Capstone Project Car Accident Severity

Language
Python 3.6

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INTRODUCTION: Problem Definition

Road traffic injuries are one of the leading cause of death across many countries and are predicted to increase drastcally in the coming years. The government and civic bodies need to understand what is the cause of such accidents. Hence a thorough data exploration and analysis is required to find the reasons for the same. An accurate prediction of the accidents can be predicted by analysing factors like vehicles used, time of the day, gender of drivers, age of the drivers among many other factors. This project will help civic bodies and governments to find out the cause for these accidents and come up with various measures to curtail these accidents which are growing in number by the day,

DATA:

The data for this project is sourced from the https://data.gov.uk/ (https://data.gov.uk/) - road safety data https://data.gov.uk/dataset/cb7ae6f0-4be6-4935-9277-47e5ce24a11f/road-safety-data (https://data.gov.uk/dataset/cb7ae6f0-4be6-4935-9277-47e5ce24a11f/road-safety-data)

The following data processing and analyzing is followed for this project:

1. Import all the required libraries
2. Import the datasets
3. Accident Datasets
4. Analyse the accident dataset
5. Casualities data set
6. Corelation - Accidents
7. Accidents severity based on road type
8. Scatter plot of longitude/latitude
9. Correlation - Casualities 10.Distribution of Casualities based on age 11.Accident severity Distribution based on Sex 12.Accident Severity distribution based on Light conditions 13.Accident severity distribution based on road type

Based on the above data extraction and analysis the following issues can be predicted:

- Which the age group has the most number of accidents
- Most of the accidents fall under which gender category - is it male/female category.
- Do most accidents occur in daylight/night time
- Most of the accidents occur in which road type