**Report on Road Accident Analysis**

**Introduction**

Road accidents are a major global concern, causing significant loss of life, injuries, and economic burden. This report aims to analyse road accident data to identify patterns, contributing factors, and potential areas for improvement in road safety.

**Data and Methodology**

* Data Source : <https://drive.google.com/file/d/1yTI0506e7lZglRl7fsG2_TL0fHcd-G6D/view>
* This Data Consists the record of accidents during the year 2023
* Data analysis methods used: visualization using power BI.

**Analysis of Road Accidents**

* **Frequency and Severity:**
  + The total number of accident occurred during the entire year is 307973 with most accidents in the month of November (29095) followed by the month of October (28368).
  + Most of the accidents occurred on Fridays reaching up-to 51K during the time stamp of 3p.m-6p.m followed by Tuesday (46.3K) between 4p.m-7p.m.
  + Most of the accidents occurred were slight reaching up-to 351K. The number of in Fetal accidents were very less reaching the number 52.
  + 77% of the accidents occurred were of cars followed by vans covering 5% of the accidents.
  + It is also observed that mostly accidents occurred were in the time stamp of 3p.m-7p.m followed by the time stamp of 8a.m-12noon.
  + Most of the accidents occurred with 20 minutes away from junction (123K) followed T junction (96.7K). The number of accidents on crossroads were 29.9K
  + Most of the accident occurred were on T junctions with speed limit of 30
* **Contributing Factors:**
  + The main factors includes over-speeding of drivers, drunk and rash driving, negligence of drivers and not obeying traffic rules while driving.
* **Causal Relationships:**
  + During the analysis, it was also found that most accidents occurred were between 3p.m-6p.m. through this it was concluded that most accident occurred in a traffic rush at the ending of office hours.
  + Most of the accidents occurred were slight accident.
* **High-Risk Locations:**
  + The black spots are 20 minutes away from junction (123K) followed T junction (96.7K).
  + **Impact of Road Accidents**
* **Human Cost:**
  + Total 418K casualties were reported in the year with most number of casualties were in slight accidents (351K).
  + Total casualties in case of drunk driving were more than 30K.

**Recommendations for Improvement**

Based on the analysis, propose recommendations to improve road safety:

* **Traffic Law Enforcement:**
  + Suggestion of stricter enforcement of traffic laws targeting identified risk factors speeding, drunk driving.
* **Road Infrastructure Improvements:**
  + Better signage at the blind-spots like T junctions and zone 20 min away from a junction, road repairs, improved lighting.
  + Advocate for safer road designs that prioritize pedestrian and cyclist safety.
* **Public Awareness Campaigns:**
  + Proposing educational campaigns to raise awareness about safe driving practices, responsible pedestrian behaviour, and the dangers of distracted driving.
* **Vehicle Safety Standards:**
  + Encourage stricter vehicle safety standards and technological advancements (e.g., mandatory advanced driver-assistance systems for driving in traffic).

**Conclusion**

Road accidents are a complex public health issue. By analyzing accident data, we can identify key risk factors and develop targeted interventions. Implementing the recommendations outlined in this report can significantly contribute to improving road safety and saving lives.