Accident record analysis and severity prediction

ABOUT PROBLEM

The Open Data Program makes the data openly available to the public for the purpose of increasing the quality of life for the residents, increasing transparency, accountability and comparability, promoting economic development and research, and improving internal performance management.

The Traffic Records Group, Traffic Management Division, Seattle Department of Transportation, provides data for all collisions and crashes that have occured in the state from 2004 to the present day. The data is updated weekly and can be found at the Seattle Open GeoData Portal.

BUSINESS SOLUTION

The objective is to exploit this data to extract vital features that would enable us to end up with a good model that would enable the prediction of the severity of future accidents that take place in the state. This would further enable the Department of Transportation to prioritise their SOPs and channel their energy to ensure that fewer fatalities result in automobile collisions.

IN SIMPLE WORDS: from previous the data where we have a records of all accidents and severity caused in seattle city we will try to predict the severity of an accident that may happen in future so as to reduce those .
from few entries we can see that there are many columns which we call as features . below here is description of some of features
here is the description of some of the attributes in the data

ATTRIBUTE	DESCRIPTION
X	Latitude where accident took place
Y	longitude where accident took place
SEVERITYCODE	A code that corresponds to the severity of the collision:• 3—fatality• 2b—serious injury• 2—injury• 1—prop damage• 0 unknown
SEVERITYDESC	A detailed description of the severity of the collision

ATTRIBUTE	DESCRIPTION
PERSONCOUNT	The total number of people involved in the collision
PEDCOUNT	The number of pedestrians involved in the collision. This is entered by the state.
PEDCYLCOUNT	The number of bicycles involved in the collision.This is entered by the state.
VEHCOUNT	The number of vehicles involved in the collision.This is entered by the state.
INJURIES	The number of total injuries in the collision.
SERIOUSINJURIES	The number of serious injuries in the collision.
FATALITIES	The number of fatalities in the collision.
UNDERINFL	Whether or not a driver involved was under the nfluence of drugs or alcohol.
WEATHER	A description of the weather conditions during the time of the collision.
ROADCOND	The condition of the road during the collision.

ATTRIBUTE	DESCRIPTION
LIGHTCOND	The light conditions during the collision.
SPEEDING	Whether or not speeding was a factor in the collision.