Business Problem

Car accident severity

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1. Context:

You probably didn't wake up today thinking you would lose a loved one in a car crash! Unfortunately, the number of car accidents is increasing drastically day by day. Nearly 1.3 million people die internationally every year from car accidents and in addition up to 50 million people are injured (Infos).

Although the severity of car accidents is different from one case to another, it continues to pose a big challenge and became a worldwide problem.

As a Data Science passionate, I believe that Data can solve problems and make positive impact, in this project we will discover if data Science and machine learning could save lives.

2. Project purpose:

The project will mainly try to predict accident risk based on different factors, and show what factors should be kept in mind to avoid car accident or at least decrease its severity:

- Does the weather matters?
- Does the vehicle type matter?
- Do pedestrian and drivers attitude impact the car accident severity, including (Cell phone usage, inattention, alcohol), if it is true, which attitude is the most dangerous?
- Does accident car severity depend on the accident location? If it's true, where are traffic accidents increasing?
- Are any regions similar based on the type of accidents?
- When are the most dangerous times to be driving?
- What are the trends for particular peak crash days and times?

With these questions in mind we will try to find out the factors that would affect car accident severity.

3. Perspectives:

Building a good classification model to predict accident severity is not the purpose, but only the rudimentary stage. There are numerous possible applications among others, that would be beneficial for citizens and governments as well:

- Safe route planning
- Emergency vehicle allocation
- Roadway design
- Sensibilization (The most destructive attitudes…)
- Where to place additional signage