Report on Collision Severity in SEATTLE, WA

Bhanu Mahesh

Chapter 1

Introduction

The Current Machile Learning/Data Science Capstone Project is based on the Car accidents in the city of Seattle, WA. There may be several reasons to start a car journey which includes but not limited to: commuting to work, going out to dinner, visit friends or family or even going out for holidays. No matter the reason,the risk is always embedded in the decision.
In year 2010, there were 32,999 people killed, 3.9 million were injured, and 24 million vehicles were damaged in motor vehicle crashes in the United States. The economic costs of these crashes totaled $242 billion. Included in these losses are lost productivity, medical costs, legal and court costs, emergency service costs (EMS), insurance administration costs, congestion costs, property damage, and workplace losses. This represents a 1.6 percent of the $14.96 trillion real Gross Domestic Product for 2010.

1.1 Business Problem

The aim of the project is to use relevant information which can help road users, insurance companies, employers, health care providers, road maintainers and traffic congestion models, between others.
Using Data Analysis and training different Machine Learning models, the best one will be chosen to predict the severity of a car accident based in some variables that will work as predictors of the incident.The model will include variables such as weather, road and light conditions. It will also generate some insights in accident severities based on the amount of people travelling in the car, the areas where accidents take place most frequently, impact of driving under substances abuse and also distraction while driving, such as using the mobile phone and some others. It will also seek to provide a better understanding of the actual road conditions, likeliness of an impact.