**Introduction and Business Problem**

Car accidents can be caused due to various reasons. Some of which include; road conditions, weather and visibility conditions. The extent of these factors also affects the severity of the accidents. For example, worse weather conditions lead to accidents more severe than accidents in more favourable weather. This Project aims to draw a connection between these 3 factors and the severity of road accidents using machine learning to create a model. With the help of the model and its results, drivers can accordingly react to prevent accidents.

**The Data**

The data used here has been provided by the Seattle Police Department and recorded by Traffic Records. This data includes all types of collisions. Collisions will display at the intersection or mid-block of a segment. The time frame of the data is from 2004 to present day. The data had been updated on a weekly basis. For this project, the required columns from the data that will positively affect the machine learning model are “WEATHER”, “ROADCOND” and “LIGHTCOND”. The “SEVERITYCODE” column has some numbers and represent road accident severity in the following way:

* 3—fatality
* 2b—serious injury
* 2—injury
* 1—prop damage
* 0—unknown