**Introduction**:

According to 2017 WSDOT (Washington State Department of Transportation) data, a car accident occurs every 4 minutes and a person dies due to a car crash every 20 hours. The seaport city of Seattle is the largest city in the state of Washington, as well as the largest in the Pacific Northwest. As of the latest census, there were 713,700 people living in Seattle. Seattle residents get around by car, trolley, streetcar, public bus, bicycle, on foot, and by rail. With such bustling streets, it’s no surprise that Seattle sees car accidents every day. It is the time for government to make some actions in order to find out the main causes of traffic accidents. Seattle Department of Transportation provides traffic accident cases from 2004 for almost 15 years to discover the reasons behind these collisions

**Business Problem**

The idea of this study is to predict the road accidents severity in Seattle, Washington, United States under given conditions or variables. We utilizes a variety of data attributes such as traffic events, weather data, points-of-interest, and time to predict the road accident severity in order to reduce overall road accidents. . This study will use various analytical techniques and machine learning classification algorithms such as logistic regression, decision tree analysis, k-nearest-neighbors, support vector machine, etc.

**Target Audience**

This study can mainly help Seattle Department of Transportation improve traffic policies or update public facilities such as street lamp, speed bumps at proper positions.

Car rental or insurance companies are also among the target groups of this analysis because they can classify potential customers and design different service content based on customers driving habits.