Data Science Capstone Project- Business Objective/Idea.

As part of the requirements for the completion of the IBM Data Science Professional Certification on Coursera- Capstone Project, we would want to shed light on, discuss, and analyze Accident Severity.

This particular worrisome and important subject, which has been a torn in our societal fabric for time immemorial, will be analyzed through some of the lenses below, focusing especially on Seattle. These include;

1. Death/Injured/fatalities toll.
2. Psychological Impact/Loss of Life quality for victims and their families.
3. Traffic Congestion/ Delay in the area
4. Property Damage.
5. Time Wastage.
6. Loss of Victim Productivity.
7. Cost of Legal System.

The source of the data is Seattle Traffic Management Division-SDOT- (A US state Government Agency), as provided through a link on Coursera in CSV format. This particular dataset starts from 2004 and is updated weekly till this present time.

The information contained in the data includes; Speed, Collision Type, Weather situation, Severity Code, Location, Address Type, Road Condition, Status, Vehicle, etc.

Seattle Officials, the public, and policymakers in the transportation department are our targeted audiences in this study.

Furthermore, the reasons for the accidents and ways to mitigate against such in the future will be of keen interest to us in this study.

At this juncture, it will be imperative to have a clear understanding of the provided dataset, because our study, analysis, and inference will be based on it.

Road Accident- It refers to any accident involving at least one road vehicle, occurring on a road open to public circulation, and in which at least one person is injured or killed. Intentional acts (Murder, suicide) and natural disasters are

excluded. Killed persons" are accident victims who die immediately or within thirty days following the accident. Before Jan 2005, the time period considered was only six days...www.insee.fr/en/metadonnees/definition/c1116

Road Accidents are one of the hazards we all face in our daily lives. As unwelcome and traumatic as this is, it happens quite frequently and it is one of the most dangerous and unexpected situations a road user can find him/herself in. Recently, we can see a high increase in a road accident, this is due to many reasons, which include; Alcohol/Drugs, Stress, Unsafe lane change, Speeding, Failure to Obey Traffic Safety Devices, etc.

As mentioned earlier, the menace of road accidents, has a lot of resultant effect on the accident victims, their families, and the society at large, which in turn has a ripple effect on the economy of the country affecting overall productivity, hence GDP.

 The Seattle Road Severity Data (CSV), gives us the idea to leverage the road accident data we have to predict the different road accident scenarios and the severity, thus coming up with solutions that will guide transport officials/government/Seattle City Council in policy-making, in order to mitigate against road accidents.

The US Department of Transportation recently reports that $871 Billion is the economic loss of motor vehicle crashes every year in the US. This figure includes $271 Billion in economic loss and $594 Billion in harms from loss of lives and the pain..../www.justiceforyou.com/the-economic-costs-of-motor-vehicle-crashes/

It would be worth noting that, fighting and reducing the menace of road accidents should be confronted by all, government and decision-makers, to greatly reduce the impact of this hydra-headed monster.