Using Machine Learning to Predict Traffic Accident Severity

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Predicting Traffic Accident Severity.

**1 Introduction**

* 1. ***Background***

Every year car accidents cause hundreds of thousands of deaths worldwide. According to a research conducted by the World Health Organization (WHO) there were **1.35 million** road traffic deaths globally in 2016, with millions more sustaining serious injuries and living with long-term adverse health consequences. Globally, road traffic crashes are a leading cause of death among young people, and the main cause of death among those **aged 15-29** years. Road traffic injuries are currently estimated to be the eighth leading cause of death across all age groups globally and are predicted to become the seventh leading cause of death by 2030[1]. Leveraging the tools and all the information nowadays available, an extensive analysis to predict traffic accidents and its severity would make a difference to the death toll. Analysing a significant range of factors, including weather conditions, locality, type of road and lighting among others, an accurate prediction of the severity of the accidents can be performed. Thus, trends that commonly lead to severe traffic incidents can help in identifying the highly severe accidents. This kind of information could be used by emergency services, to send the exact required staff and equipment to the place of the accident, leaving more resources available for accidents occurring simultaneously. Moreover, this severe accident situation can be warned to nearby hospitals which can have all the equipment ready for a severe intervention in advance.

***Who would be interested in this project?***

Governments, local authorities and private companies investing in technologies that can help reduce accidents and improve overall driver safety, insurance companies and car manufactures/ sellers

* 1. ***Introduction to Business Problem***

The main aim of this project is to help car insurance companies to decide which car holder to deal with or to refuse based on a machine learning algorithm that gives car accident predicted severity. it involves (age, sex, areas, health conditions, car model, annual precipitations, annual accidents rate, traffic mistakes rate)