**DATA ANALYTICS ON ROAD ACCIDENTS**

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**ABSTRACT**

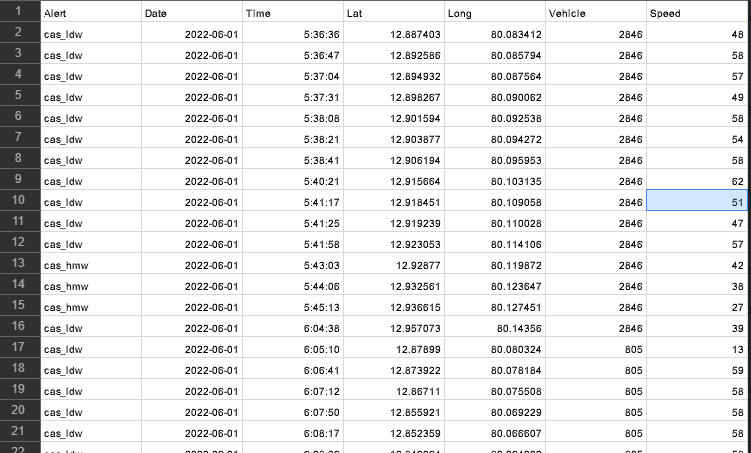
***One of the primary causes of car accidents is speed. If emergency services had been able to learn about the tragedy and arrive in time, many lives might have been saved. Today, GPS is an essential component of a car's system. For the analysis, a scatter plot was created in Python. Kepler.gl has been utilized by us to locate accidents. Road accidents cause injuries, deaths and financial losses, Making them a major public safety concern around the world. A summary of a sizeable data analytics study on traffic accidents is given. From the given dataset we have taken latitude, longitude and speed of the vehicle and we have used a data visualization tool to display the accident zone.***

**INTRODUCTION**

India ranks first in the world for the number of accidents and lives lost on the roads. India has only 1 % of the vehicles in the world, but has 11% of the accidents in the world.We have used python to build a scatter plot for the analysis. This ongoing procedure of locating and fixing zones contributes to increased road safety and a decrease in accident rates. A dataset has been offered in order to visualize and locate the unintended locations. By analyzing data and using various visualization techniques, we can determine the likelihood of accidents occurring in accident zones. According to research on "Education Influence on Traffic Safety" and "Effect of Road Safety Education on Road Risky Behaviors of Spanish Children," warning of impending problems before they happen is likely to lower the number of traffic accidents by 70% to 76%.

**DATA SOURCE**

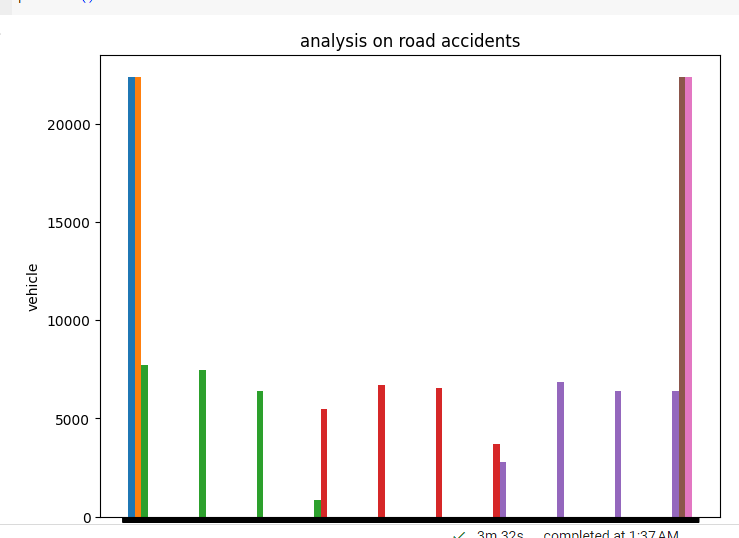
From the given dataset we have taken areas, number of vehicles, latitude, longitude, date, time and speed of the vehicle and we have used a data visualization tool to display the accident zone.

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The datasets which we have taken is given by intel organisations.The dataset includes the accidential areas and the speed of the vehicle which is the major cause for the accident.The dates and times of the accidents are given.The accident that occurred during the year of 2022 are given.

**ANALYSIS**

After a thorough analysis of the warnings issued by Advanced Driver Assistance System,it was discovered that the Headway Monitoring and warning alert(cas\_hmw) was the one that occurred the most-12,328 times-while the Forward Collision Warning alert(cas\_pcw) was the one that occurred the least-599 times.According to the likelihood table,there is a possibility of roughly 0.578 that headway monitoring and warning will occur.Therefore,the cas\_hmw alert had detected the bulk of accidents. If a vehicle approaches another too near, the cas\_hmw warns the driver. Therefore, we may conclude that the majority of incidents have resulted from sudden passing of vehicles from behind. The accident analysis based on the submitted vehicles and alerts is shown in the graphic below. Each variety is distinguished from the others by the color variant.

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**CONCLUSION**:

Therefore, this project can help us to detect the accident zones and reduce the number of accidents on Iroads. Since the accident locations are predicted earlier, the emergency services can be provided easily.

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