# Predicting the Severity of a Car Accident Using Seattle Collision Data

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# 1. Introduction

## 1.1 Background

Car accidents are unfortunate but very common an incident around the world. The city of Seattle in the Washington state of United States of America is no exception with a good amount of car accidents seen every year over more than the past decade. As the number of cars is increasing accidents are becoming more commonplace these days. And whenever there is an accident, it involves injuries, destruction of properties, fatalities etc. and is followed by road blocks. The situation immediately demands the intervention of the paramedic team, the police department and the nearest hospital authorities. So it becomes absolutely necessary for these authorities to be totally prepared for an accident and respond immediately. Therefore, it would be very advantageous for these authorities to predict such a situation in advance on a given day. For example, the hospital authorities could increase their attending staff strength on a day likely to lead to more accidents.

## 1.2 Problem

Data that contribute to determining the severity of a car accident might include road condition, weather condition, lighting condition, inattention, speeding, influence of drugs, number of persons involved, number of pedestrians involved, number of cyclists involved, number of vehicles involved, collision type, junction type, address type, location etc. that describe the overall situation the accident might take place in. This project aims to predict the severity of car accidents that might happen in the future based on data related to these fields.

## 1.3 Interest

Firstly, the hospitals would be very much interested in accurate prediction of the severity of an accident so as to maintain sufficient amount of staffs and doctors on a given day to handle the situation efficiently. Secondly, the police department would be very interested in accurately predicting the same to increase alertness on a given day if the probability of a severe accident turns out to be high enough. Third, the Department of Transportation would be very much interested in accurately predicting the same as to warn the people of the chances of getting into a severe accident on a given day through online portals and/or by other means.