Predicting the Severity of Car Accidents

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1. Introduction

1.1 Background

The effective treatment of road accidents and thus the enhancement of road safety is a major concern to societies due to the losses in human lives and the economic and social costs. In USA for 2016, NHTSA[1] data shows 37,461 people were killed in 34,436 motor vehicle crashes, an average of 102 per day. Over the years, tremendous efforts have been made by governments, transportation researchers and practitioners in order to improve road safety. Creating a model that predicts accidents and their severity can be advantageous for many reasons, as road design can be even more optimized, drivers can be informed on the danger they are facing based on the conditions they are facing on the road.

1.2 Problem

A number of factors contribute to the risk of collisions, including vehicle design and type, road design and environment, driving skills,

[1] National Highway Traffic Safety Administration (NHTSA)

as well as weather and light conditions. This project aims to predict the severity of a possible accident based on factors that are set before the accident happen like the driver's age, the area the driver is currently at, including the light conditions and the time (hour) of the day.

1.3 Interest

Government organizations that administrate road safety would be interested in accurate prediction of accidents and its severity, like the National Highway Traffic Safety Administration. The project can be expanded into an application that uses 'live' data on a driver's information, location and environmental conditions and warn him/her to slow down or even use other safer paths to his/her destination.