

# Business Understanding

Occurrence of collisions can cause many deaths per year in addition to more collisions, traffic jams and physical damage of property. Understanding large datasets of records regarding those incidents is probably the keystone in the pursuit of having a safe driving experience, It's a best interest of governments, technology corporations and car manufacturers. The potential of this study is off limits, it can be directed towards many projects yielding many advances in cities governed by AI, projects such as:

1. A system that can assist drivers to take certain paths towards destination in order to reduce chances of accidents.
2. Advances in machine learning algorithms for automated AI cars with no chances of collisions.

## **Causes** of collisions:

Rash driving, excessive speed of road users, violation of the regulations of traffic, sudden bursting of tires, insufficient lightings, failure of breaks, skidding of road surfaces, ruts, and potholes.

The **question** here being "Can we build a model to tell if it's dangerous to drive in a certain road?" and if so .. "Can this model tell to what extent it's dangerous to drive in a certain road?"

**Severity\_code** is used to categorize the rank-wise priority at high crash locations, it goes up with more injuries and/or fatalities.

## **Objectives:**

1. Finding data resources with a unified "severity\_code" concept.
2. Building different models to classify "severity\_code".
3. Finding the model with the best accuracy metrics.
4. Further observations on the most important parameters identified by the best classifier.