PROBLEM:

The number of traffic collisions and their victims has been a rising trend globally due to increases in population and motorisation. Traffic collisions disturb the traffic operations, break down the traffic flow, and cause severe urban problems worldwide. Major traffic accidents can sometimes lead to irreparable damages, injuries, and even fatalities. In order to take necessary actions to control this ever-growing problem, extensive research has been carried out into the prediction of traffic collisions in both developed and developing countries using various statistical techniques. Different factors involved in traffic collisions have a substantial effect on each other, thus making it difficult to individually consider any of the parameters when explaining the severity of traffic collisions.

Realising traffic accidents as a preventable problem developed countries have implemented different policies and measures to reduce this problem. These include enforcement, education, training and engineering improvements. Any part of this report can be utilised by the government authorities for making necessary policy changes to avoid collisions or to minimise their severity.

OBJECTIVES OF THIS PROJECT:

The main objective of the research is to investigate the role of factors in collision severity using Seattle Department Of Transportation data and predictive models. Specific objectives include:
1) Exploring the underlying variables such as human characteristics, vehicle characteristics, roadway characteristics, and environmental characteristics that impact collision severity.

2) Predicting collision severity using Decision Tree and Logistic Regression