Car accident severity

Introduction:

Road accidents are the most unwanted thing to happen to a person and family, still it happens very frequently. Nearly 1.3 million people lose life due to car accidents every year all over the globe. Drivers are aware of traffic rules and conditions still accidents do happen and result in loss of life and property. Data related to such incidents are available in public domain which can be used to analyze the scenario, conditions and severity accident. Thus, enabling the governments and concerned authority to make roads safer and make people aware of situations which can lead to accidents.

Business Problem:

A car accident results in huge cost, according to US government data shows each road accident result in loss of $60k approx. this cost can be attributed to the damage to property, injuries treatment, loss of workday, emergency response, insurance claims. Thus, avoiding a car accident can save lot of money and life, resulting in positive impact on the economy.

As car accidents and it severity is dependent on many factors, taking into consideration factors like weather condition, speed of the car, state of the road, traffic. Using these factors to predict the severity of the outcome of the accident can help the city administration take necessary measures and impose restriction to minimize loss, in terms of man, material and money.

Thus, a model able to predict any such outcome can be very desirable.

Data:

To design any such model which can predict the severity of the road accidents, we will be using Data-Collisions data set provided in the course of this module.

This data set provides the details like., data/time, junction type, road condition, weather, light condition, speeding, under influence, severity. Thus this can help in predicting the severity in case we know the other factors.

	SEVERITYCODE	X	Y	OBJECTID	INCKEY	COLDETKEY	REPORTNO	STATUS	ADDRTYPE	INTKEY	...	ROADCOND	LIGHTCOND	PEDROWNOTGRNT	SDOTCOLNUM	SPEEDING	ST_COLCODE	ST_COLDESC	SEGLANEKEY	CROSSWALKKEY	HITPARKEDCAR
0	2	-122.323148	47.703140	1	1307	1307	3502005	Matched	Intersection	37475.0	...	Wet	Daylight	NaN	NaN	NaN	10	Entering at angle	0	0	N
1	1	-122.347294	47.647172	2	52200	52200	2607959	Matched	Block	NaN	...	Wet	Dark - Street Lights On	NaN	6354039.0	NaN	11	From same direction - both going straight - bo...	0	0	N
2	1	-122.334540	47.607871	3	26700	26700	1482393	Matched	Block	NaN	...	Dry	Daylight	NaN	4323031.0	NaN	32	One parked--one moving	0	0	N
3	1	-122.334803	47.604803	4	1144	1144	3503937	Matched	Block	NaN	...	Dry	Daylight	NaN	NaN	NaN	23	From same direction - all others	0	0	N
4	2	-122.306426	47.545739	5	17700	17700	1807429	Matched	Intersection	34387.0	...	Wet	Daylight	NaN	4028032.0	NaN	10	Entering at angle	0	0	N