Predicting the Car Accident Severity in Seattle

Brent Arnold Apostol Basiano

August 24, 2020

1. Introduction

1.1. Background

Car accidents are a common yet avoidable problem in the United States. The Association for Safe International Road Travel (ASIRT) stated that more than 38,000 people die every year in crashes on US roadways with an economic impact of $871 billion. In Washington alone, car accidents occur every four minutes. Car accidents can be caused by, but not limited to, speeding, driving under influence, weather conditions, and road conditions. However, while these conditions are known to cause car accidents, can these conditions help determine the severity of each car accident? If these factors were correlated to the severity of car accidents, a predictive model can be made to help predict car accident severity.

1.2. Problem

The dataset contains multiple factors that could contribute to the car accident severity in Seattle. The report aims to predict the car accident severity based on past reports.

1.3. Business Interest

Transport organizations and the Seattle Department of Transportation can use these findings to help understand the common factors that influence the severity of car accidents. Law enforcement can also use this report to help them expect how severe a recent car accident is.

2. Data Collection

2.1. Data Source

The dataset is provided by the Seattle Police Department via IBM here; the metadata is also provided here. The dataset contains multiple factors along with the severity code that can help predict the severity of a car accident. While additional datasets can be used, the amount of information in this dataset suffices the task for this problem.