

# Introduction

Road accidents are a major world economic and social problem as shown by the report of loss of lives and properties in many countries around the world. Reporting indicated the number of fatalities from road accidents per year of about 1.3 million and 50 million injuries were recorded or an average of 3000 deaths/day and 30,000 injuries/day. Furthermore, its consequences have an impact on economic and social conditions in terms of health care costs of injuries and disabilities. The World Health Organization (WHO) estimated the economic costs derived from road accidents reached 518 billion USD per year in high income countries and 65 billion USD per year in medium and low-income countries.

Several studies have been conducted by the authorities of various countries regarding the actual reasons behind the accidents and enormous data has been gathered. This data can be easily used, by adopting appropriate Machine Learning model, to predict the severity of accident on the basis of input data. The Model can be Trained and Tested with the help of available data.

## **Business Problem**

The objective of this capstone is to build a model to analyze the available data as well as predict the severity of possible accident given the inevitable and independent circumstances as inputs.

## **Target audience for the project**

This project is particularly useful to Seattle Police Department, Traffic Controllers and the local residents using the road for travel. The model has been built using the general observations only so is completely independent from the location of the traveler. This model should be able to predict the severity of the accident provided appropriate inputs are given. This will highlight the problems during the road travel and help the authorities make required arrangements. For the travelers, this should make the driver more cautious during the drive by raising the severity alert.