Predicting Accident Severity in Seattle

Predicting Accident Severity in Seattle is useful for :

- Seattle Police and Traffic Department .
- The people driving to work or other cities
- Insurance companies in issuing advisory to the general public to minimize the claim cost

Data Acquisition and Cleaning :

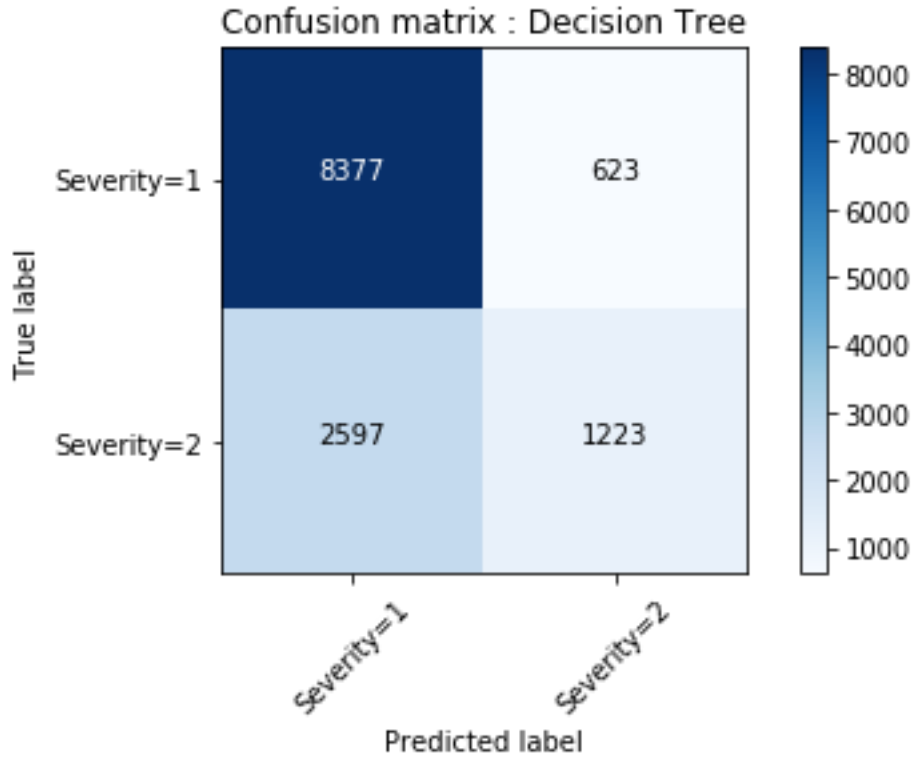
- We have used the example Data set provided in the Capstone Project.
- Data has been provided in the form of comma separated version (csv) file "Data-Collisions.csv" : https://github.com/shashwatdhyani/Coursera_Capstone/blob/master/Data-Collisions.csv

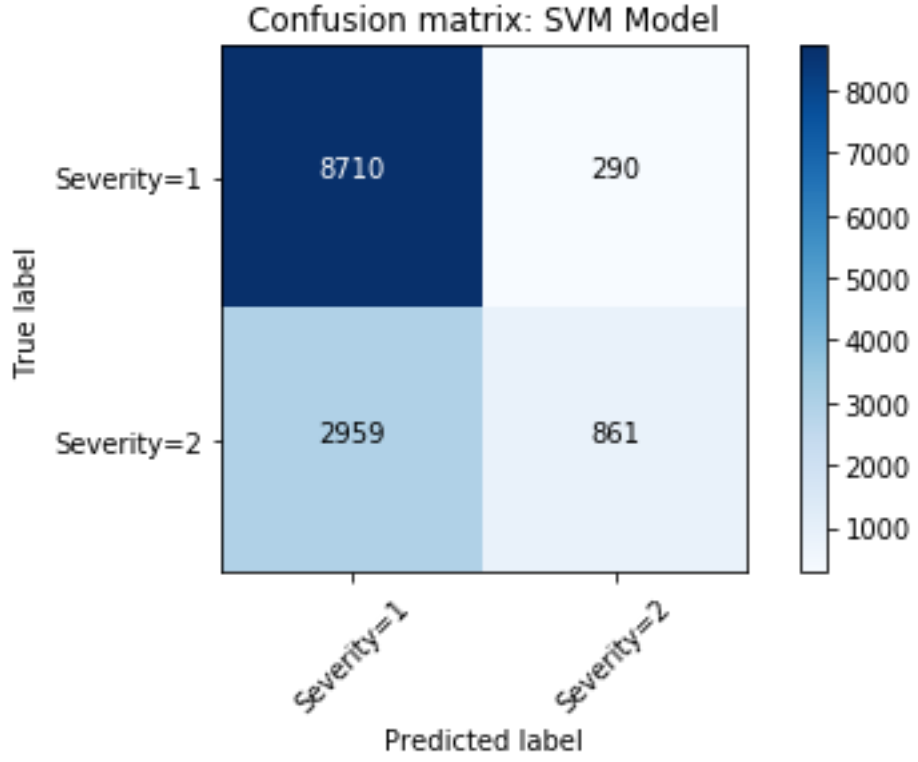
- Data has the details on Accident occurrences in Seattle.
- The data set has 37 columns and 65691 rows.
- Cleaned data consists of 13 Features.

Report comparing the Evaluation metrics for all the Classification Models¶

Algorithm	Jaccard	F1-Score	Log Loss
KNN	0.7356	0.7076	NA
Decision Tree	0.7488	0.7174	NA
SVM	0.7465	0.6948	NA
Logistic Regression	0.7205	0.6649	0.5504

Confusion Matrix shows why we are choosing Decision Tree Model and not SVM model





Conclusion :

We built Machine Learning Model to predict the Accident Severity in Seattle.

We found most of the Accidents occurred at Block Addrtype.

Alcohol or drug influence did not cause many accidents.

It can be deployed to warn the people of the likelihood of the Accident which could be helpful in avoiding traffic chaos and unnecessary delays.

Model has room for improvement