Traffic Fatalities in The United States

By: LaChandra Ash

Abstract

Traffic fatalities occur more often in the United States versus the rest of the world. Currently, deaths in traffic are the leading causes of death in America. The fatality rate in the United States is approximately fifty percent higher when compared to other countries. Pedestrian deaths represent a large portion of traffic fatalities. Prior studies revealed most traffic deaths occur in the United States, because Americans drive more than drivers in other countries. The other reason the United States is leading in traffic deaths is because of permissive traffic laws that lead to deadly behavior. The traffic safety policies in the United States are out of line when compared to other countries' laws. The lenient traffic laws in America include seat belt laws in the back seats, drunk driving, vehicle standards, and speed laws. The data gathered from real-time traffic is used to reveal possible strategies that can decrease traffic deaths.

Author Keywords

Fatality; traffic; accident; safety; injury; road; crashes; driver; behavior; vehicles; pedestrians; speed; driving; technology; cellphones; drunk; death; seatbelt.

ACM Classification Keywords

Traffic Management Systems – Future Perspectives
Highway Traffic State- Estimation of real-time traffic
Alcohol-related – Traffic fatalities

Introduction

Approximately 1.25 million people in the world, were killed in traffic fatalities each year. More than fifty percent of the traffic fatalities included young adults between the ages of 15-24. Globally, traffic fatalities were ranked as the 9th leading cause of 2.2% deaths. In the United States, nearly 37,000 people died in traffic deaths every year. More than 1,600 children who were under the age of 15 years old, were killed in a traffic death every year. The traffic crashes cost the United States approximately $230.60 billion each year, which is nearly $820 per person. Deaths occur mostly due to driving under the influence, back seat passengers not wearing their seat

belts, speeding, talking, or texting on the phone, and car issues. Governments, non-governmental organizations, industry, and international agencies need to make a commitment to reduce the risk of global traffic deaths.

The Causes of Traffic Fatalities Multiple causes of traffic fatalities exist including talking on cellphones, texting on cellphones, not wearing seat belts in the front or back of the vehicle, known or unknown car issues that were not fixed, driving while under the influence, speeding on highways or in neighborhoods, driver or pedestrian not paying attention, drivers not following the highway or street signs, and many more.

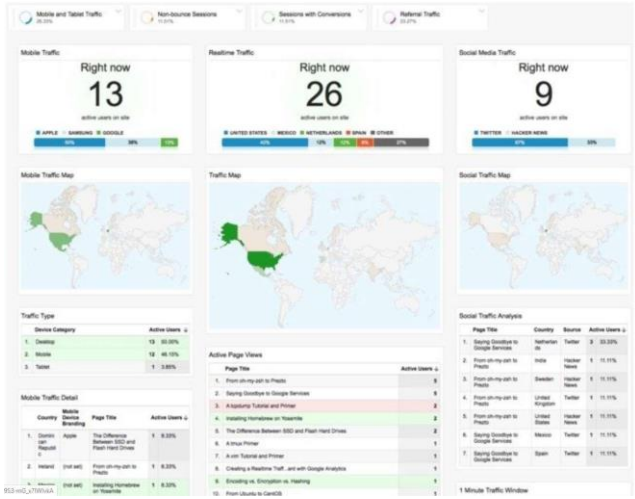

Figure 1: Google Analytics can be used to monitor traffic in real-time.

Real-Time Analytics
Real-time analytics is a specific term used to refer to data analytics, which can be accessed as the data enters the system. Analytics is a term that is used to define the specific data outlines that will provide meaning to organizations, companies, businesses, stakeholders, and other entities. The analyst will obtain the critical information, sort, and organize the data, and then analyze the data. Experts suggest the data involved with real-time analytics is utilized within at least one minute after it is entered into the system. Managers and other individuals can view the data remotely while it is updated.

Figure 2: Traffic fatality involving female bicyclist

Big Data
The World Health Organization (WHO) reported globally, more than 1.25 million traffic victims die

per year due to car crashes. The traffic fatalities cost most countries approximately 3 percent of their gross domestic product. Globally, traffic fatalities are the leading cause of death of victims who are between the ages of 15 and 29. The United States has the highest rates of traffic mortalities versus other countries. A goal was set by WHO to half the number of traffic fatalities by year 2020. WHO will use predictive analytics and big data as tools to reduce the number of traffic deaths.

Conclusion

Data Science is a great tool needed to reduce the traffic death rates globally and within the United States. Domestic and international governments and non-governments need to see that data science is the key to reducing deaths and reducing amount of money paid out per accident. The Machine Learning process will keep motorist safer on the highways by predicting the traffic incidents before they happen. Data analytics is a very useful tool to gather traffic data and analyze it to reduce traffic deaths and raise awareness. Policies need to be created, viewed, and implemented to reduce traffic deaths.

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