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| Checkpoint I | Checkpoint I: Project Proposal | |
| Group: | G12 |
| Date: | 2020/10/01 |
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# Domain

We are going to tackle Road Traffic Accidents across the United Kingdom, from 2005 to 2017.

We want to study this domain since there is a big number of people that die each year or get injuries in car accidents.

Since there are many conditions that influence the road and road accidents, we want to study how we can have measures to reduce the number of accidents.

# Dataset

The dataset that we will used is called UK Road Safety: Traffic Accidents and Vehicles.

We can get it on: <https://www.kaggle.com/tsiaras/uk-road-safety-accidents-and-vehicles>.

# Example Questions

* Does the amount of accidents follow a cyclic pattern through-out the year? Reaching peaks during certain times?
  + Can climatic conditions increase the likelihood of an accident? Does the amount of accidents increase nearer the holidays when a lot of people consume alcohol?
  + Do the surface conditions alter the frequency of accidents?
* Are there more accidents on roads with higher speed limits?
  + If, for example, on roads with a speed limit of 120 km/h there are more accidents than on roads with a speed limit of 60 km/h.
* How does the number of accidents change along each day?
  + For example, if at 8:00 there are more accidents than at 10:00.
* Do accidents occur more often with poorer visibility conditions?
  + Can unlit environments be the cause of more accidents and well-lit environments cause less accidents.
* How does the frequency of accidents change along the week?
  + For example, if at 8:00 there are more accidents than at 10:00.
* Do the surface conditions alter the frequency of accidents?
  + If there are more accidents on rainy days or more accidents on sunny days.
* Does the number of severities increase with the number of vehicles present?
  + If, for example, accidents with only one car have in average one person injured and accidents with three cars have on average three people injured.

# Data Sample

(from “Accident\_Information.csv”)

Date; Time; Speed\_limit; Light\_Conditions; Day\_of\_Week;

2005-01-04; 17:02; 30; Darkness - lights lit; Tuesday;

(from “Accident\_Information.csv”)

Road\_Surface\_Conditions; Number\_of\_Vehicles; Number\_of\_Casualties

Dry; 1; 1