Car Accident Severity Prediction

Introduction

As per a report from USA's CDC, 1.35 million people die each year due to road accidents, apart from the damage to property. If we can understand why road accidents happen, if we can identify the important factors behind accidents, we can create a curative plan to reduce the number of road accidents. This report aims to identify the factors behind accidents. This analysis can be used in a plethora of industries and scenarios. For e.g. Home deliveries have been increasing in the last 10 years, and has recently shot up due to COVID-19. All the delivery agent traversing the last mile (from Pick up point to a customer's address) can benefit from this analysis. If our model states that a given stretch of road has a high risk of accident, routing algorithms (like Google maps) can direct the riders towards a different road.

This report will identify the important factors behind road accidents and predict the severity of road accidents in Seattle Area.

Data

I am using the data collected by Seattle City's Police Department from 2004 to Feb 2020. It has around 194k+ observations regarding the reported road accidents during the past 15+ years. Each observation can have 38 attributes. Some of the attributes are SEVERITYCODE, LOCATION, STATUS, VEHCOUNT, etc.

For e.g. SEVERITYCODE corresponds to the severity of the collision. '3' represents a fatal accident, whereas '1' represents property damage.

A detailed description of attributes can be found at link.

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