

Capstone Project - Car accident severity

Business Problem

Road traffic accidents are a serious problem in our societies around the world. In most cases, insufficient attention while driving, drug and alcohol abuse or driving at very high speeds are the main causes of accidents, which can be prevented by adopting stricter regulations. In addition to the aforementioned reasons, weather, visibility or road conditions are the main uncontrollable factors that can be prevented by discovering hidden patterns in the data and issuing a warning to local authorities, police and drivers on targeted roads.

The predictive analysis performed here aims to analyze the severity of an accident / collision based on road conditions, lighting conditions, collision area, number of people involved, and many other factors as such. Knowing in advance the severity of any such collision will help prevent and take immediate action.

Data

The data for this project is taken from open source and it belongs to SDOT Traffic Management Division, Traffic Records Group. This dataset includes all types of road collisions. Road collisions will be displayed at the intersection or in the middle of the segment. The information on incidents contains data from 2004 to the present. All collisions are provided of the Seattle Police Department and registered by Traffic Records.

There are a total of 38 data columns in the dataset, including the 3 target columns. We will consider various aspects when deciding the importance of a particular column or the transformation that might be required before we introduce it into the model. The dependent variable "SEVERITYCODE" contains codes that correspond to different severity levels.

In this project, we will try to identify the dependence of road accidents with other factors for their possible prevention or warning in the future.

