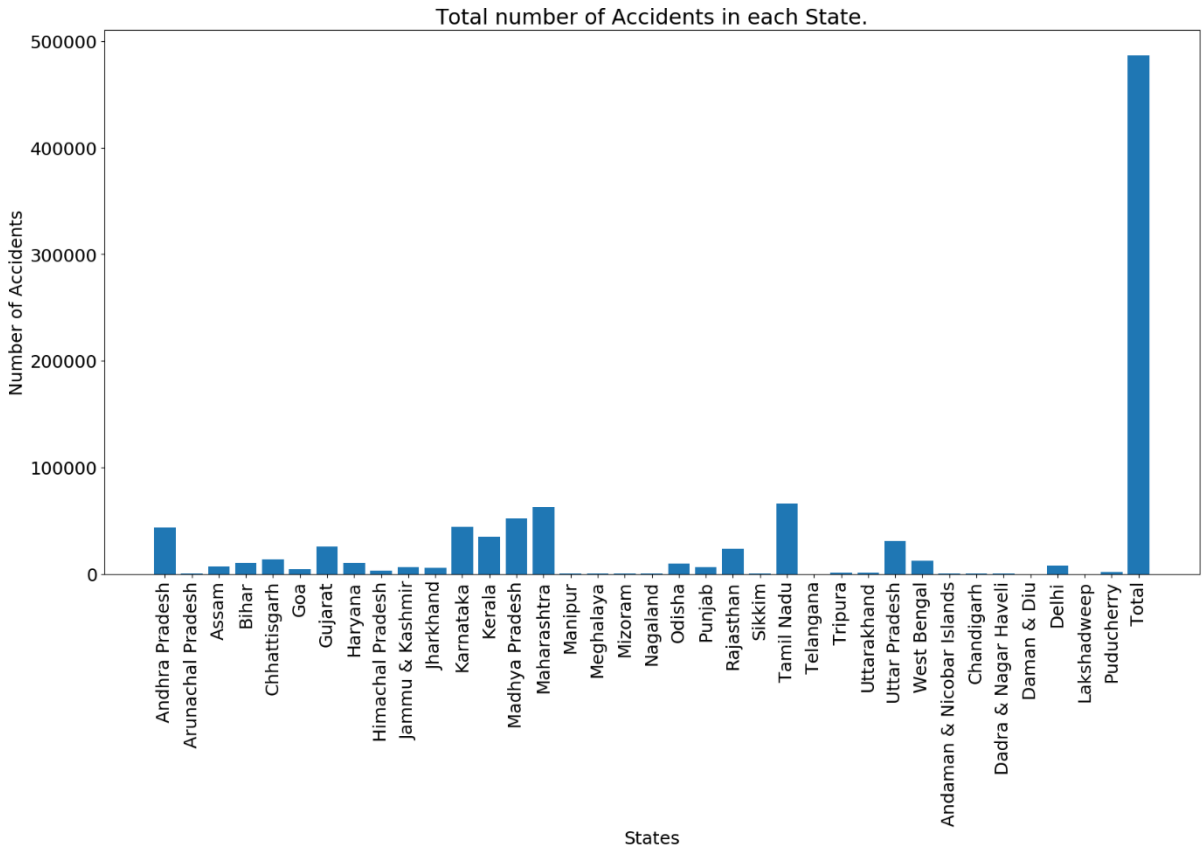
This dataset is about **Number of accidents** per state, accidents sharing multiple states and TOTAL number of accidents overall per year per state.



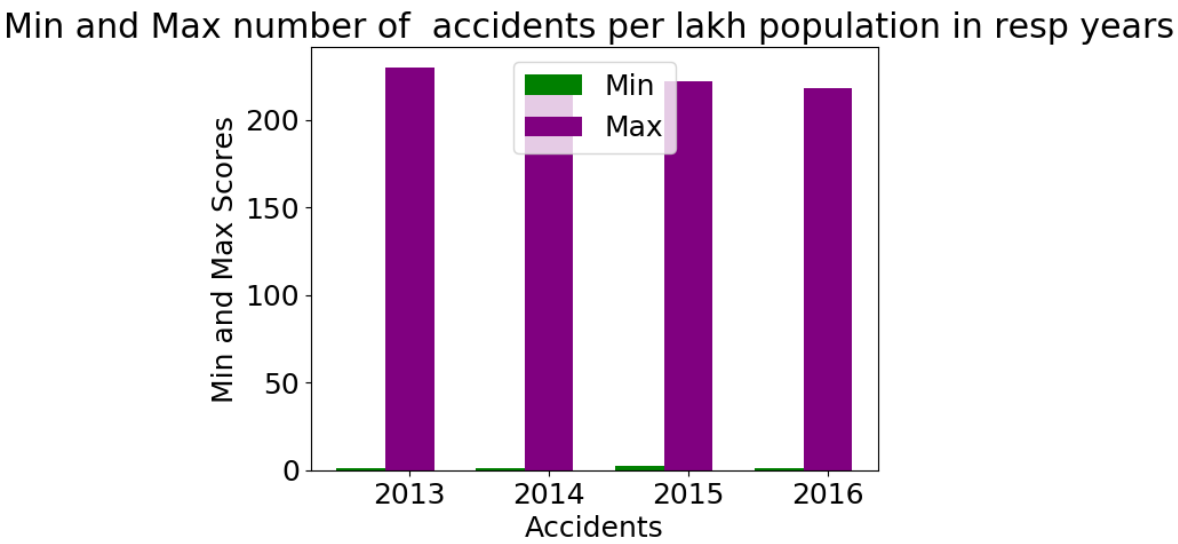
State/UT-Wise Total Number of Road Accidents

The percentage of road accidents are **almost constant during all years.** The government is making less efforts to prevent accidents by creating wider, good quality roads or creating new safety rules.

Comprehensive Understanding of accidents in different states till 2016.



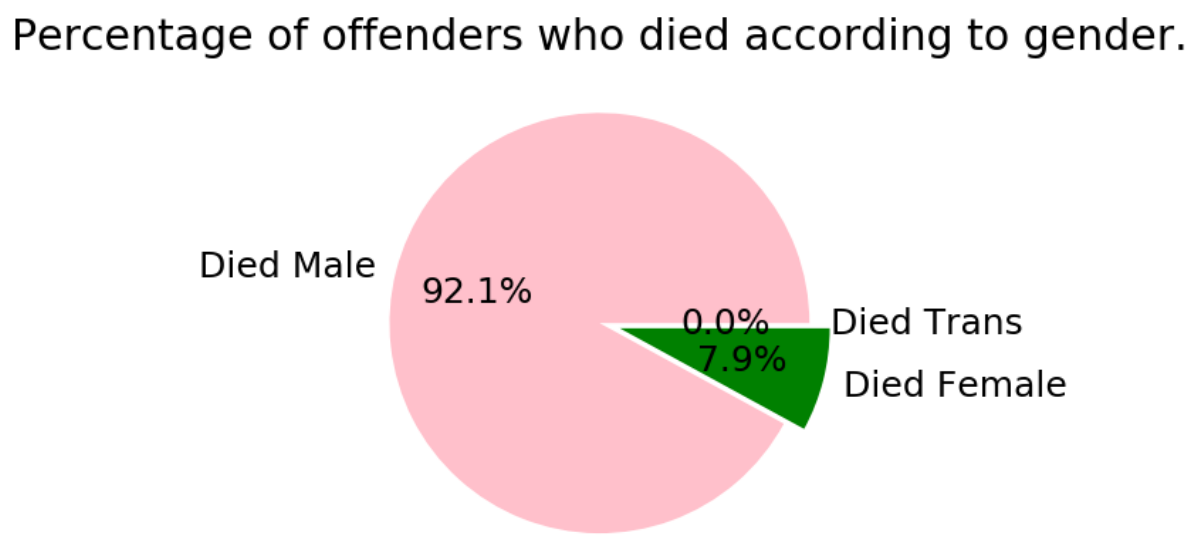
Maharashtra and **Tamil Nadu** have the highest number of accidents. Further investigation needs to be done to understand the case. **Arunachal, Manipur, Meghalaya, Mizoram, Nagaland, Tripura** have the least number of accidents. They surprisingly all belong to the **north-eastern area.**

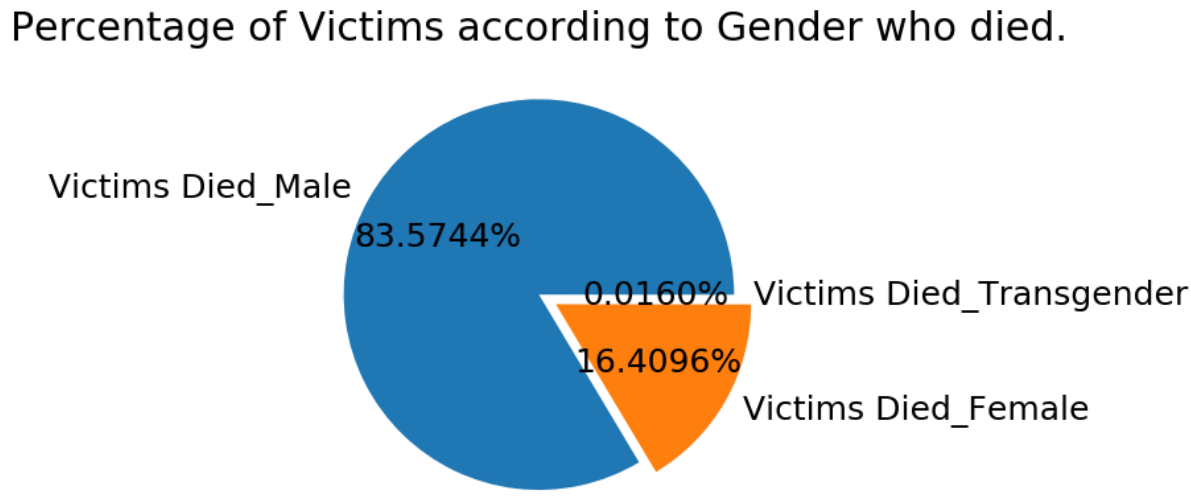


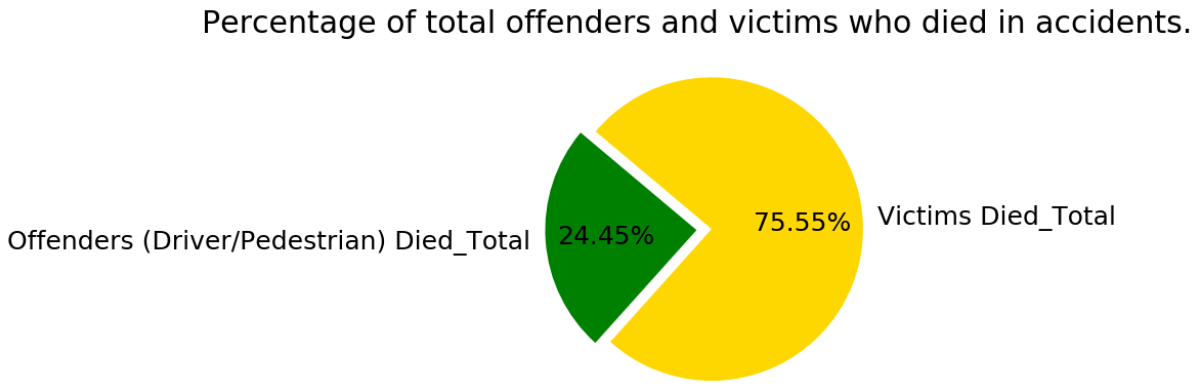
DF1 :

This dataset shows the number of **offenders** and **victims** who died according to gender as well the as the total deaths.

Analysis of accidents according to the gender of offenders and victims:

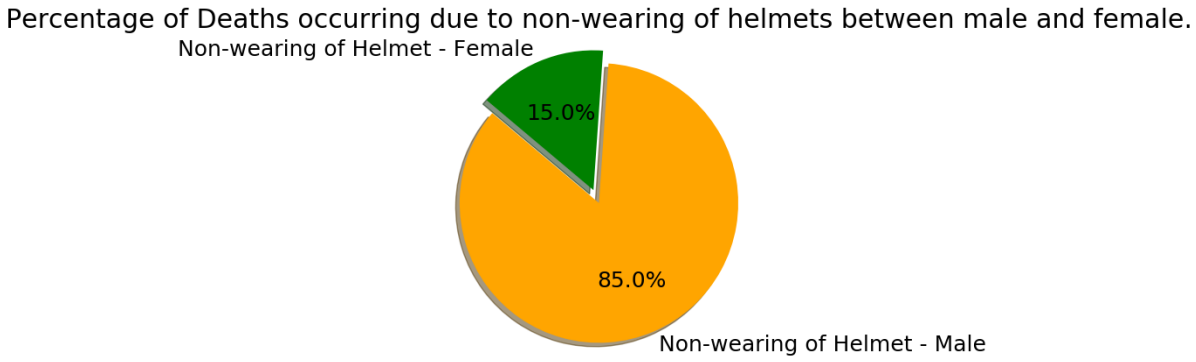






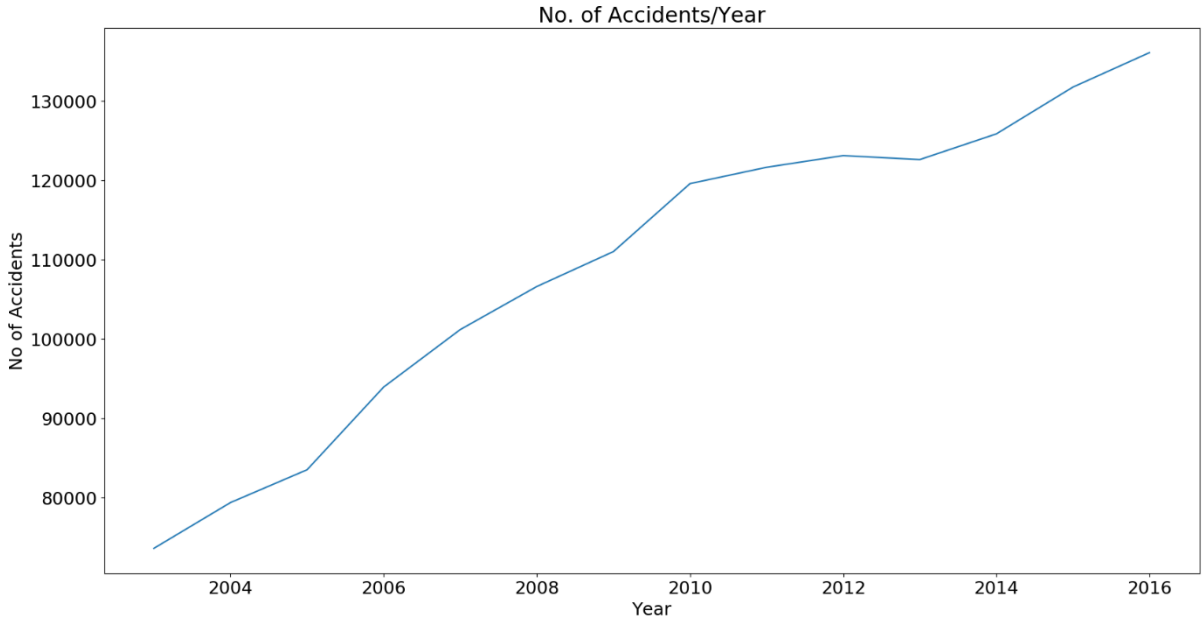
DF2 :

This dataset is about the deaths that occurred due to the **ignorance for safety accessories like Helmets, Belts** per gender.



DF3 :

This data set shows the number of accidents happening per state from the year 2003 to 2016.

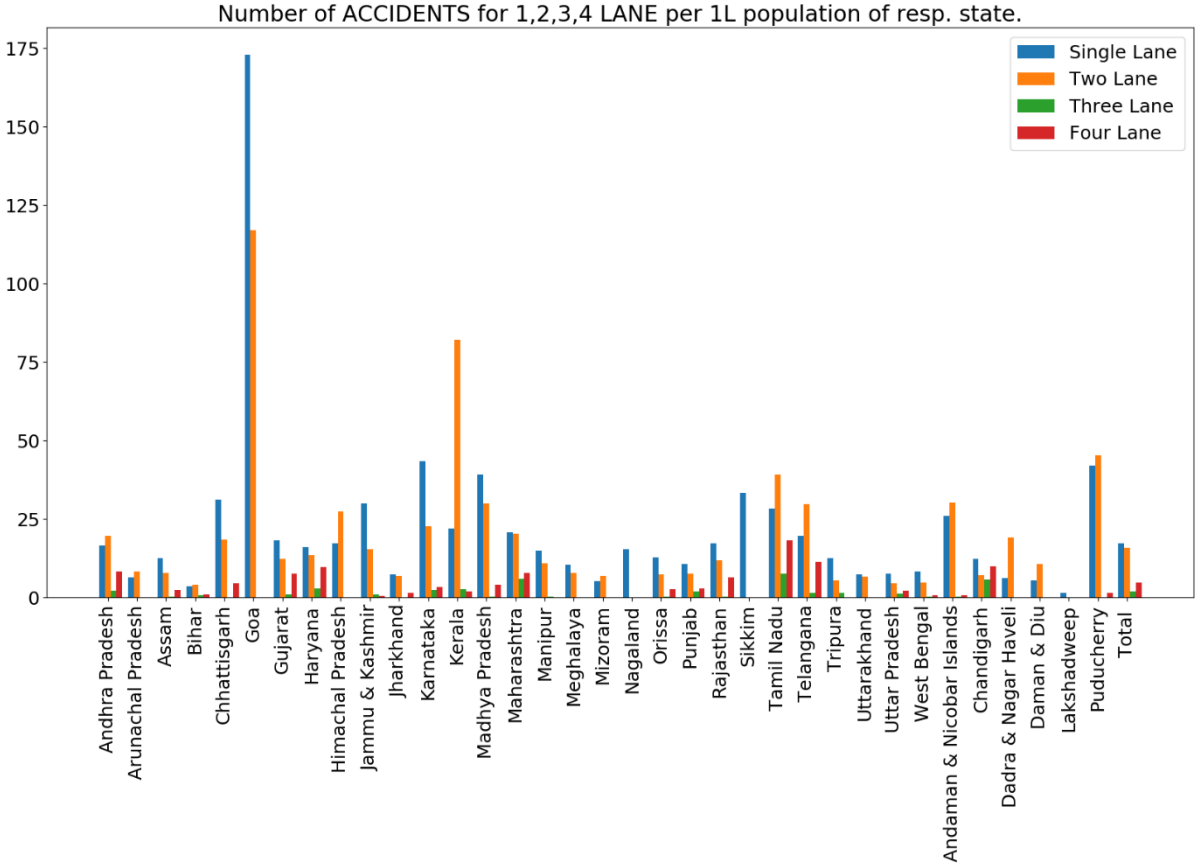


Over the years the number of accidents also kept increased .

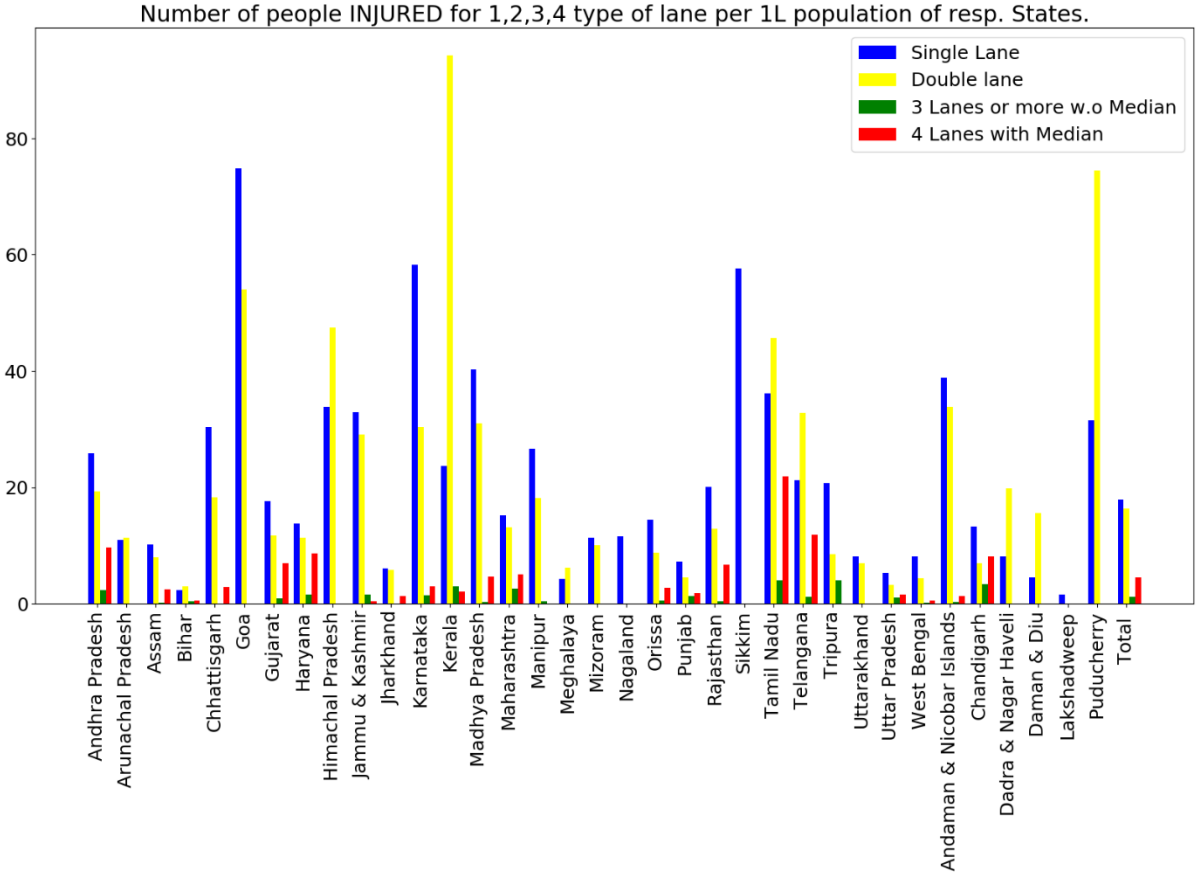
DF4 :

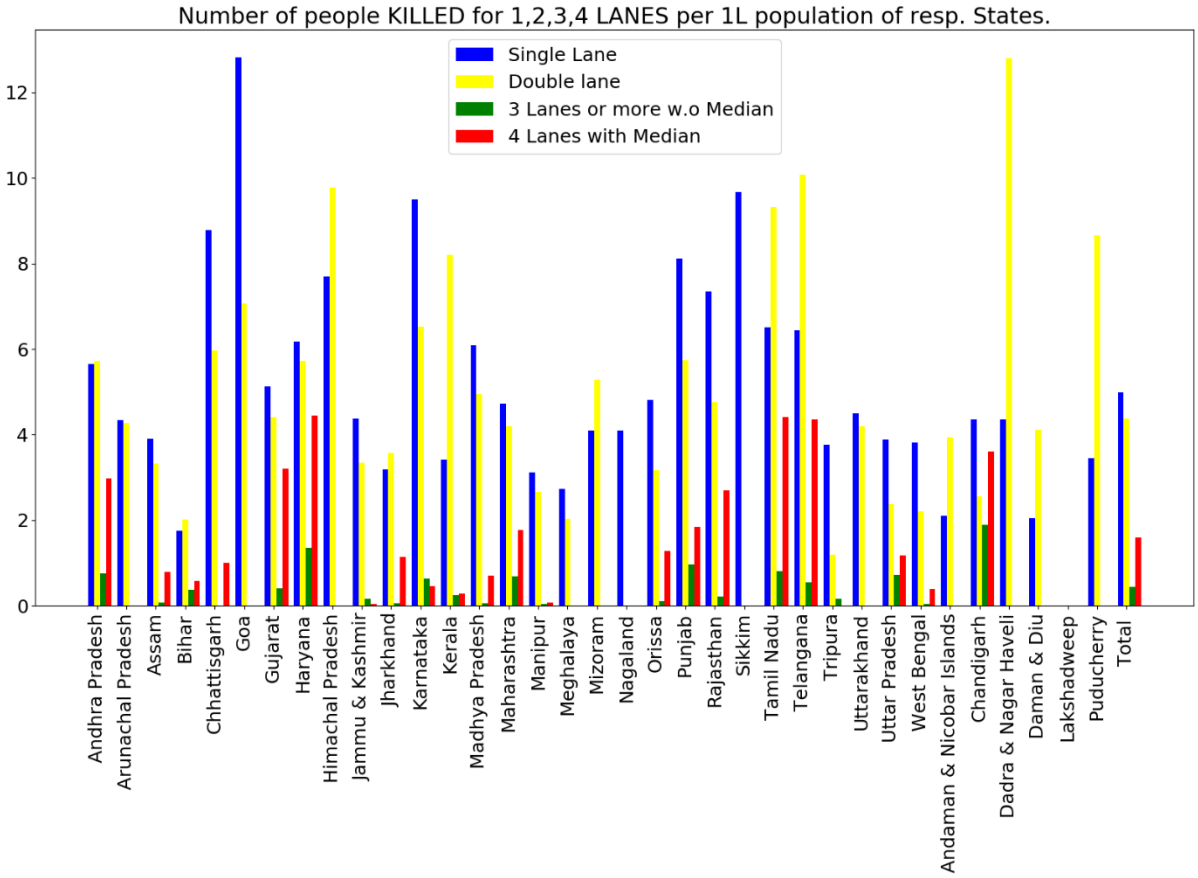
This data set contains number of **accidents/deaths/injuries occurring as per number of lanes.**

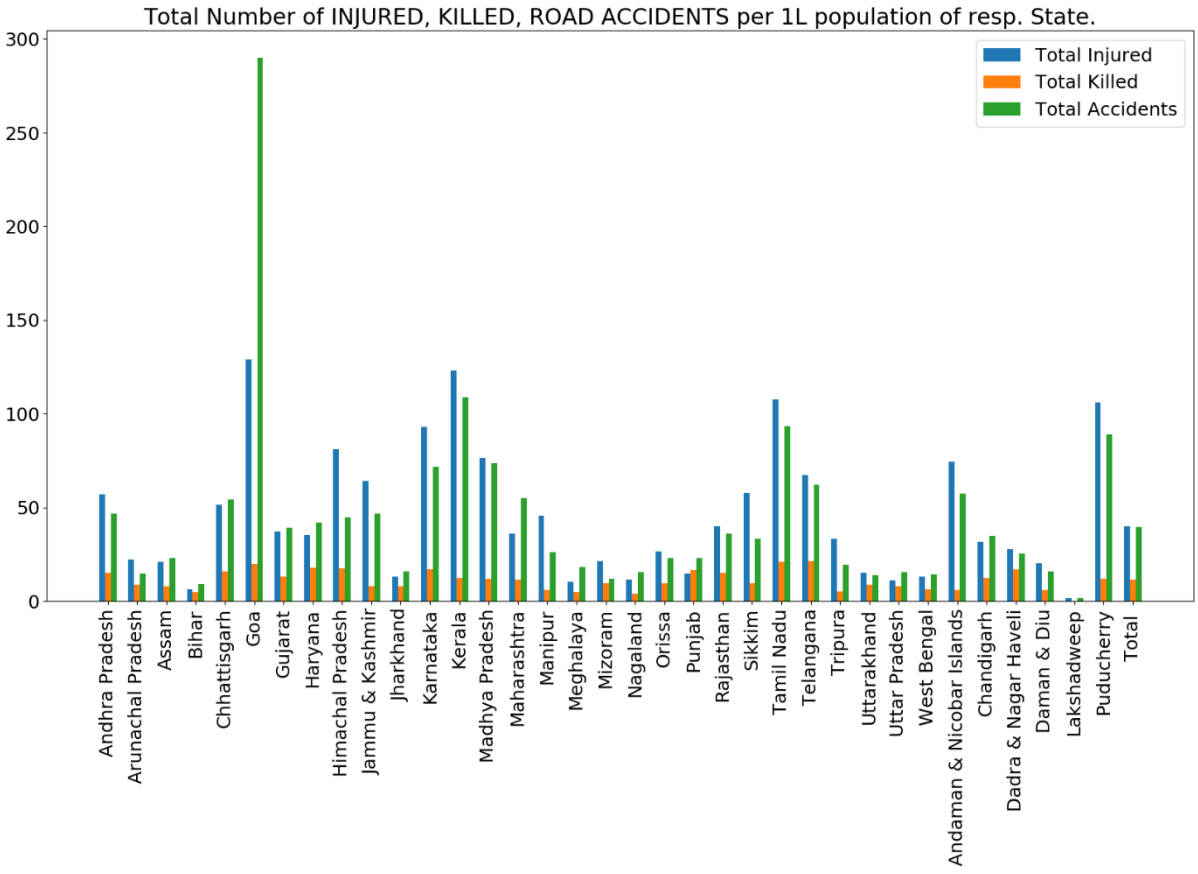
Number of ACCIDENTS for 1,2,3,4 LANE per 1L population of resp. state.



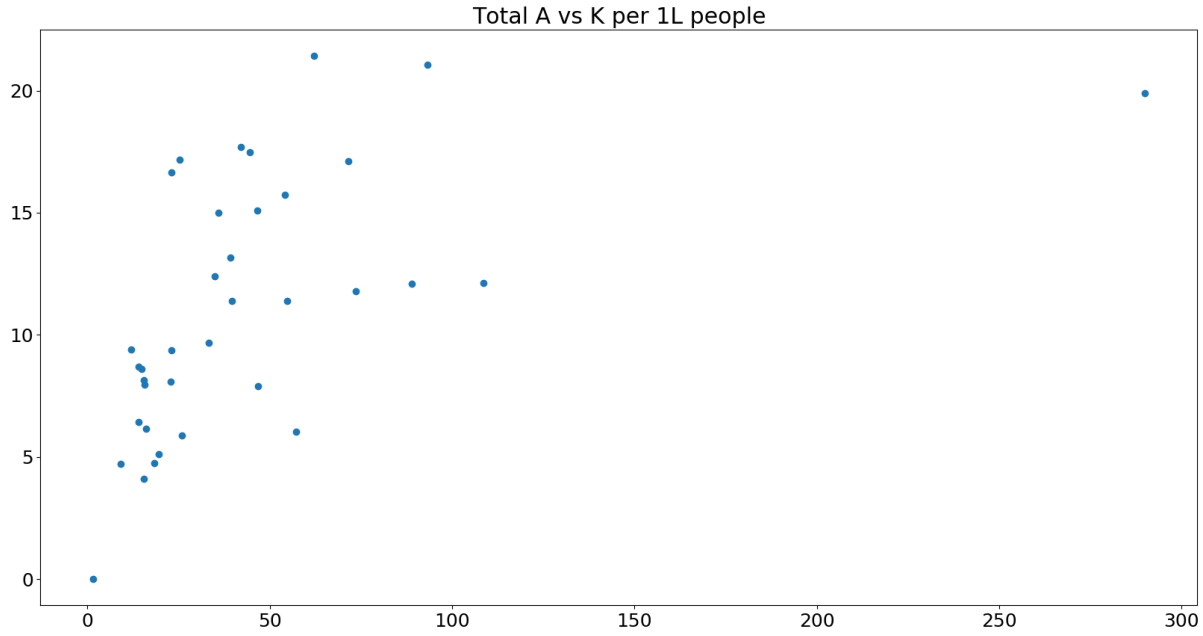
Number of people INJURED for 1,2,3,4 type of lane per 1L population of resp. States.



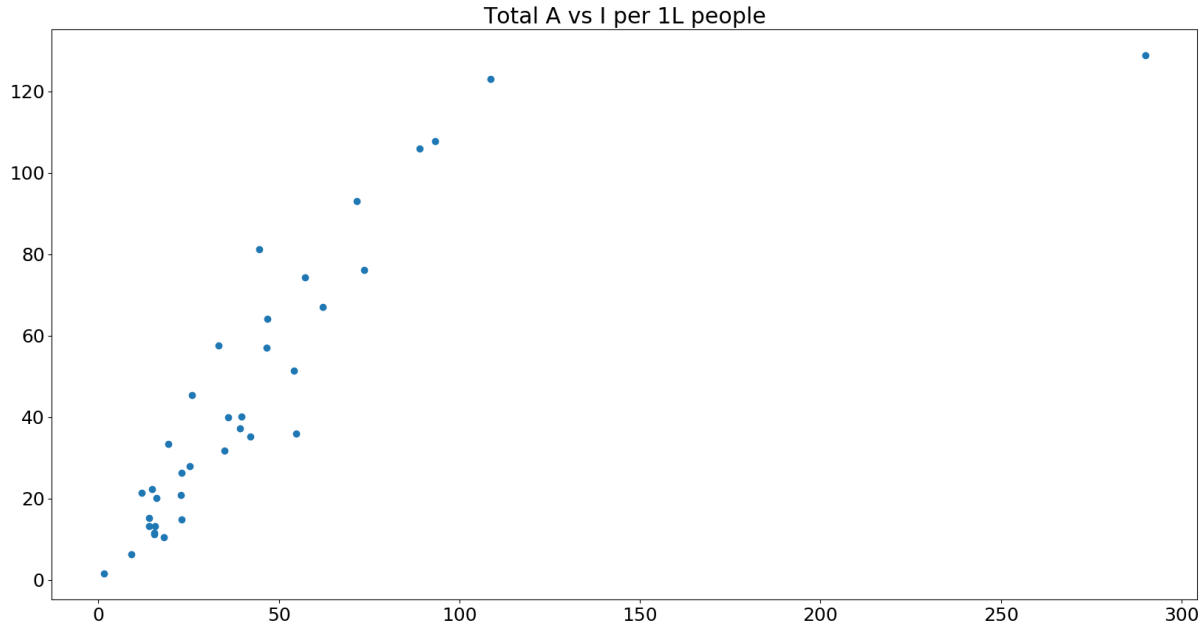

Number of people KILLED for 1,2,3,4 LANES per 1L population of resp. States.
Single Lane
Double lane
3 Lanes or more w.o Median
4 Lanes with Median
0
2
4
6
8
10
12
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chhattisgarh
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu & Kashmir
Jharkhand
Karnataka
Kerala
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Orissa
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttarakhand
Uttar Pradesh
West Bengal
Andaman & Nicobar Islands
Chandigarh
Dadra & Nagar Haveli
Daman & Diu
Lakshadweep
Puducherry
Total


Total Number of INJURED, KILLED, ROAD ACCIDENTS per 1L population of resp. State.
Total Injured
Total Killed
Total Accidents
0
50
100
150
200
250
300
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chhattisgarh
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu & Kashmir
Jharkhand
Karnataka
Kerala
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Orissa
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttarakhand
Uttar Pradesh
West Bengal
Andaman & Nicobar Islands
Chandigarh
Dadra & Nagar Haveli
Daman & Diu
Lakshadweep
Puducherry
Total

Total Sum of Accidents vs Killed for all types of lanes for the accident (dots represent each state)



Total Sum of Accidents vs Injured for all types of lanes for the accident *(dots represent each state)*



DF5 :

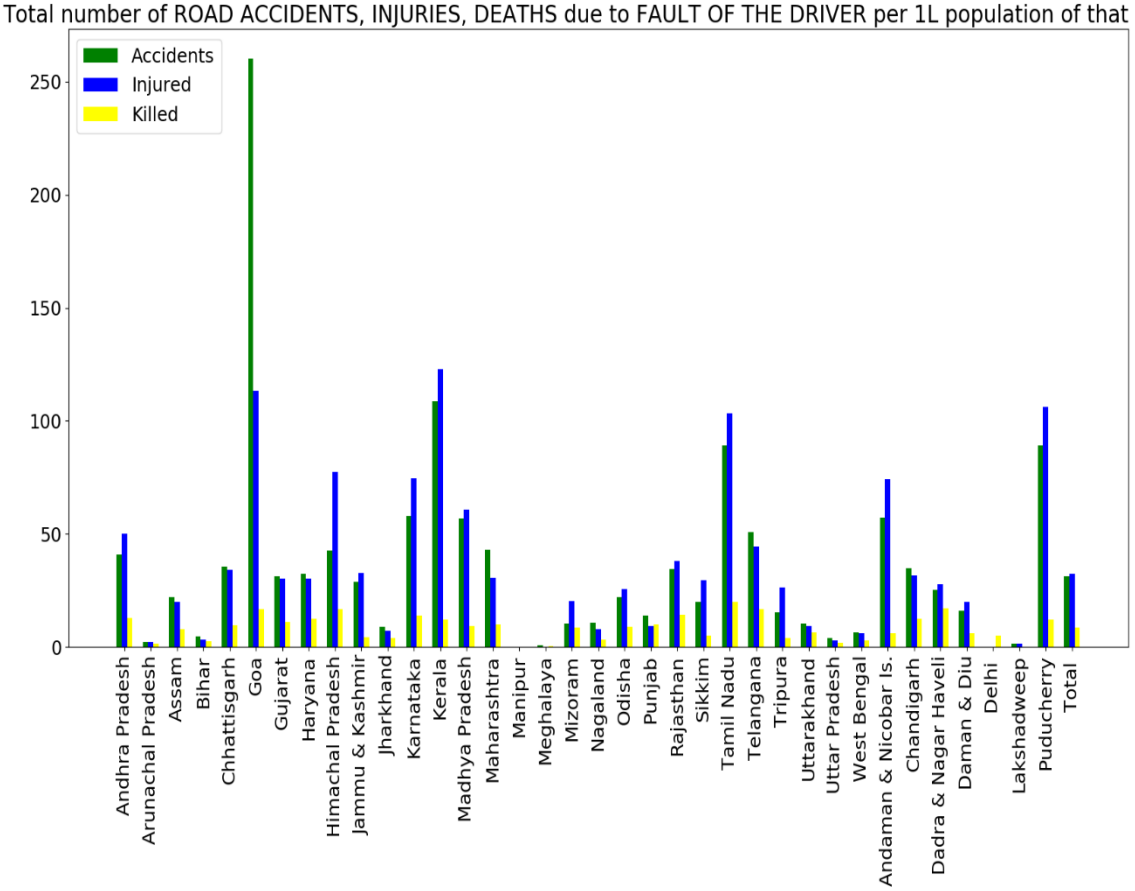
This dataset states the count of accidents, deaths, injuries occurred due to **various faults and reasons like Fault of Driver, weather condition, boulder, poor light etc.**

Reasons for death due to Accidents :

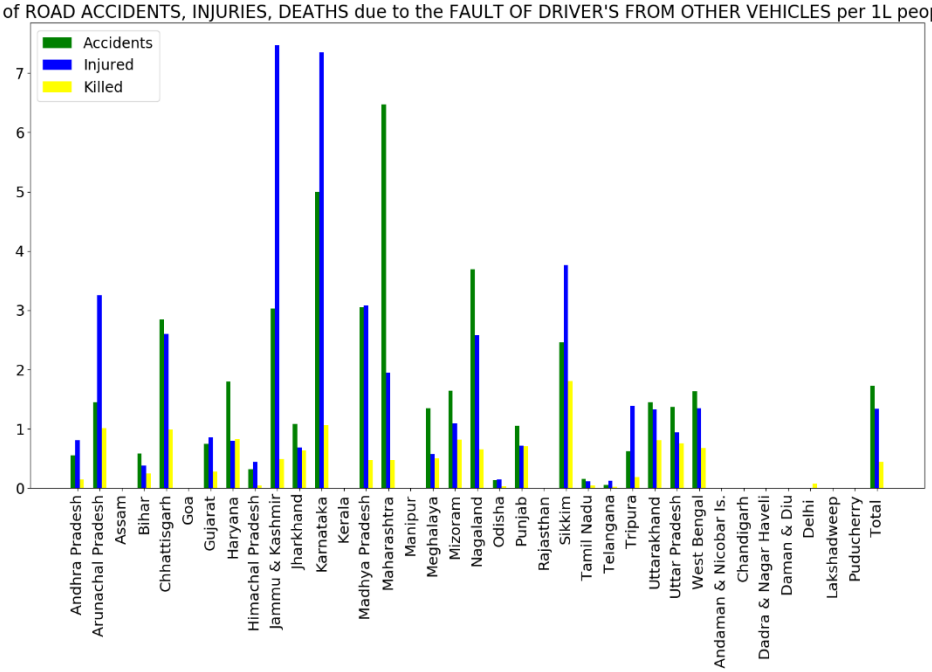
- Driver
- Other Driver's
- Pedestrian
- Condition of Vehicle
- Road Condition

- Weather Condition
- Passenger
- Poor Light
- Boulders
- Other Causes
-

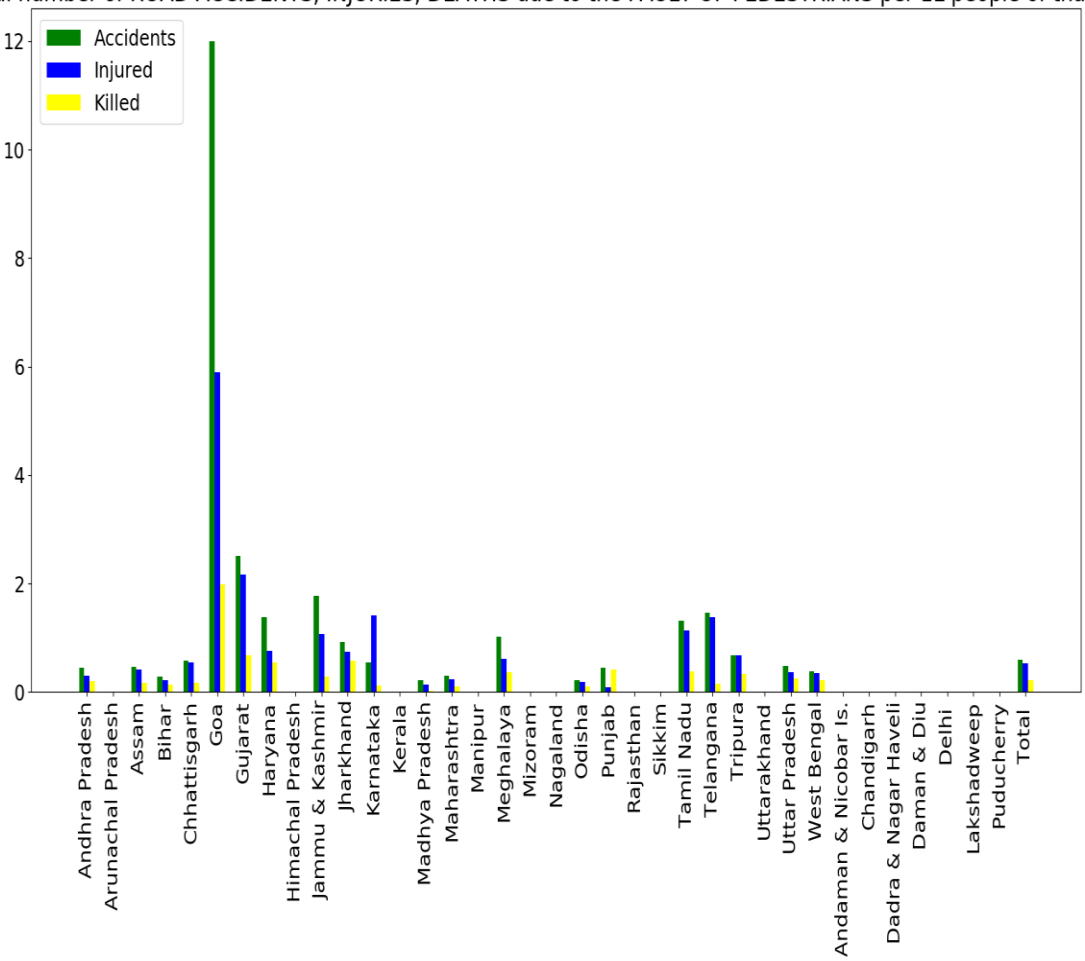
Total number of ROAD ACCIDENTS, INJURIES, DEATHS due to FAULT OF THE DRIVER per 1L population of that state.



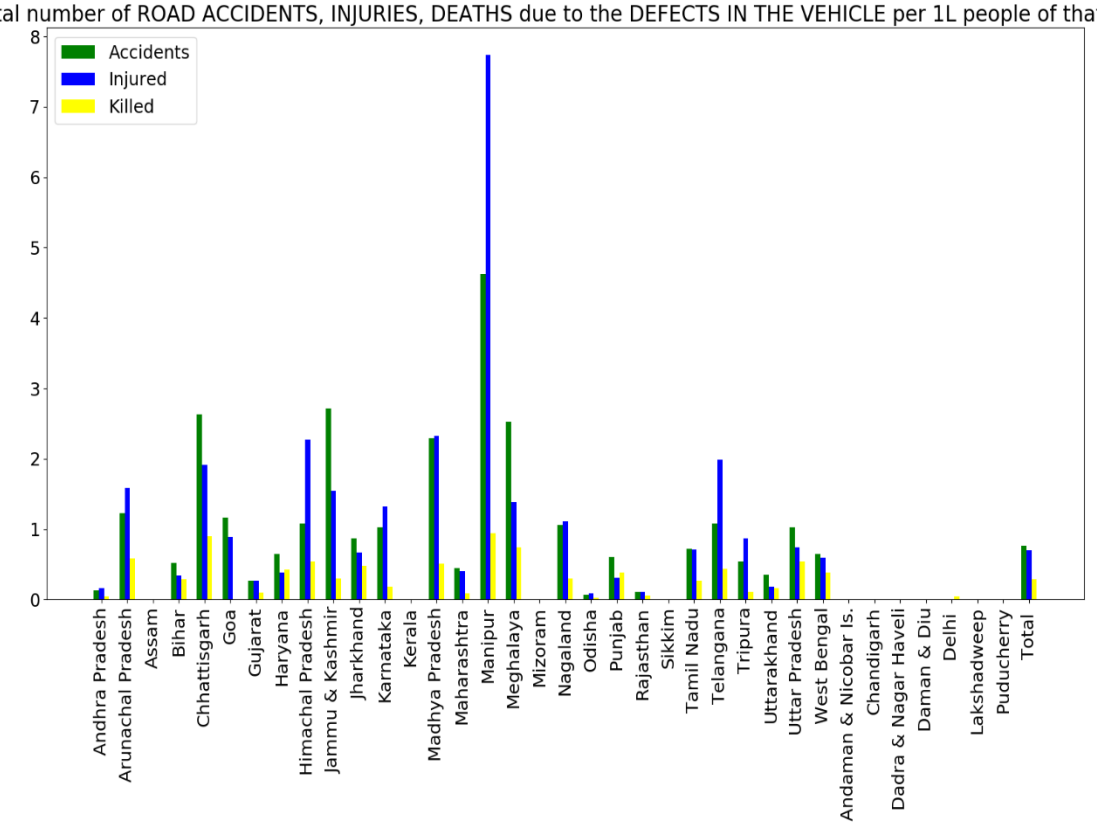
Total number of ROAD ACCIDENTS, INJURIES, DEATHS due to the FAULT OF DRIVER'S FROM OTHER VEHICLES per 1L people of that state.



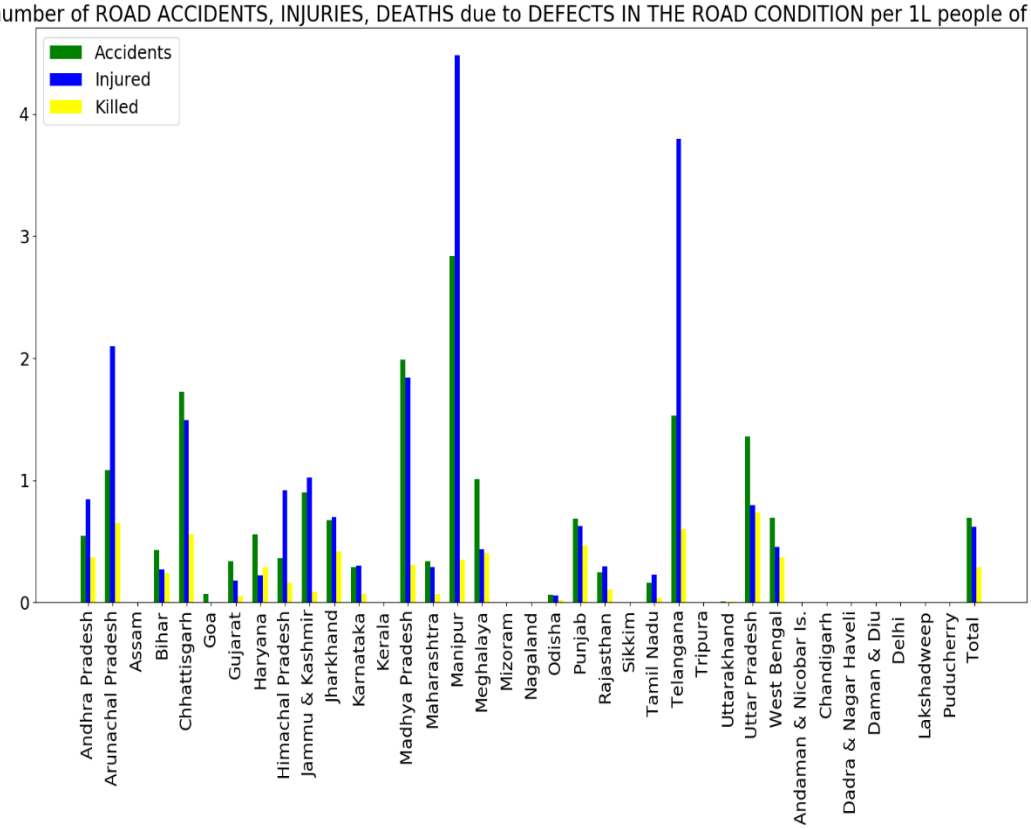
Total number of ROAD ACCIDENTS, INJURIES, DEATHS due to the FAULT OF PEDESTRIANS per 1L people of that state



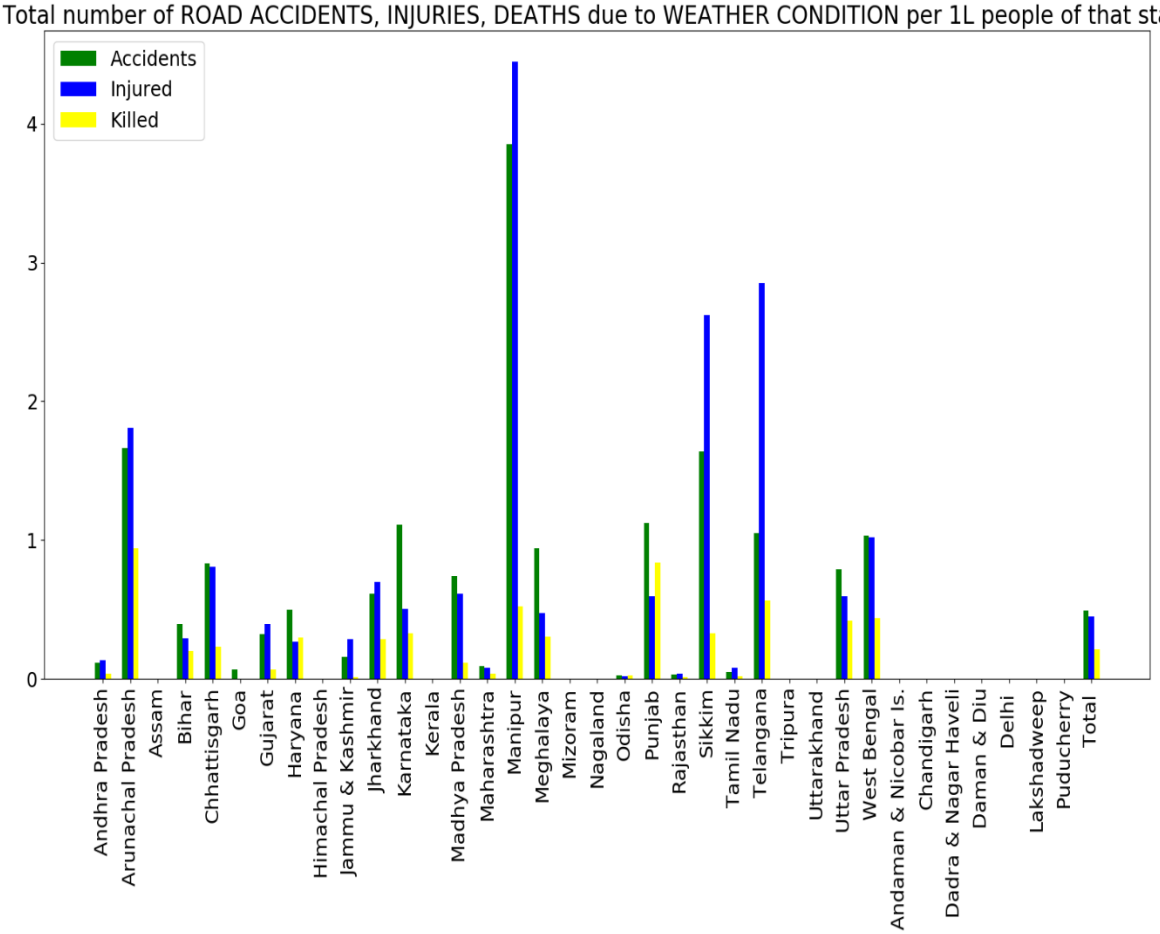
Total number of ROAD ACCIDENTS, INJURIES, DEATHS due to the DEFECTS IN THE VEHICLE per 1L people of that state



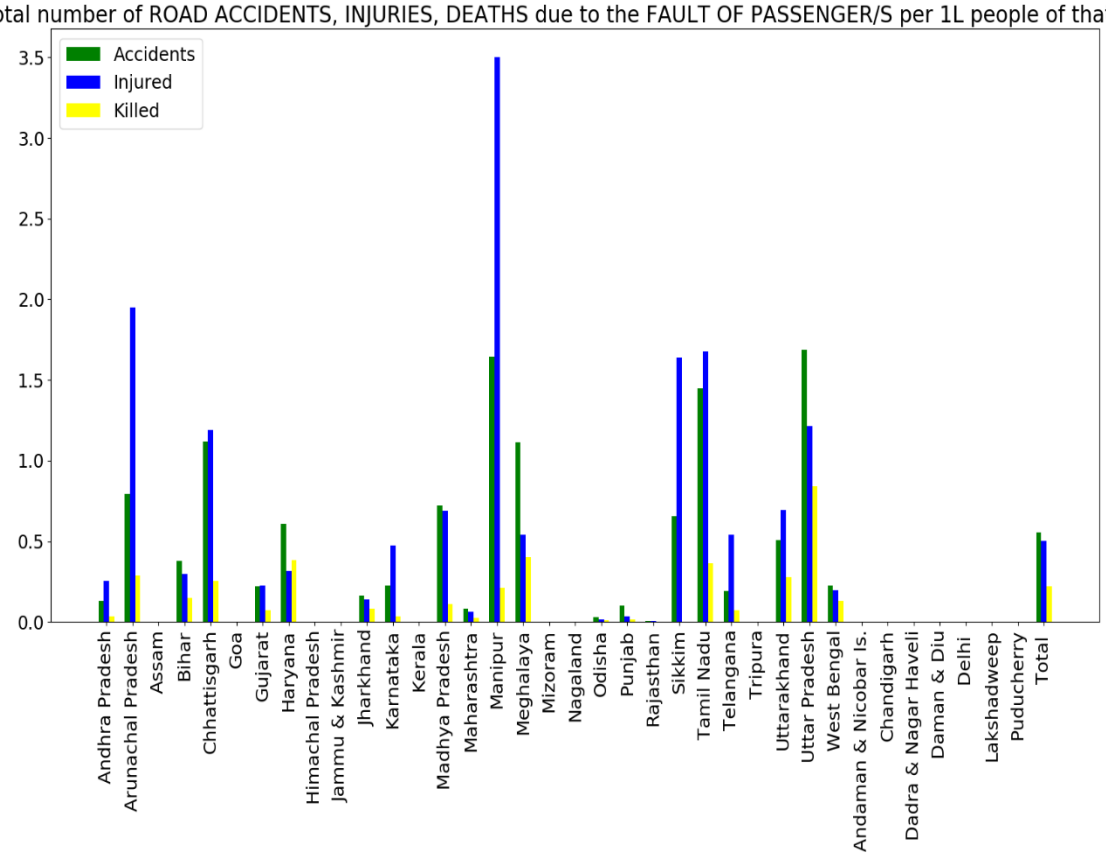
Total number of ROAD ACCIDENTS, INJURIES, DEATHS due to DEFECTS IN THE ROAD CONDITION per 1L people of that state



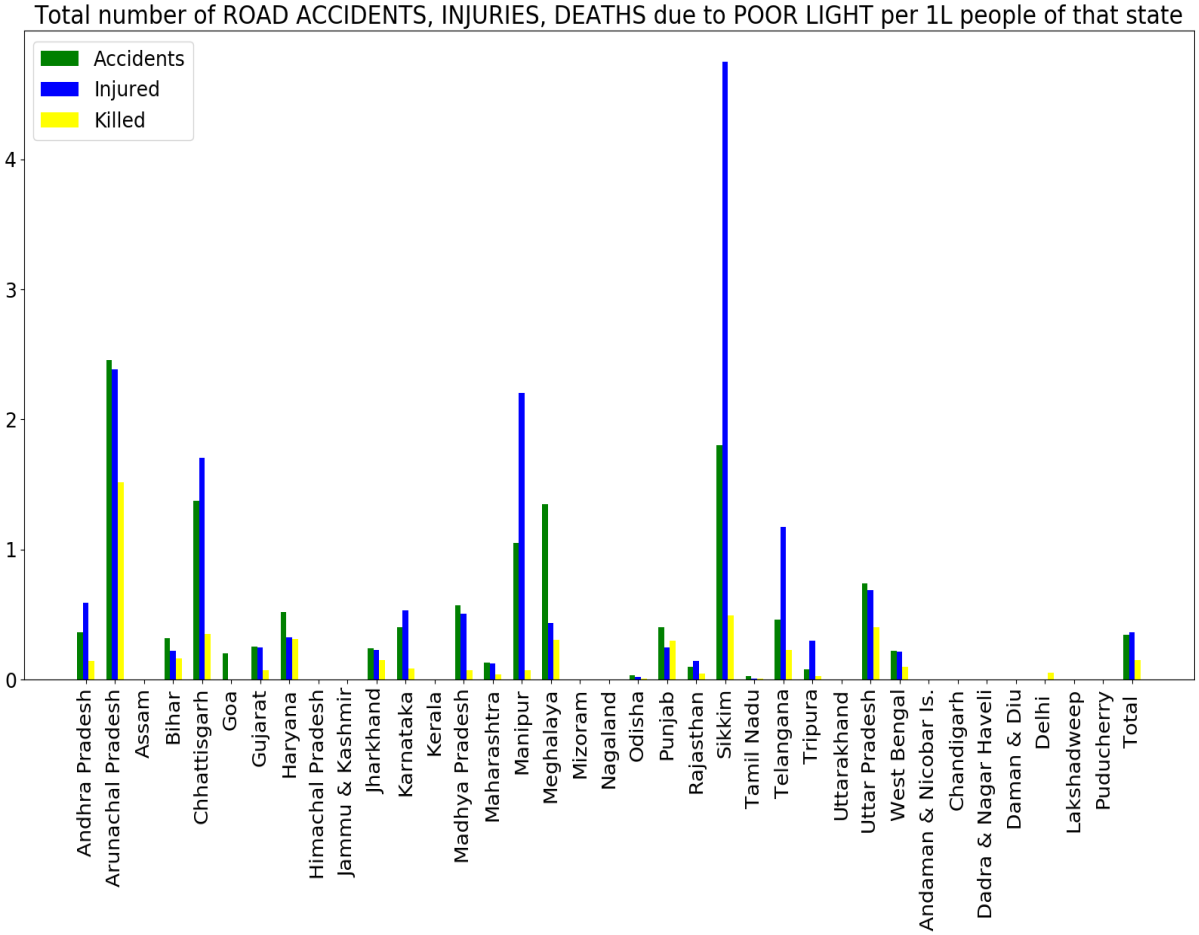
Total number of ROAD ACCIDENTS, INJURIES, DEATHS due to WEATHER CONDITION per 1L people of that state



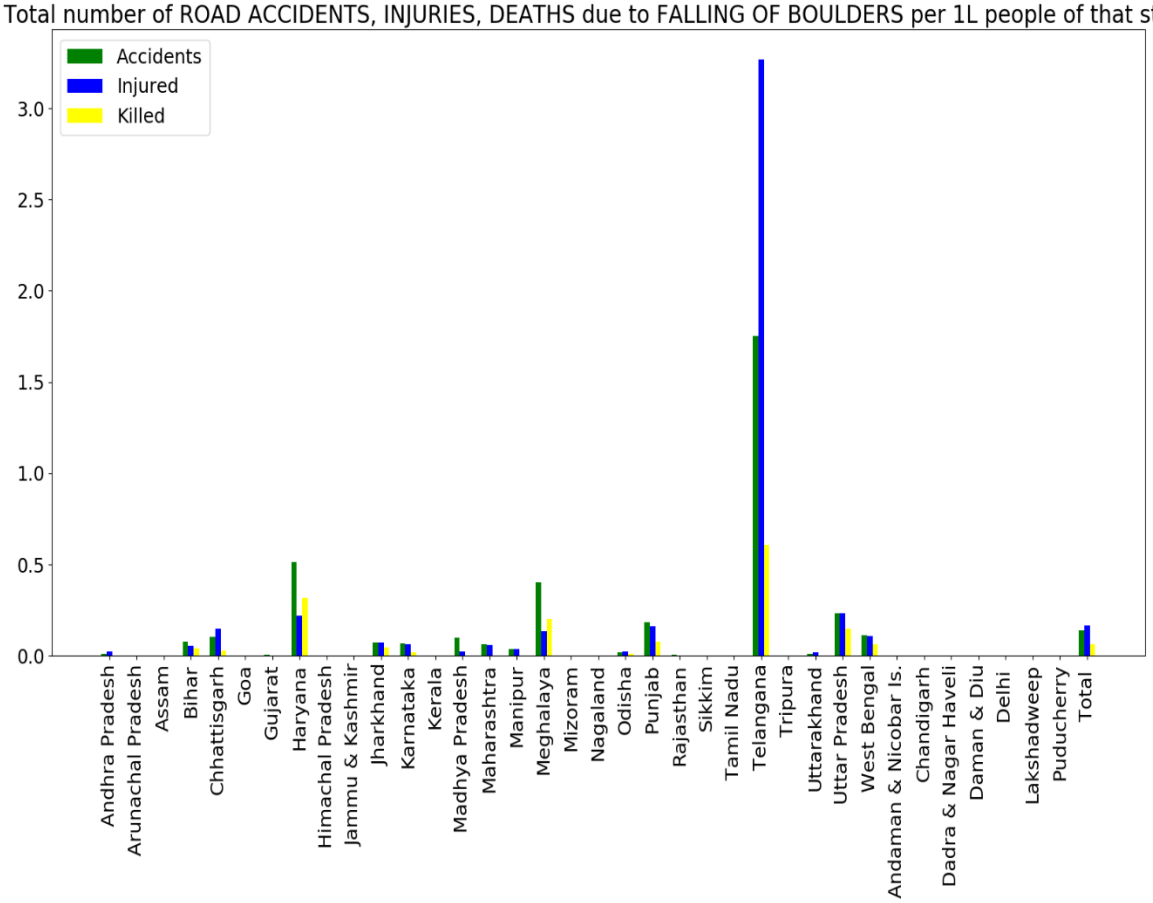
Total number of ROAD ACCIDENTS, INJURIES, DEATHS due to the FAULT OF PASSENGER/S per 1L people of that state



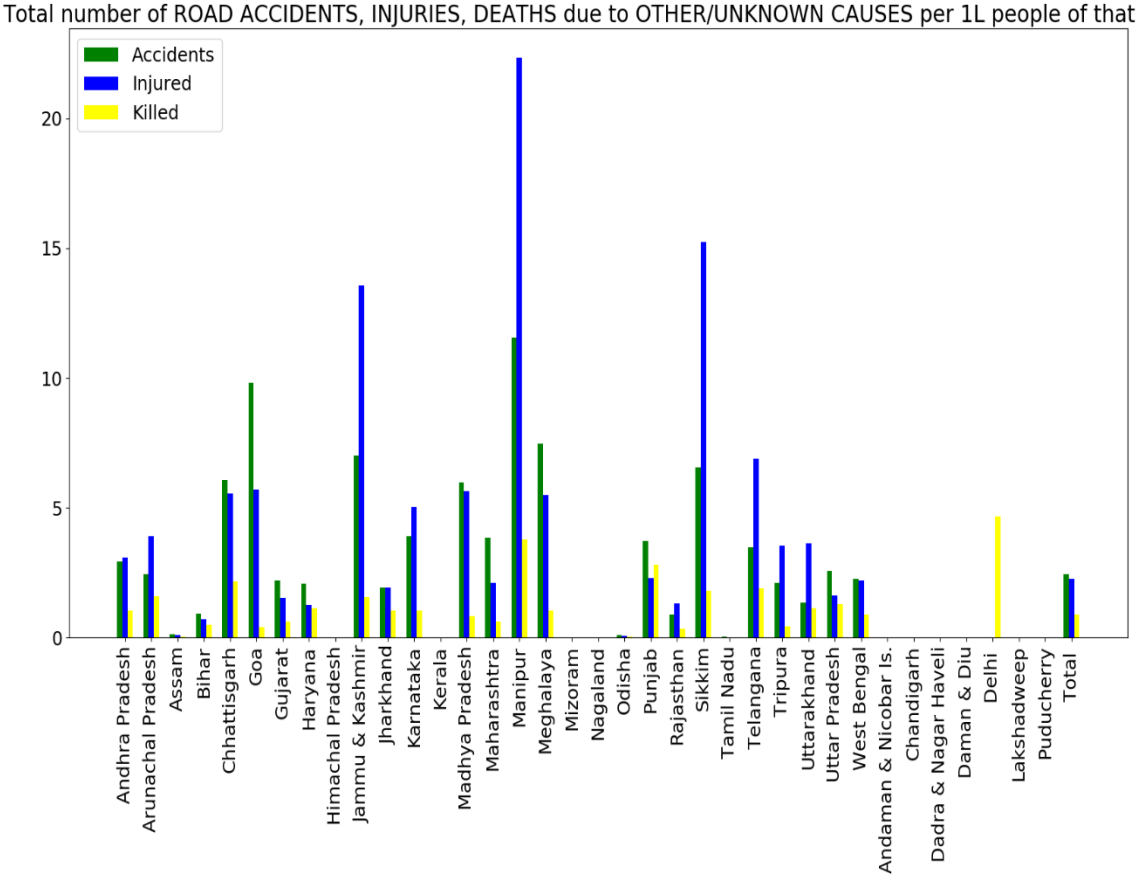
Total number of ROAD ACCIDENTS, INJURIES, DEATHS due to POOR LIGHT per 1L people of that state



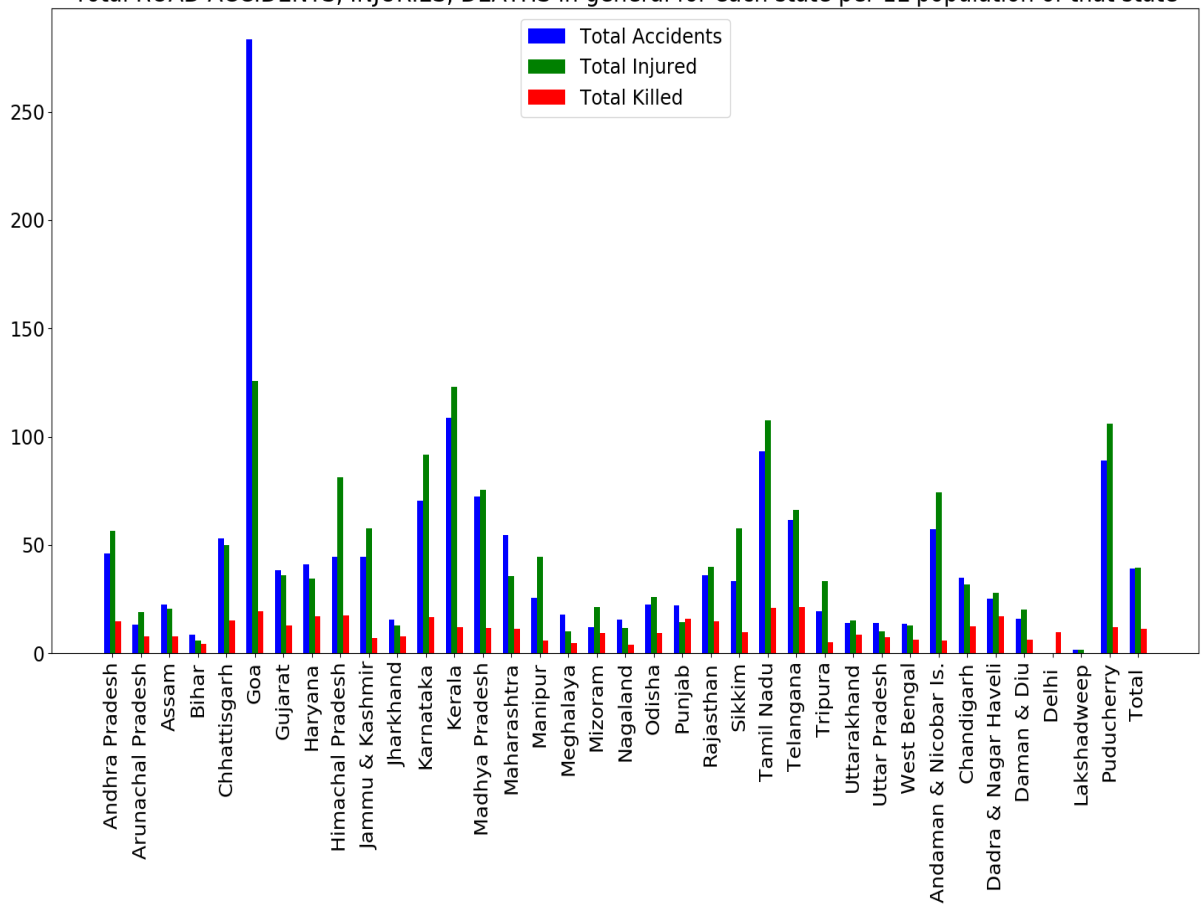
Total number of ROAD ACCIDENTS, INJURIES, DEATHS due to FALLING OF BOULDERS per 1L people of that state



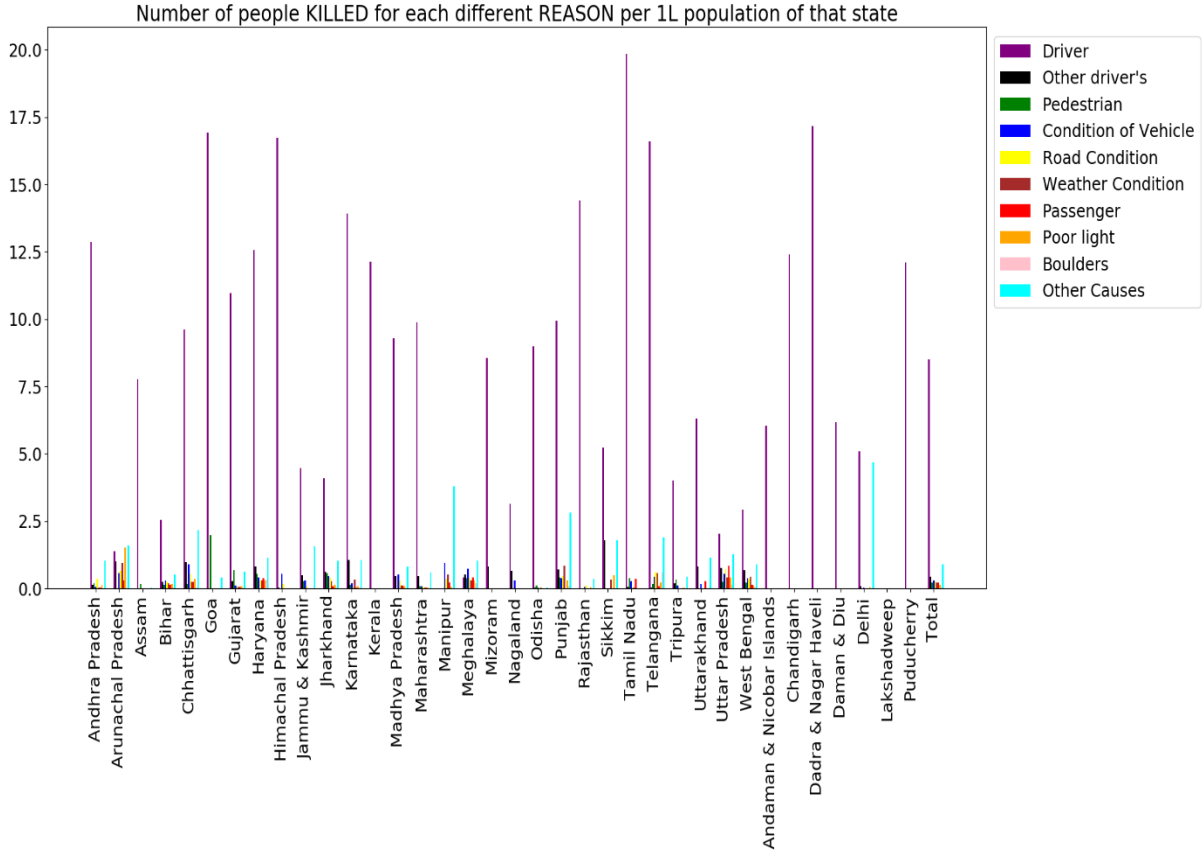
Total number of ROAD ACCIDENTS, INJURIES, DEATHS due to OTHER/UNKNOWN CAUSES per 1L people of that state

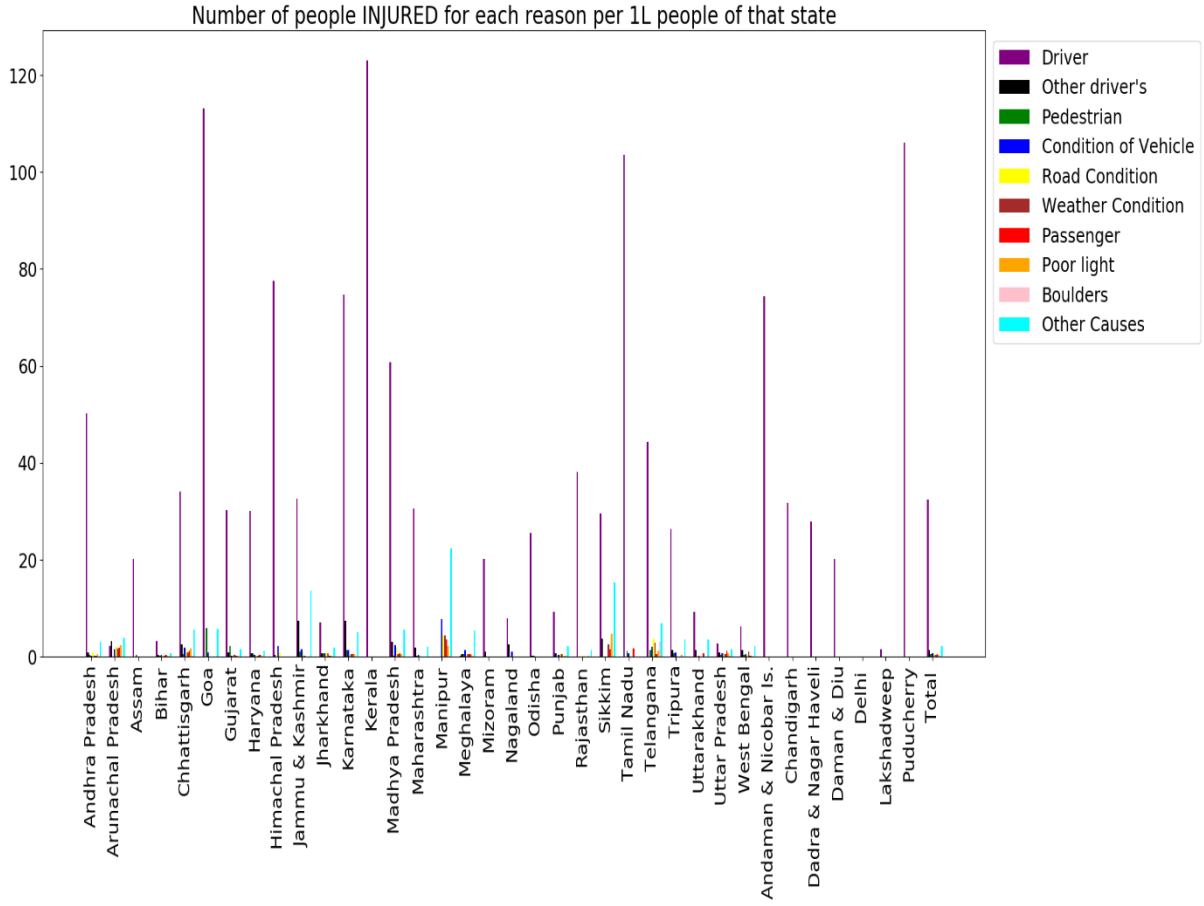


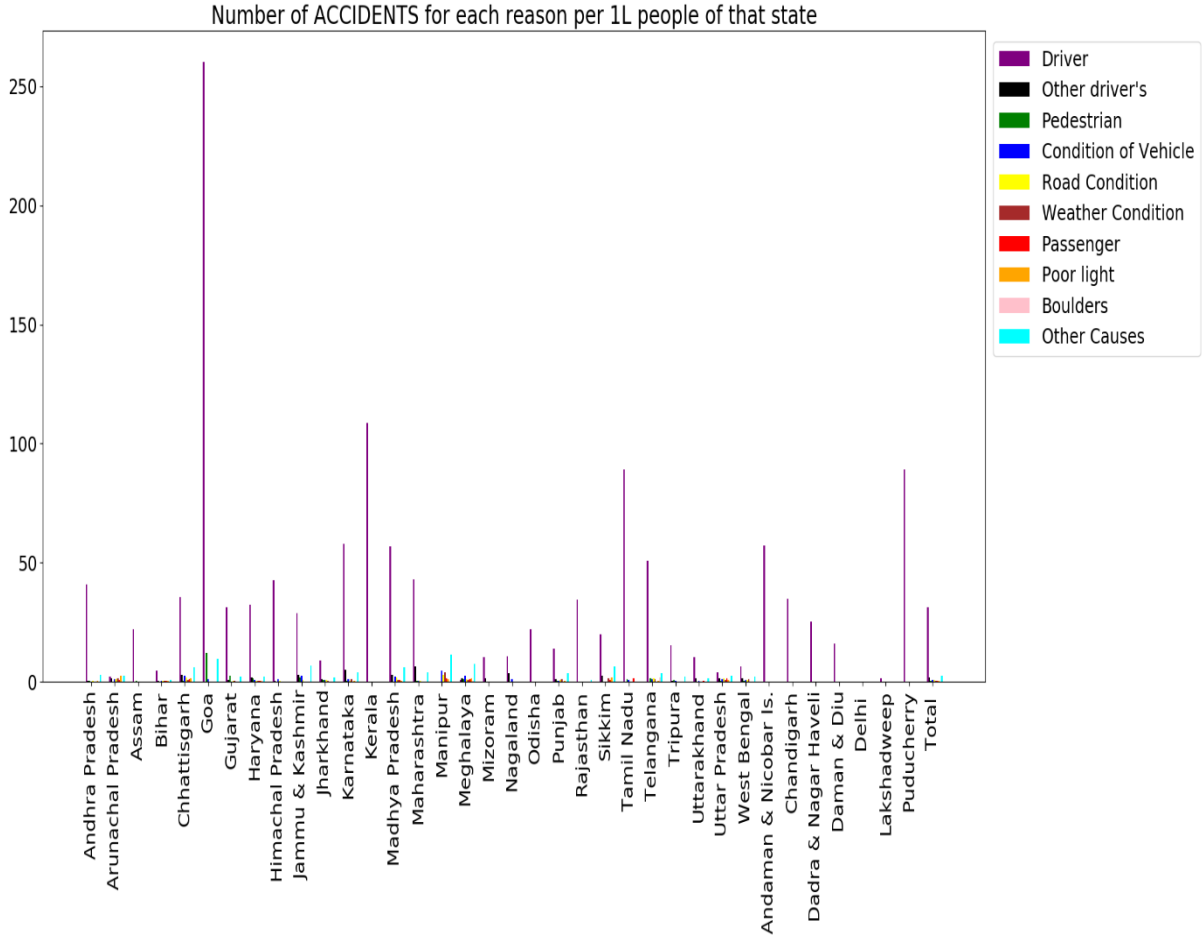
Total ROAD ACCIDENTS, INJURIES, DEATHS in general for each state per 1L population of that state



Number of people KILLED for each different REASON per 1L population of that state



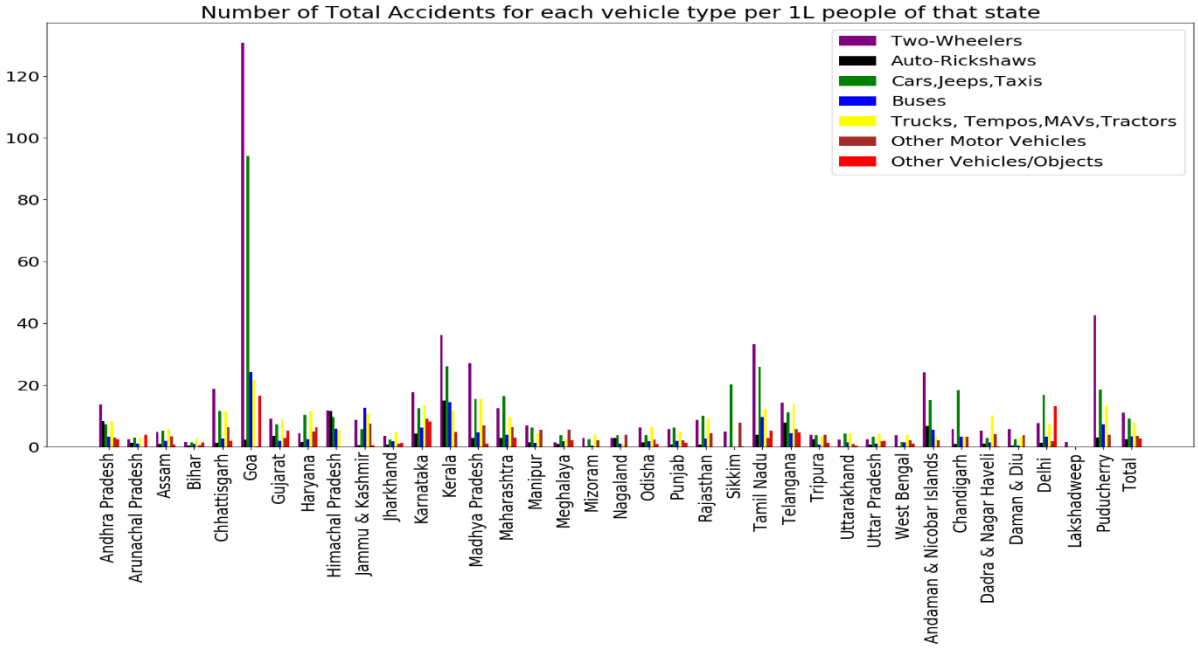

Number of people INJURED for each reason per 1L people of that state
Driver
Other driver's
Pedestrian
Condition of Vehicle
Road Condition
Weather Condition
Passenger
Poor light
Boulders
Other Causes
0
20
40
60
80
100
120
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chhattisgarh
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu & Kashmir
Jharkhand
Karnataka
Kerala
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Odisha
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttarakhand
Uttar Pradesh
West Bengal
Andaman & Nicobar Is.
Chandigarh
Dadra & Nagar Haveli
Daman & Diu
Delhi
Lakshadweep
Puducherry
Total

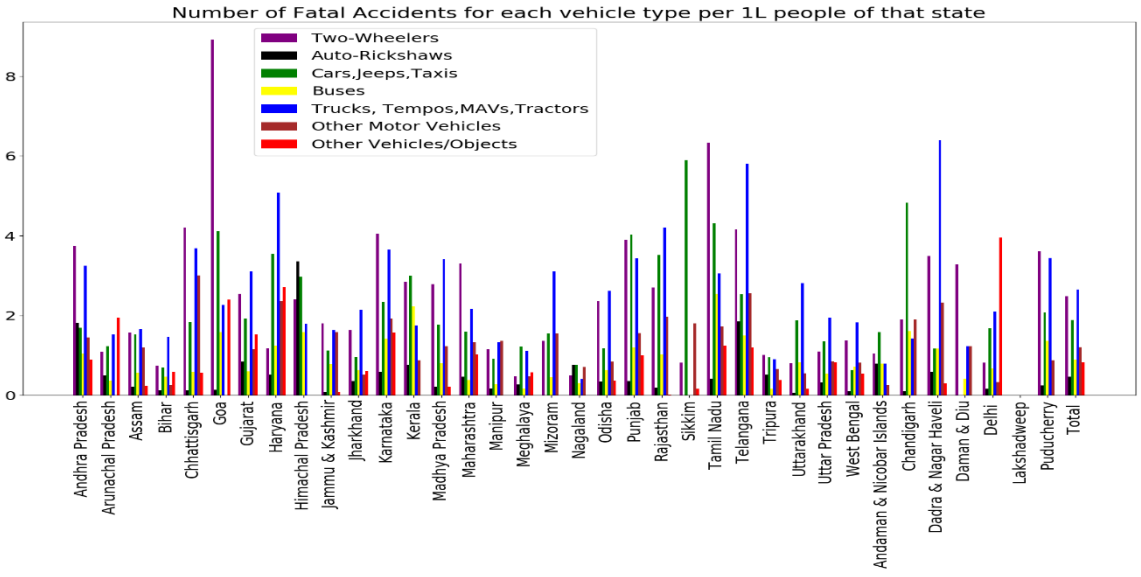

Number of ACCIDENTS for each reason per 1L people of that state
Driver
Other driver's
Pedestrian
Condition of Vehicle
Road Condition
Weather Condition
Passenger
Poor light
Boulders
Other Causes
0
50
100
150
200
250
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chhattisgarh
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu & Kashmir
Jharkhand
Karnataka
Kerala
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Odisha
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttarakhand
Uttar Pradesh
West Bengal
Andaman & Nicobar Is.
Chandigarh
Dadra & Nagar Haveli
Daman & Diu
Delhi
Lakshadweep
Puducherry
Total

DF6 :

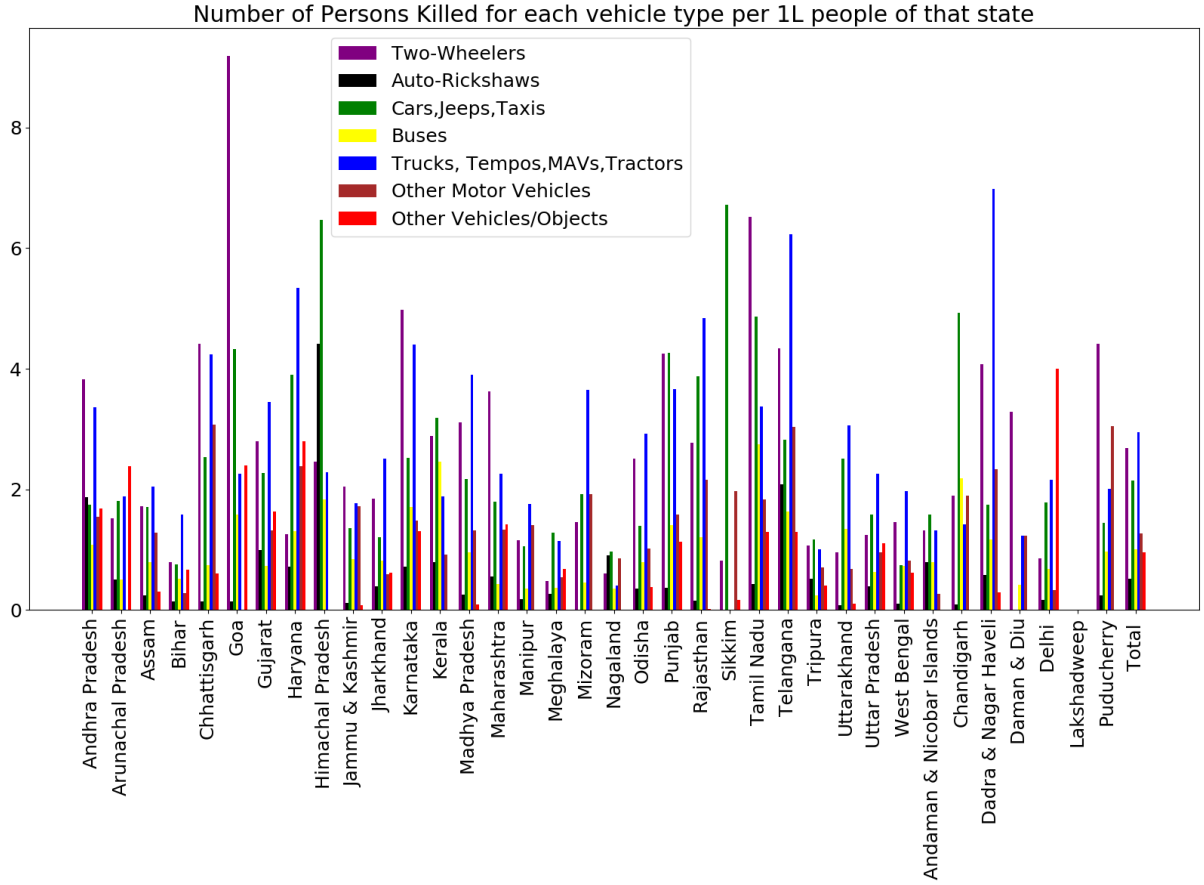
This dataset tells about the number of accidents happening along **different types of vehicles**

- Two-Wheelers
- Auto-Rickshaws
- Cars ,jeeps ,Taxis
- Buses
- Trucks ,Tempos, MAVs, Tractors
- Other Motor Vehicles
- Other Vehicles/Objects.

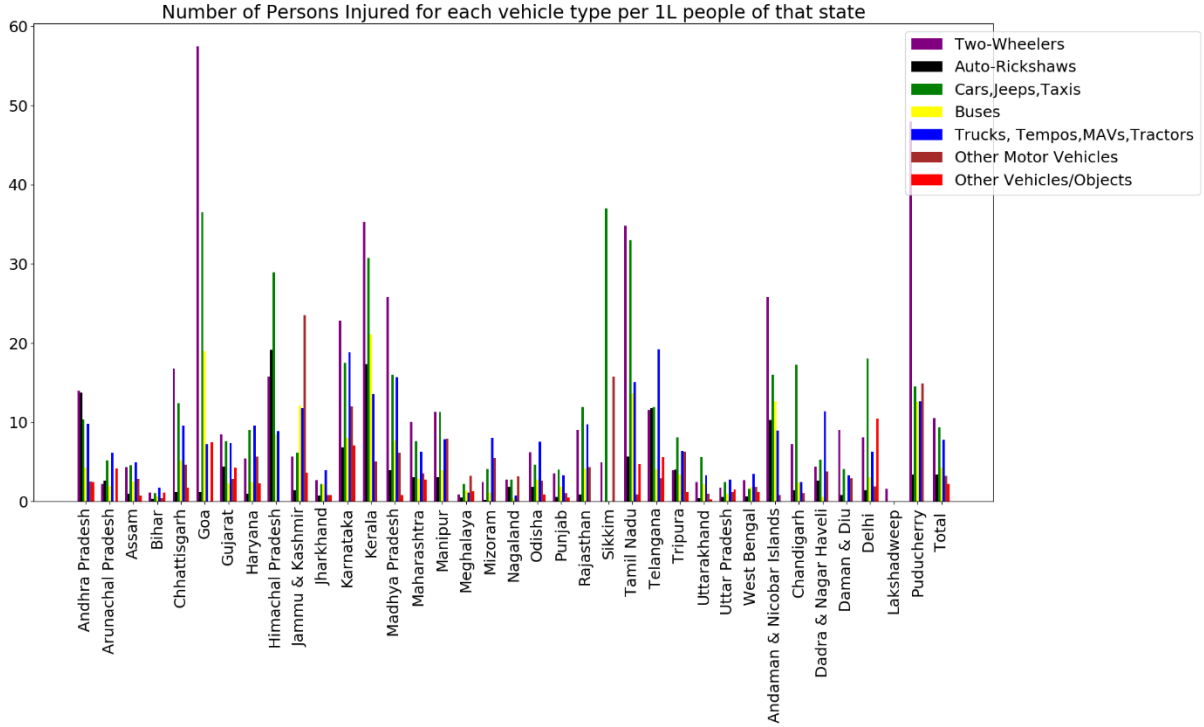


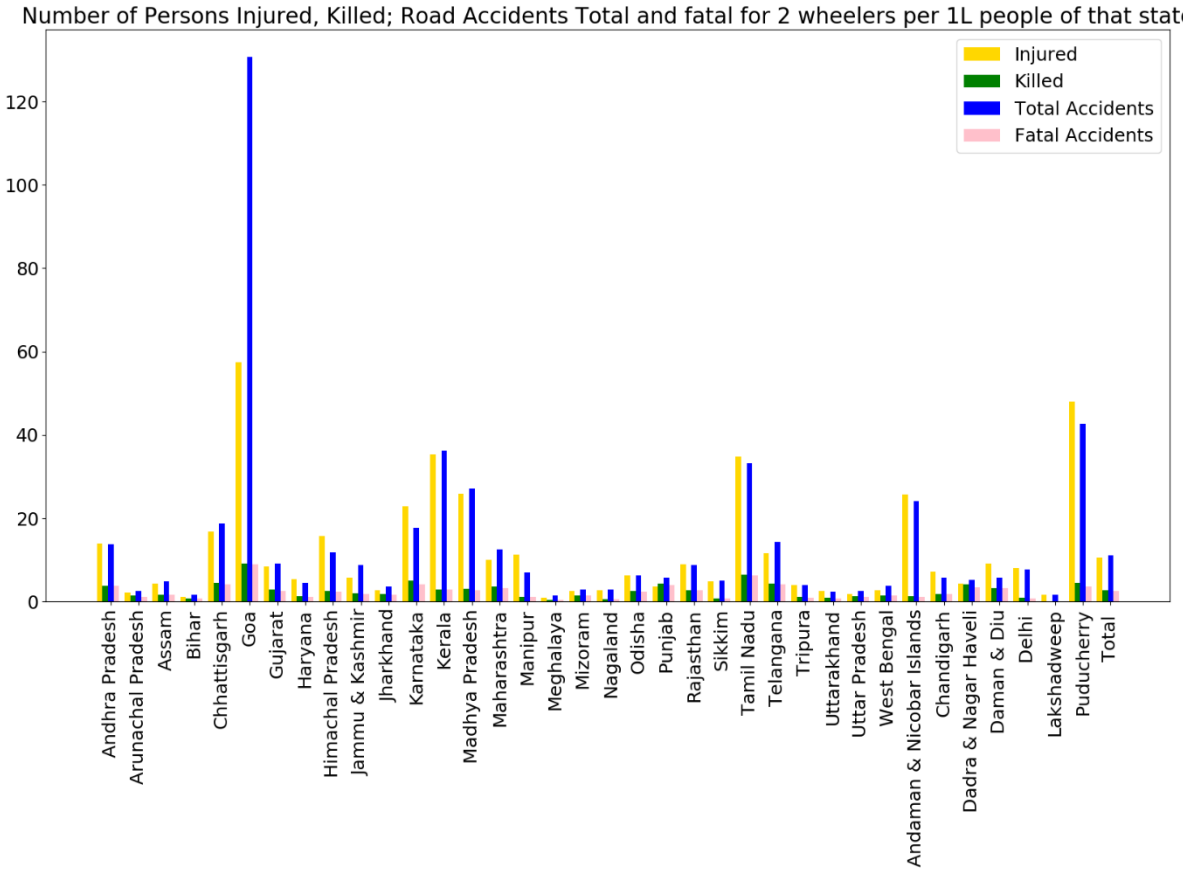


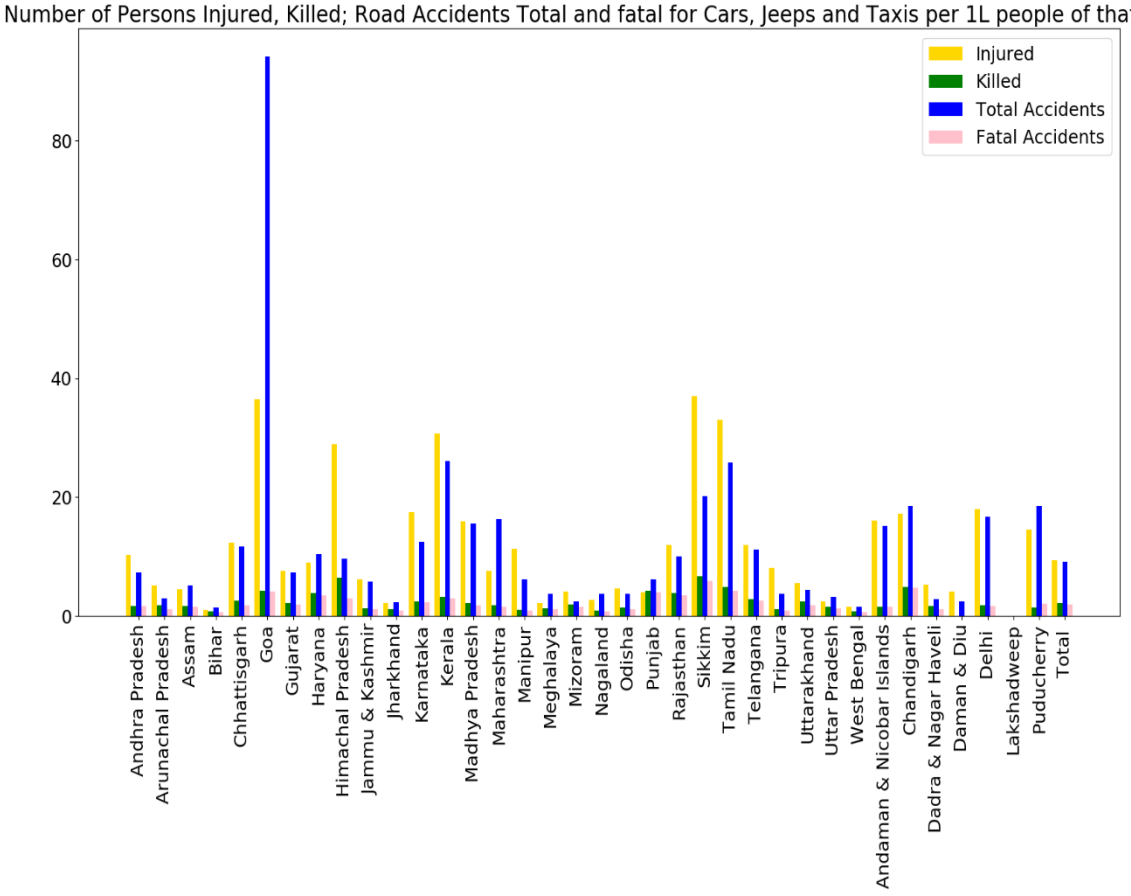
Number of Persons Killed for each vehicle type per 1L people of that state



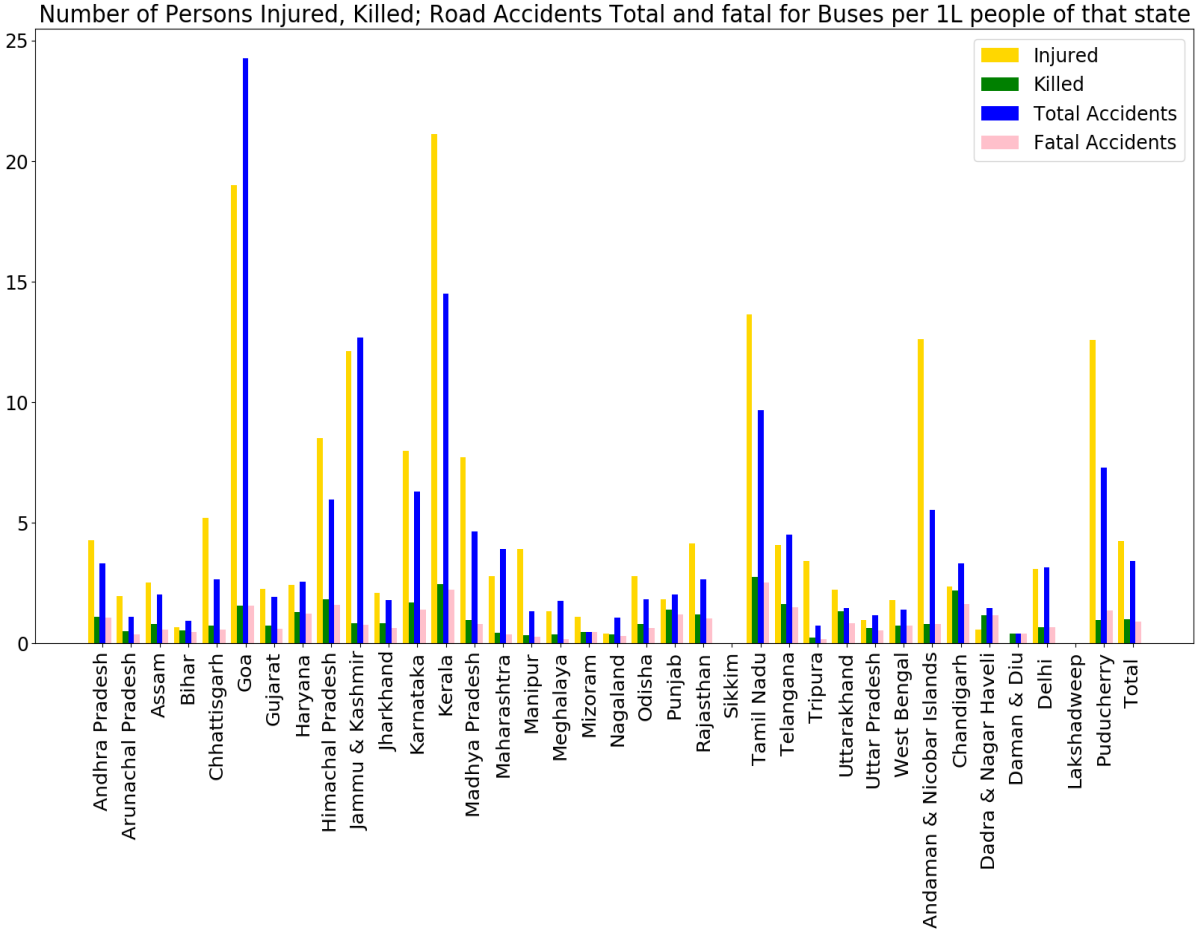
Number of Persons Injured for each vehicle type per 1L people of that state



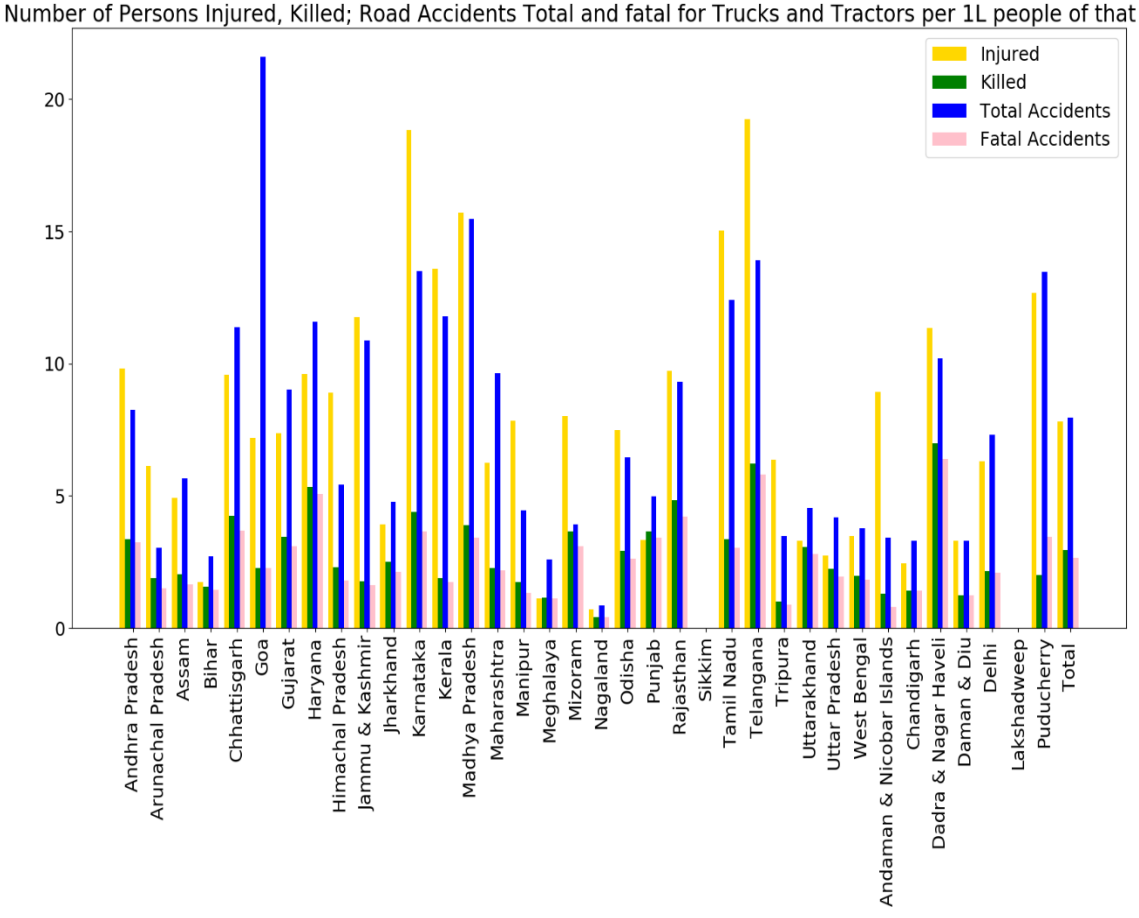

Number of Persons Injured, Killed; Road Accidents Total and fatal for 2 wheelers per 1L people of that state
Injured
Killed
Total Accidents
Fatal Accidents
0
20
40
60
80
100
120
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chhattisgarh
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu & Kashmir
Jharkhand
Karnataka
Kerala
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Odisha
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttarakhand
Uttar Pradesh
West Bengal
Andaman & Nicobar Islands
Chandigarh
Dadra & Nagar Haveli
Daman & Diu
Delhi
Lakshadweep
Puducherry
Total


Number of Persons Injured, Killed; Road Accidents Total and fatal for Cars, Jeeps and Taxis per 1L people of that state
Injured
Killed
Total Accidents
Fatal Accidents
0
20
40
60
80
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chhattisgarh
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu & Kashmir
Jharkhand
Karnataka
Kerala
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Odisha
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttarakhand
Uttar Pradesh
West Bengal
Andaman & Nicobar Islands
Chandigarh
Dadra & Nagar Haveli
Daman & Diu
Delhi
Lakshadweep
Puducherry
Total

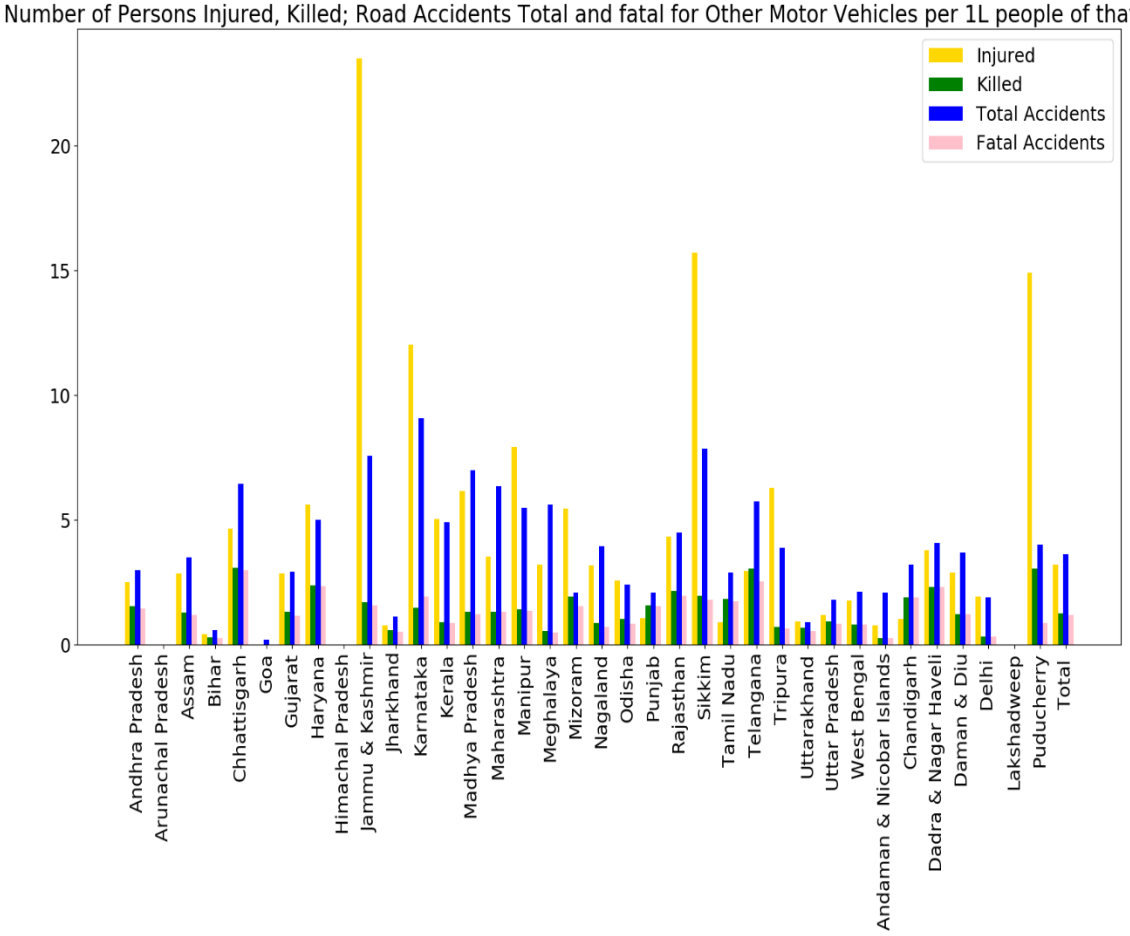
Number of Persons Injured, Killed; Road Accidents Total and fatal for Buses per 1L people of that state



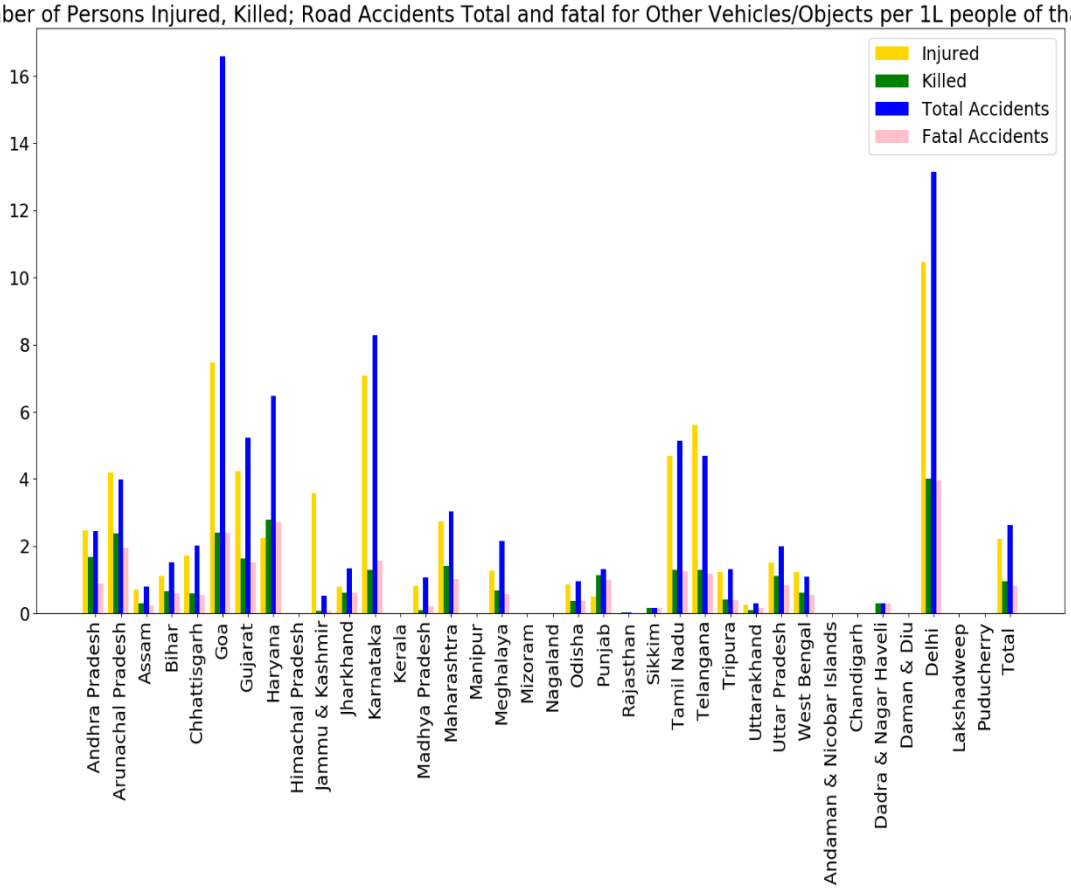
Number of Persons Injured, Killed; Road Accidents Total and fatal for Trucks and Tractors per 1L people of that state

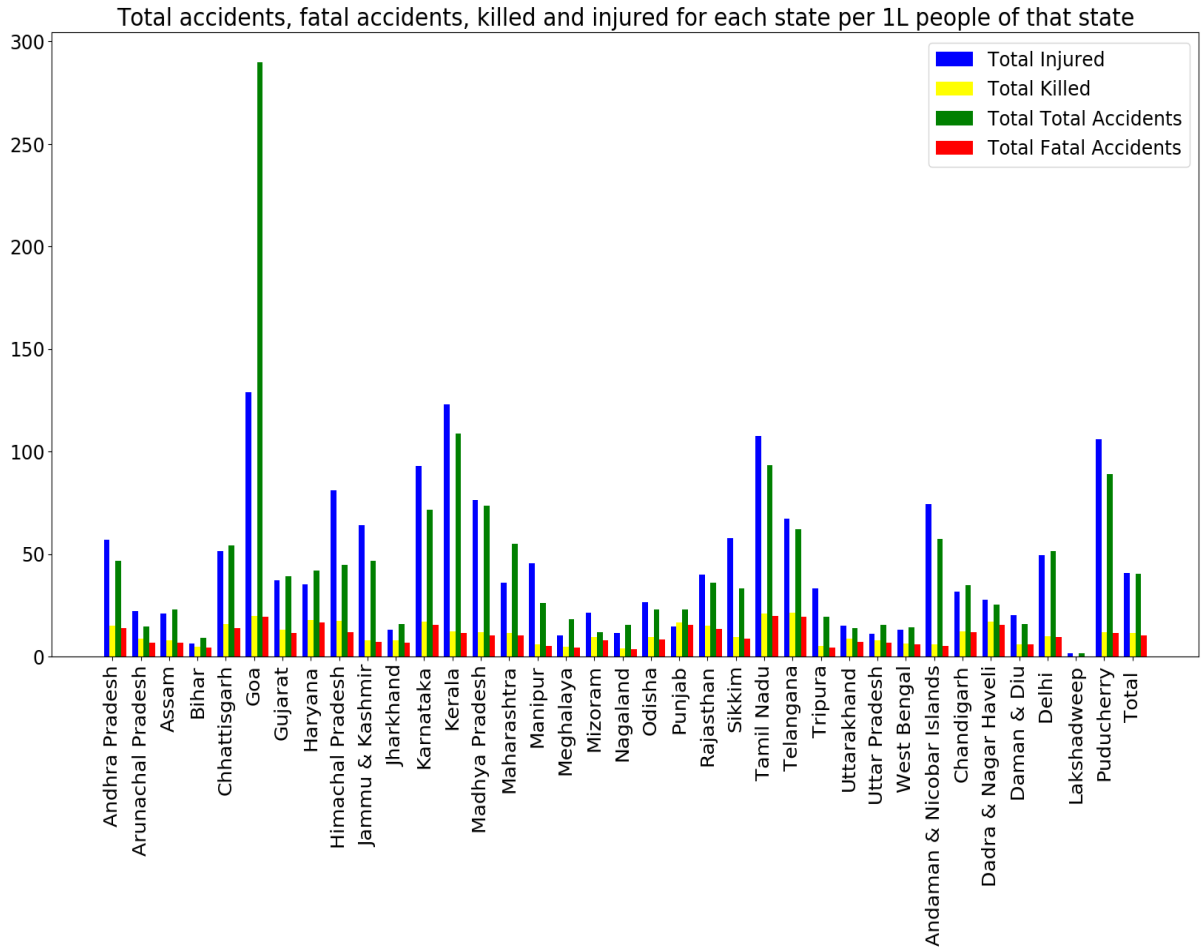


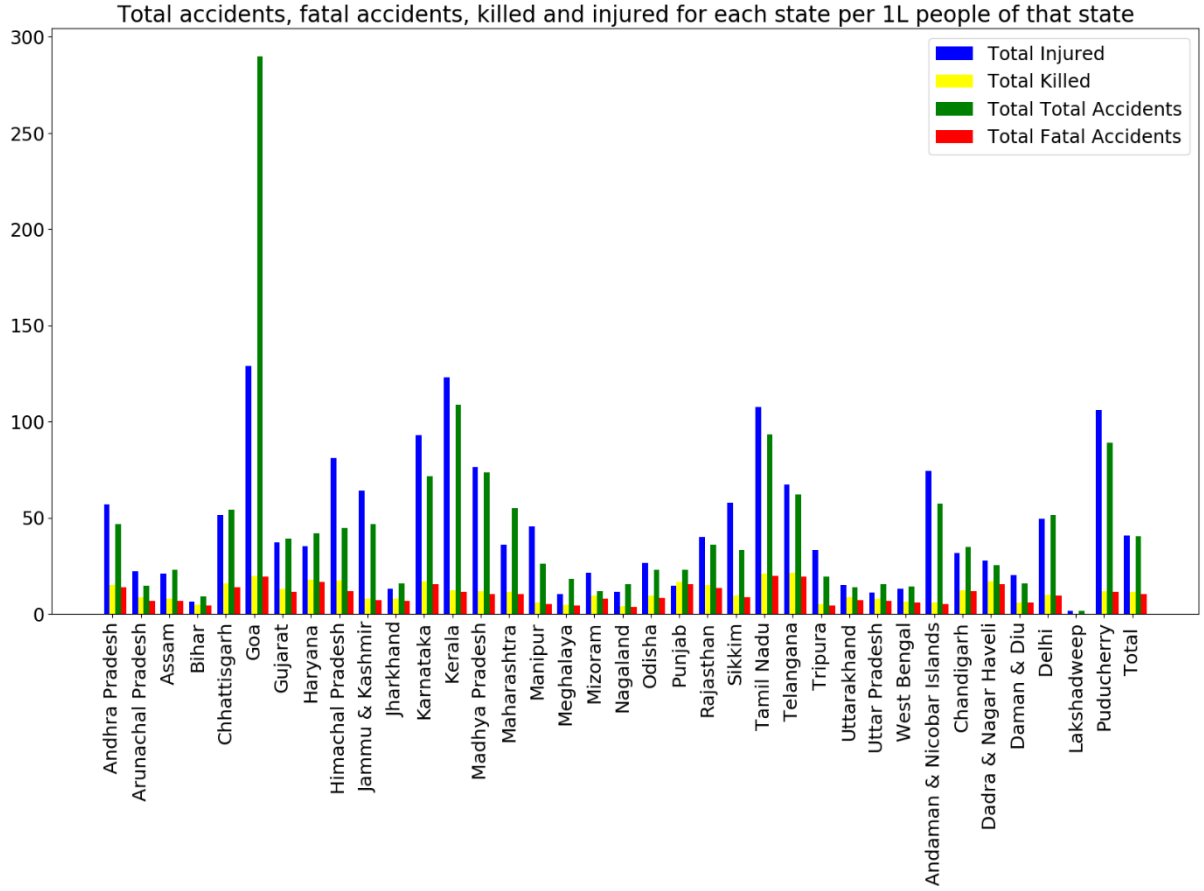
Number of Persons Injured, Killed; Road Accidents Total and fatal for Other Motor Vehicles per 1L people of that state



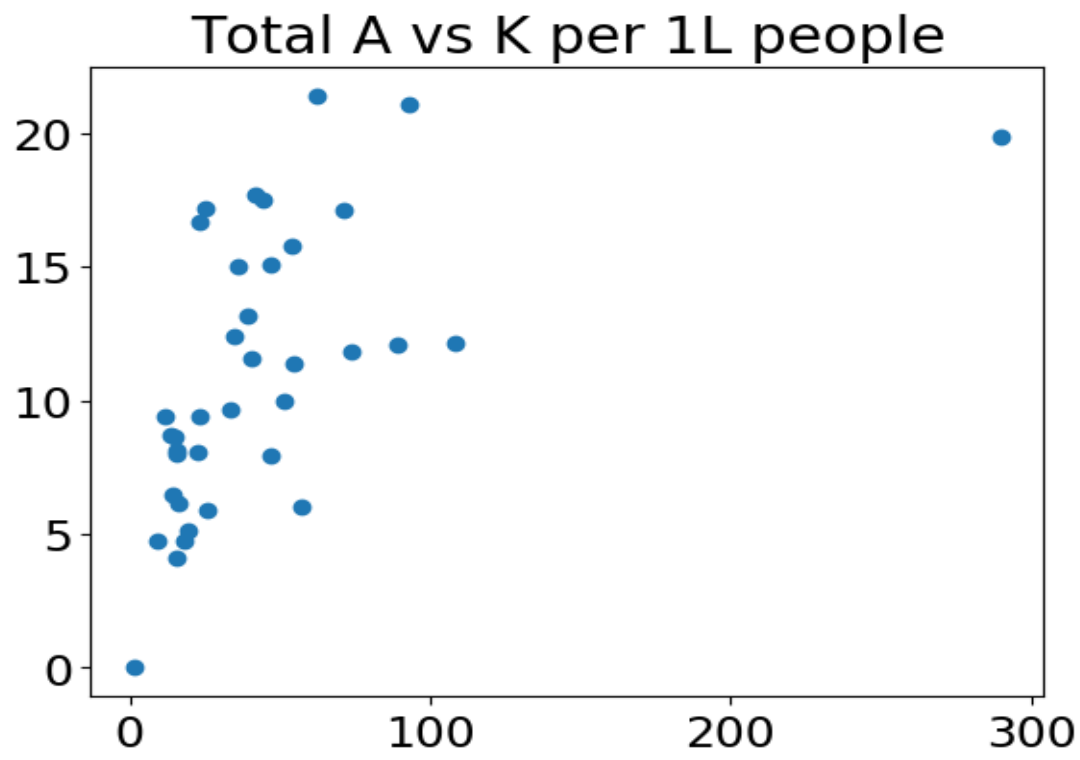
Number of Persons Injured, Killed; Road Accidents Total and fatal for Other Vehicles/Objects per 1L people of that state



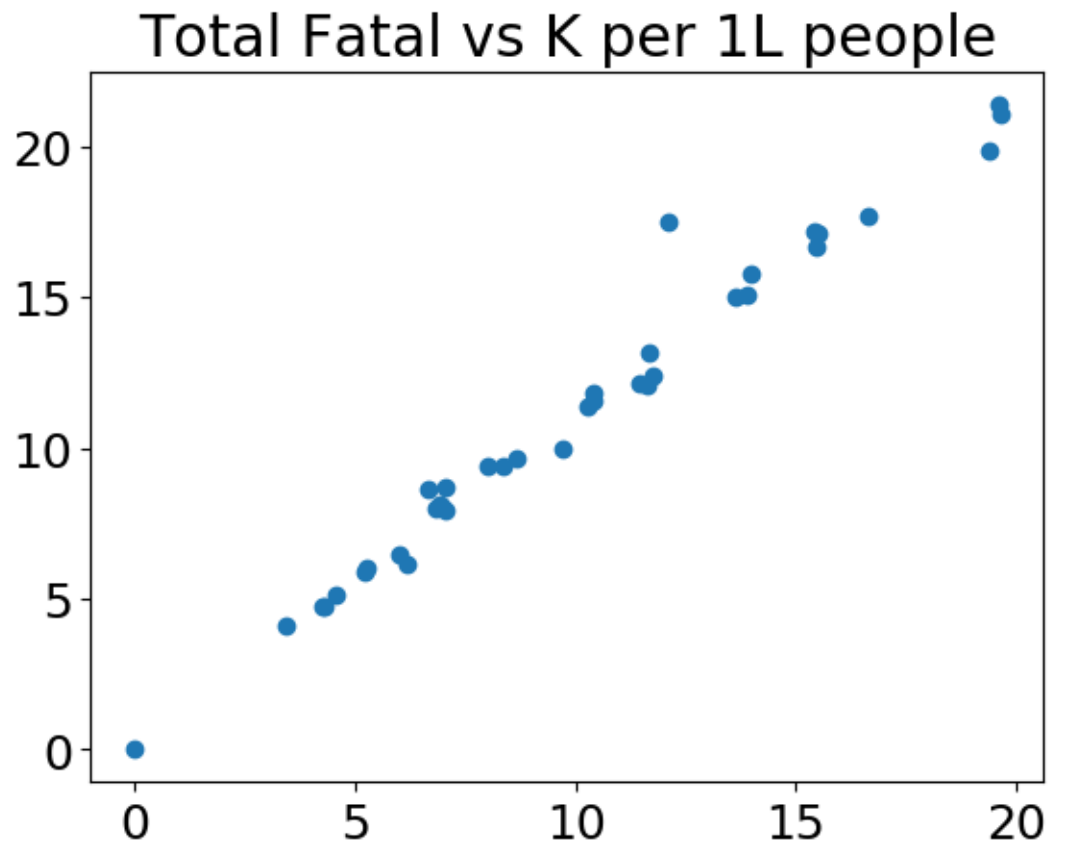

Total accidents, fatal accidents, killed and injured for each state per 1L people of that state
Total Injured
Total Killed
Total Total Accidents
Total Fatal Accidents
0
50
100
150
200
250
300
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chhattisgarh
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu & Kashmir
Jharkhand
Karnataka
Kerala
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Odisha
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttarakhand
Uttar Pradesh
West Bengal
Andaman & Nicobar Islands
Chandigarh
Dadra & Nagar Haveli
Daman & Diu
Delhi
Lakshadweep
Puducherry
Total


Total accidents, fatal accidents, killed and injured for each state per 1L people of that state
Total Injured
Total Killed
Total Total Accidents
Total Fatal Accidents
0
50
100
150
200
250
300
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chhattisgarh
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu & Kashmir
Jharkhand
Karnataka
Kerala
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Odisha
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttarakhand
Uttar Pradesh
West Bengal
Andaman & Nicobar Islands
Chandigarh
Dadra & Nagar Haveli
Daman & Diu
Delhi
Lakshadweep
Puducherry
Total

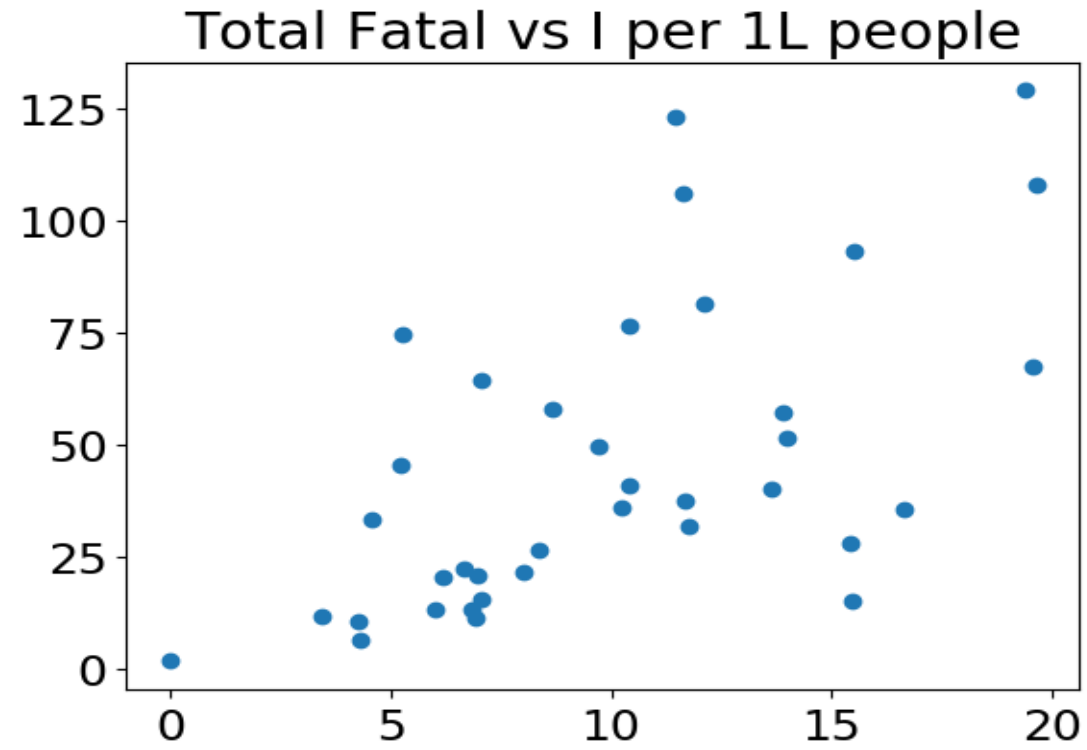
Sum Total Road Accidents - 2014 per 1L people Vs Sum Total Number of Persons Killed



Sum Total Fatal Road Accidents - 2014 per 1L people Vs Sum Total Number of Persons Killed - 2014 per 1L people

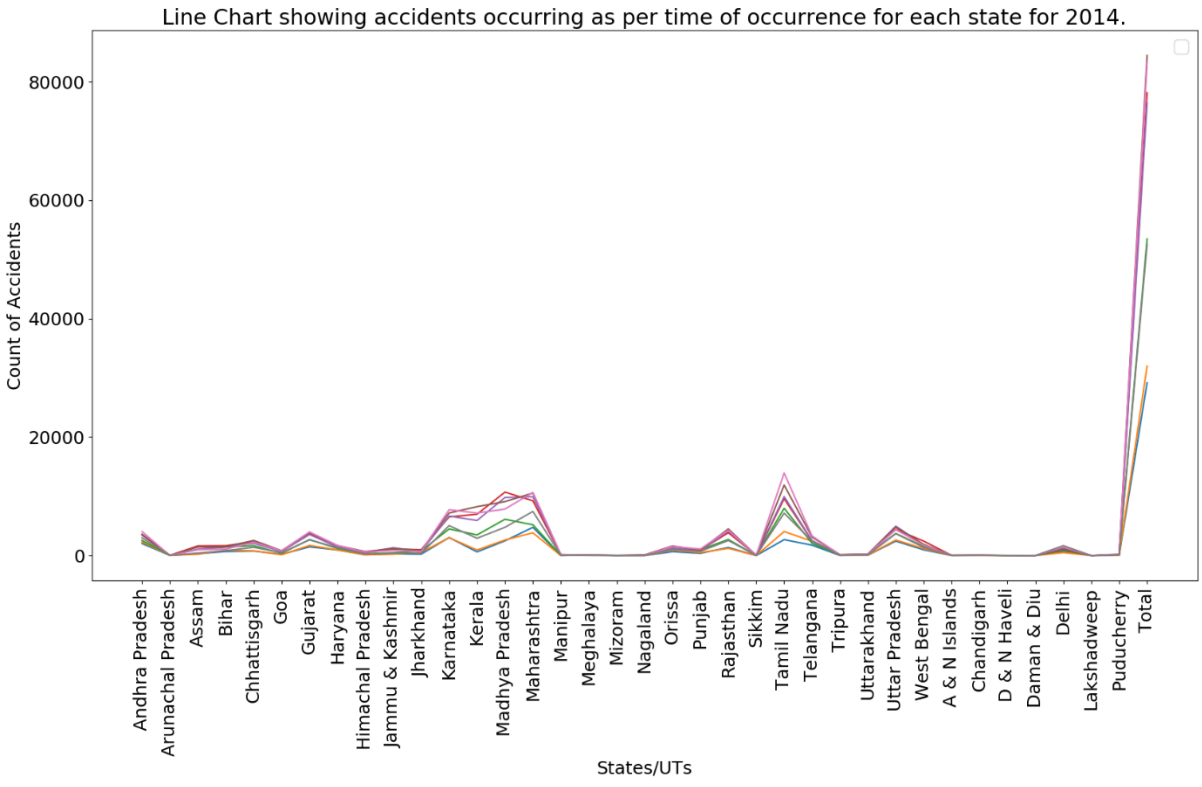


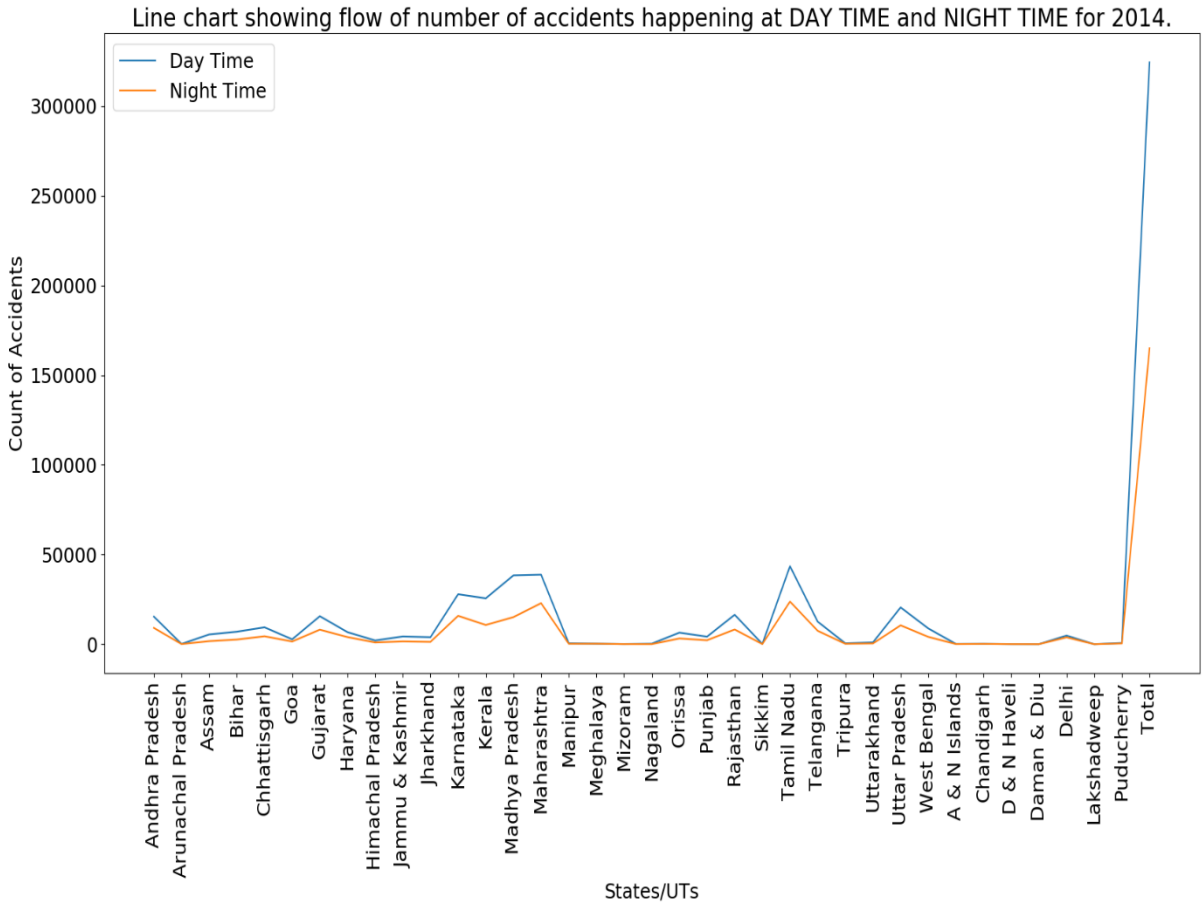
Sum Total Fatal Road Accidents - 2014 per 1L people Vs Sum Total Number of Persons Injured - 2014 per 1L people

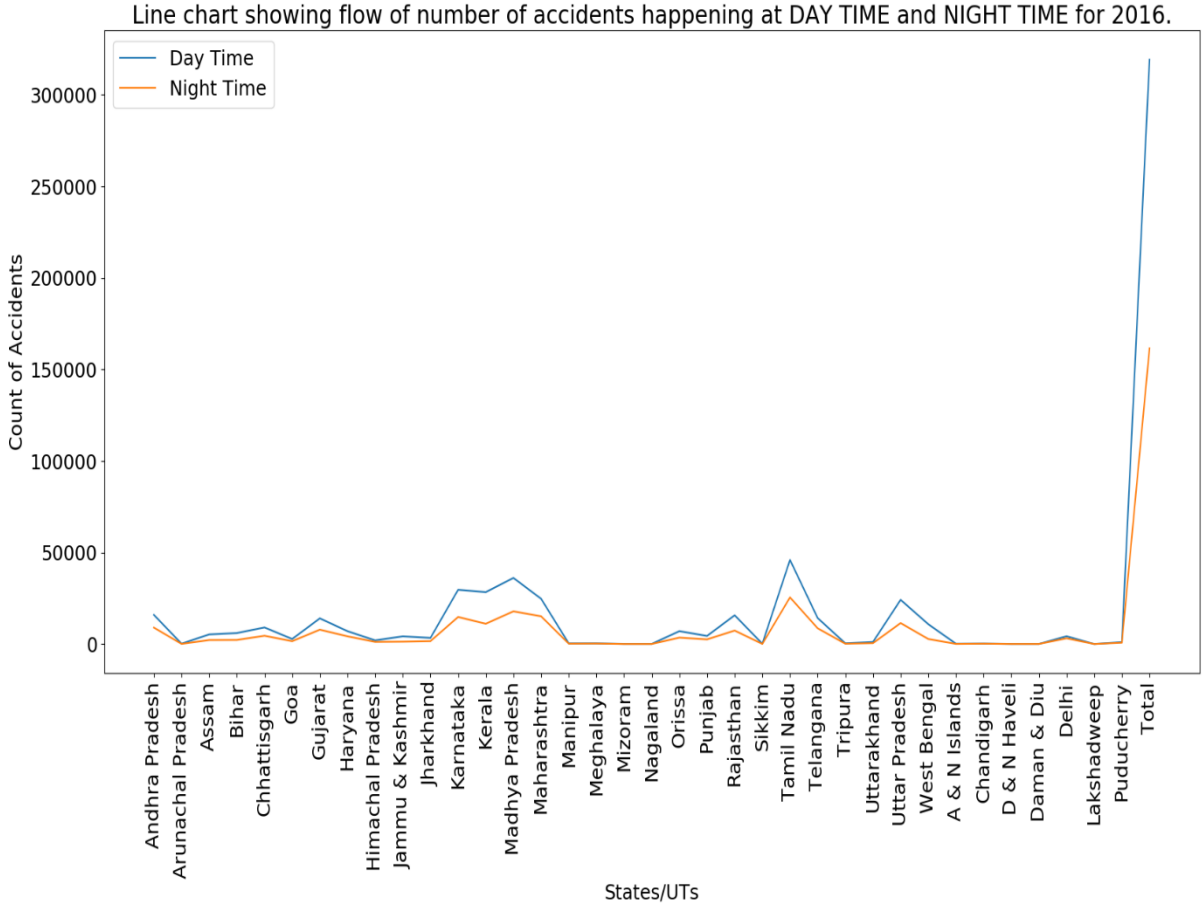


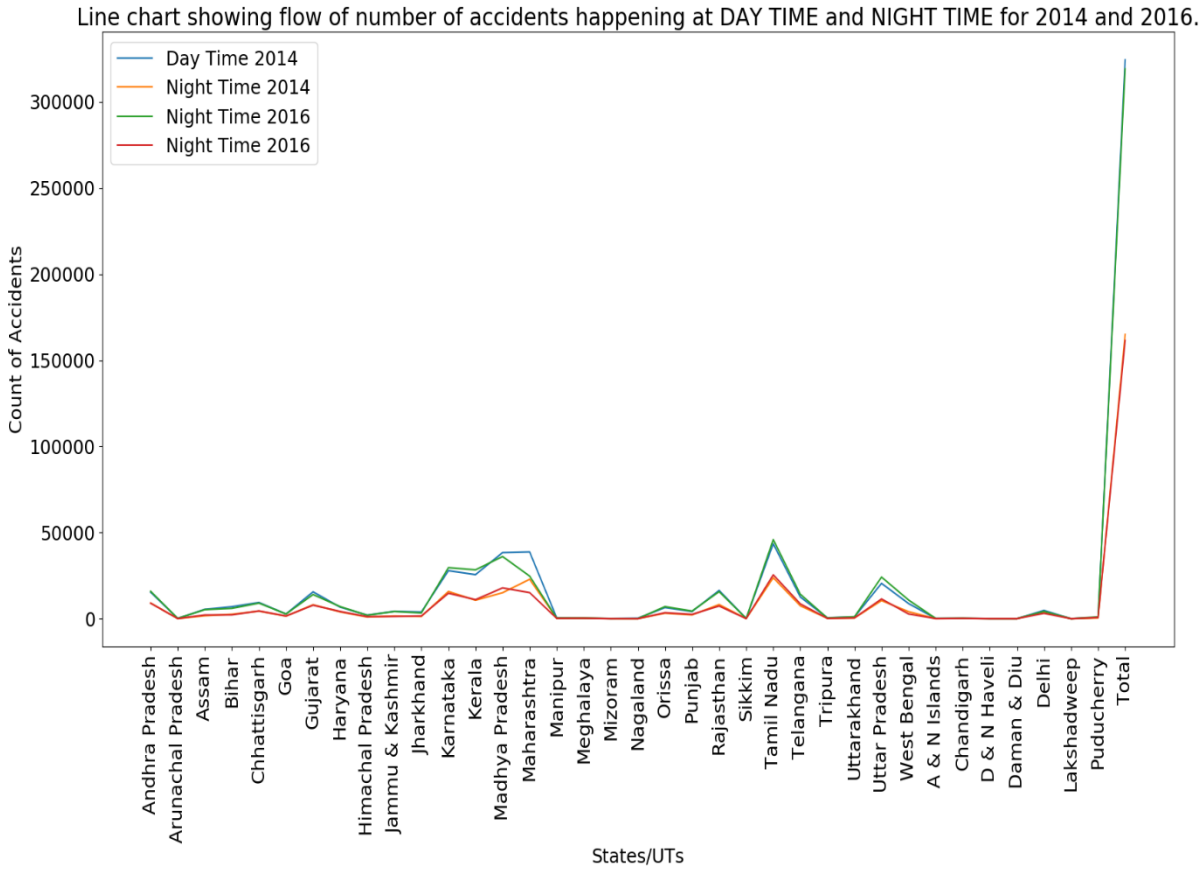
DF7 :

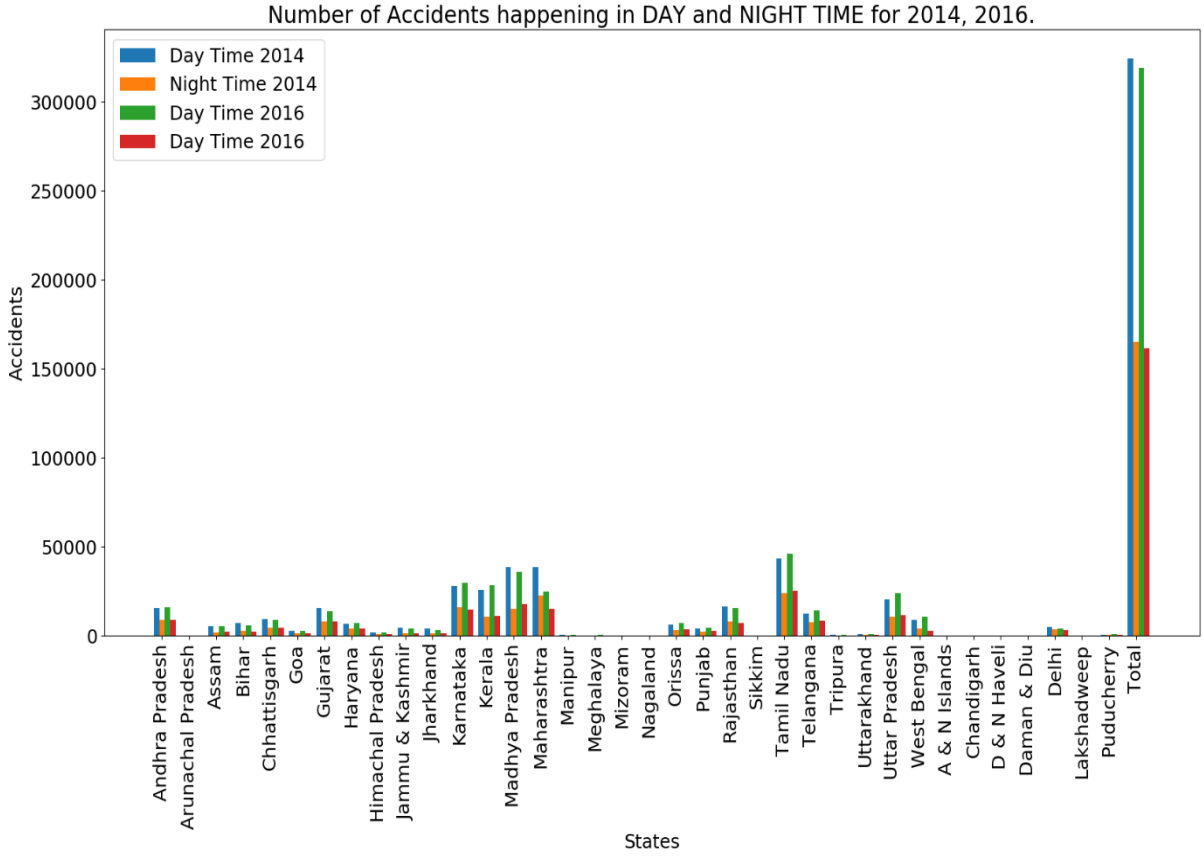
This dataset tells how many accidents happen according to the **time of occurrence** in different states.




Line chart showing flow of number of accidents happening at DAY TIME and NIGHT TIME for 2014.
Day Time
Night Time
Count of Accidents
300000
250000
200000
150000
100000
50000
0
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chhattisgarh
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu & Kashmir
Jharkhand
Karnataka
Kerala
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Orissa
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttarakhand
Uttar Pradesh
West Bengal
A & N Islands
Chandigarh
D & N Haveli
Daman & Diu
Delhi
Lakshadweep
Puducherry
Total
States/UTs


Line chart showing flow of number of accidents happening at DAY TIME and NIGHT TIME for 2016.
Day Time
Night Time
Count of Accidents
300000
250000
200000
150000
100000
50000
0
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chhattisgarh
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu & Kashmir
Jharkhand
Karnataka
Kerala
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Orissa
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttarakhand
Uttar Pradesh
West Bengal
A & N Islands
Chandigarh
D & N Haveli
Daman & Diu
Delhi
Lakshadweep
Puducherry
Total
States/UTs


Line chart showing flow of number of accidents happening at DAY TIME and NIGHT TIME for 2014 and 2016.
Day Time 2014
Night Time 2014
Night Time 2016
Night Time 2016
Count of Accidents
300000
250000
200000
150000
100000
50000
0
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chhattisgarh
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu & Kashmir
Jharkhand
Karnataka
Kerala
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Orissa
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttarakhand
Uttar Pradesh
West Bengal
A & N Islands
Chandigarh
D & N Haveli
Daman & Diu
Delhi
Lakshadweep
Puducherry
Total
States/UTs


Number of Accidents happening in DAY and NIGHT TIME for 2014, 2016.
Day Time 2014
Night Time 2014
Day Time 2016
Day Time 2016
Accidents
300000
250000
200000
150000
100000
50000
0
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chhattisgarh
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu & Kashmir
Jharkhand
Karnataka
Kerala
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Orissa
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttarakhand
Uttar Pradesh
West Bengal
A & N Islands
Chandigarh
D & N Haveli
Daman & Diu
Delhi
Lakshadweep
Puducherry
Total
States

THE END