Predicting the Car Accident Severity in Seattle

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Introduction

Traffic accidents has become a major headache for the governments around the world. A global status report on traffic safety notes that there were 1.25 million traffic deaths in 2013 alone, with deaths increasing in 68 countries when compared to 2010. Thus, the importance for accident prediction is increasingly felt in various fields: optimizing public transportation, enabling safer routes, and cost-effectively improving the transportation infrastructure; all in order to make the roads safer. Accident analysis and prediction has been a topic of much research in the past few decades. Analyzing the impact of environmental stimuli (e.g., road-network properties, weather, and traffic) on traffic accident occurrence patterns, predicting frequency of accidents within a geographical region, and predicting risk of accidents are the major related research categories.

The objective of this project is to use the dataset on car accidents on Seattle, USA to explore the incident severity and to build a machine learning algorithm to predict the future accident severity so that it can limit the future possible accidents. Python is used for this project to analyze the dataset and to build a fitting model for the objective.