

Data Visualization IGR204

Road traffic accidents in France between 2005 and 2017

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In this data visualization project, we will analyze the road traffic accidents from the French national database between 2005 and 2017. The dataset can be downloaded from the following link :

<https://www.data.gouv.fr/en/datasets/base-de-donnees-accidents-corporels-de-la-circulation/>

The data are collected by the police each time a traffic accident occurs in France. The data are then aggregated by the “Observatoire national interministériel de la sécurité routière” (ONISR).

The data takes the form of 56 CSV files describing, 4 for each of the 14 years of history :

- The vehicles implied
- The passengers/pedestrians
- A description of the location
- Characteristics of the accident

Our analysis could bring value to :

- Other users for this database, essentially in the Community Contributions section on the government’s website
- Insurance companies, actuaries and business users within these companies, interested in understanding and “visualizing the risk”
- Public authorities, in order to focus specifically on specific zones of France (road safety, police workforce...)

The users would have diverse backgrounds, whether they’re actuaries pricing a new product, or policemen planning their interventions. Overall, all the users should be able to understand, at all scale, what is the specific risk within the zone considered, which roads are the most dangerous, but also get a broader view of the historic trends. Therefore, the visualization we aim to develop will mainly be used to explore the data.

There are 9 attributes in the vehicles dataset (vehicle category, type of obstacle hurt...), 12 attributes for the passenger / user dataset (including age, sex, activity at the time of the accident...), 18 attributes for the location of the accident (road type, luminosity, road width...), and 16 attributes for the characteristics of the accident (date, time, GPS coordinates...). The 56 files represent 254 Mo overall.