Seattle Accident Severity Prediction Model.

Introduction:

According to SDOT Traffic Management Division in 2019 there were over 9000 accidents in Seattle. 32% of those resulted in injuries. In 2020 there have been 2245 accidents. This can be avoided by using collected data to build a machine learning model which can predict whether a route is dangerous based on the current conditions.

The business problem is to analyse the collision dataset and build a model which can predict under the current condition if a route is dangerous or not based on past accidents

This model can be useful to various navigation systems and car manufacturers as a built in safety feature which could warn users of potential hazardous routes

Data:

The data we will be using is provided by the SDOT Traffic Management Division and Traffic Records Group. It has various information of accidents that has occurred from 2004 to the present day.

The data has various information regarding incidents including:

- Severity of the incident
- Location of the incident
- Whether or not the accident was caused due to inattention or if drugs or alcohol was involved or if speeding was involved
- Weather at the time of the incident
- Road condition at time of incident
- Light condition at time of incident

By using the Severity of the incident as our target variable and the remainder as features we will build a classification model that will predict how dangerous a certain route is based on the given inputs