Coursera Capstone Project : Predicting car accident severity

Business Problem:

1. Many people lose their lives while driving either by four wheelers or two wheelers just because they dont take precautions or don’t have information about the weather condition or the road condition or any external factors.
2. In some cases the hospitals are not always ready for sudden new patients, so using this predictions we can make the hospitals be prepared for such cases.
3. Another problem is traffic officers or any other security services can be alarmed to monitor the locations where more accidents are likely to occur.
4. Often people get confused when more number of options are avaliable to travle from source to destinations and in many cases they choose the one with short distance which may not be the safest way to travle.
5. Better if insrance is covered for the vehicle used to travel.

Hence this project will be predicting the severity of the accidents that are likely to happen which aims help the above mentioned target audiance and to solve the above mentioned common problems.

Data:
The data source for this project : https://s3.us.cloud-object-storage.appdomain.cloud/cf-courses-data/CognitiveClass/DP0701EN/version-2/Data-Collisions.csv

The following factors are used to solve this problem:-
LOCATION : Description of the general location of the collision

SEVERITYCODE : 1 – Prop Damage
2 – Injury

COLLISIONTYPE : Collision type

PERSONCOUNT : Total number of people involved in the collision

PEDCOUNT : Total number of pedestrians involved in the collision

PEDCYLCOUNT :Total number of bicycles involved in the collision

VEHCOUNT :Total number of vehicles involved in the

collision

INCDATE :Date of the collision

INCDTTM :Time of collision

WEATHER :Weather conditions

ROADCOND :Road Conditions

LIGHTCOND :Light Conditions

SPEEDING :Wheather speeding was cause for accident

Examle data:

SEVERITYCODE	COLLISIONTYPE	PERSONCOUNT	PEDCOUNT	PEDCYLCOUNT	VEHCOUNT	INCDATE	INCDTTM	WEATHER	ROADCOND	LIGHTCOND	SPEEDIN
2	Angles	2	0	0	2	2013/03/27 00:00:00+00	3/27/2013 2:54:00 PM	Overcast	Wet	Daylight	Nal
1	Sideswipe	2	0	0	2	2006/12/20 00:00:00+00	12/20/2006 6:55:00 PM	Raining	Wet	Dark - Street Lights On	Nal
1	Parked Car	4	0	0	3	2004/11/18 00:00:00+00	11/18/2004 10:20:00 AM	Overcast	Dry	Daylight	Nal
1	Other	3	0	0	3	2013/03/29 00:00:00+00	3/29/2013 9:26:00 AM	Clear	Dry	Daylight	Nal
2	Angles	2	0	0	2	2004/01/28 00:00:00+00	1/28/2004 8:04:00 AM	Raining	Wet	Daylight	Nal