**Captone Project - Severity of car accidents**

**Applied Data Science Capstone by IBM/Coursera**

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**1. Introduction: Business Problem**

Road traffic accidents (RTAs) and subsequent injuries have a remarkable social impact and are one of the leading causes of death and non-fatal injuries across the globe.

In this project, we will **predict severity of a car accident in Seattle, USA,** based on the attributes **weather and road conditions**

We will correlate different degrees of injury severity with the above mentioned variables. Knowing which factors contribute more to severe car accident conditions will help improve the quality of road conditions as well as setting up more measures to limit or timely announce the status of weather conditions. For example, is there a relationship between rain, wet road and fatal outcome accidents? Or in contrast, are there more accidents when the weather is good and road is dry? Will those accidents which occur during good weather cause prop damages or injuries?

**Data**

Based on definition of our problem, factors that will influence our decission are:

* weather conditions
* road conditions

(Initially, speeding was considered as one of the attributes to analyze but due to the vast number of missing values that variable was withdrawn from the analysis).

The data used for this study comprises a csv file and metadata from **all collisions in Seattle** provided by the Seattle Police Department (SPD) and recorded by Traffic Records **from 2004 to Present**. The data analysed will involve specifically car accidents.