Road Accidents

Univariate Analysis

2022-05-05

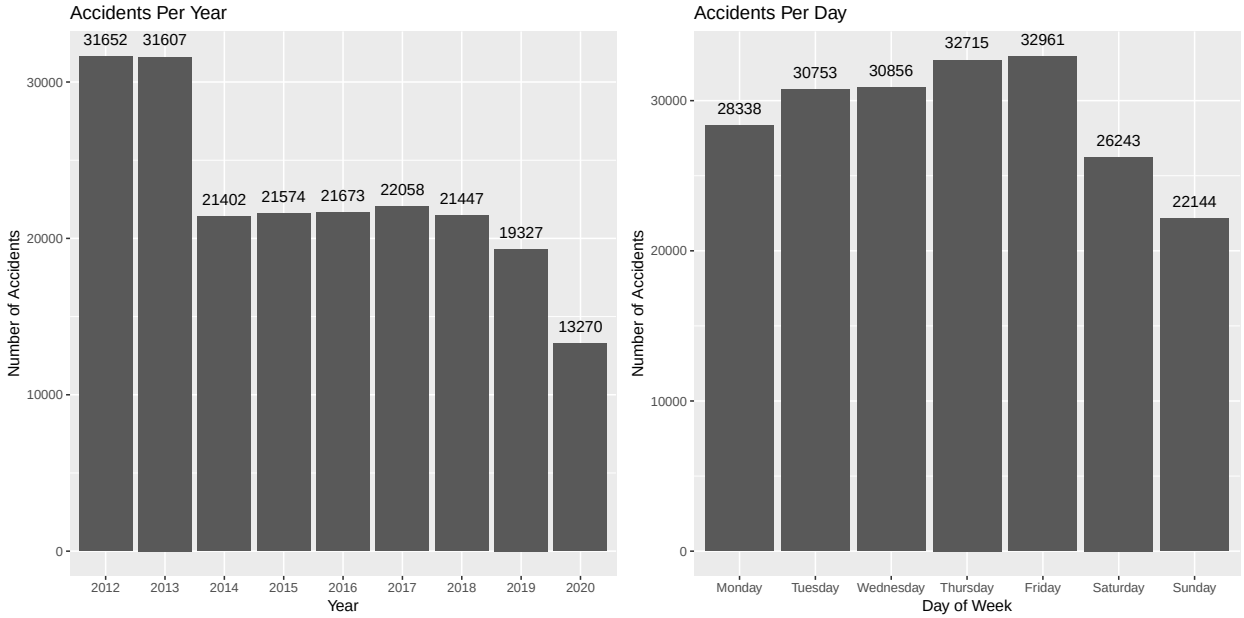
204010
Entries

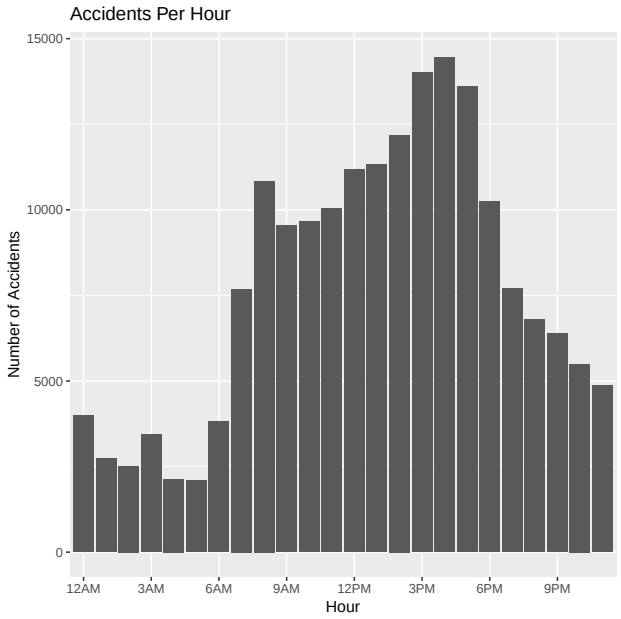
68
Features

Feature definitions and summaries

1. Time variables

AN: Year,
DT_ACCDN: Date,
HR_ACCDN: Hour,
JR_SEMN_ACCDN: Day.





The percentage of null values for the hour of accidents is 8.45 %.

Unless mentioned, the variables do not have null values.

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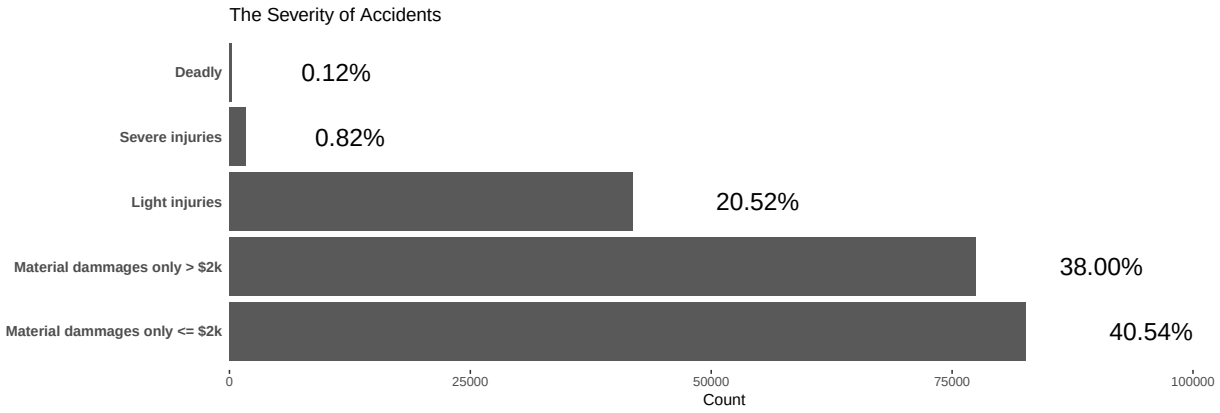
2. Losses and Damagaes (27 variables)

We will divide the 27 variables into 3 groups.
The first group contains one variable: “Gravité: Severity”. It’s a categorical variable of 5 categories:

- Deadly: at least one victim died during the 30 days following the accident.

- Severe injuries: At least one victim was severely injured.
- Light injuries: One or more victims were lightly injured.
- Material damage only: Material damage with value exceeding $2000.
- Inferior material damage: Material damage with value equal to or below $2000.

Whenever deaths are counted, deaths happening during the 30 days following the accident are included

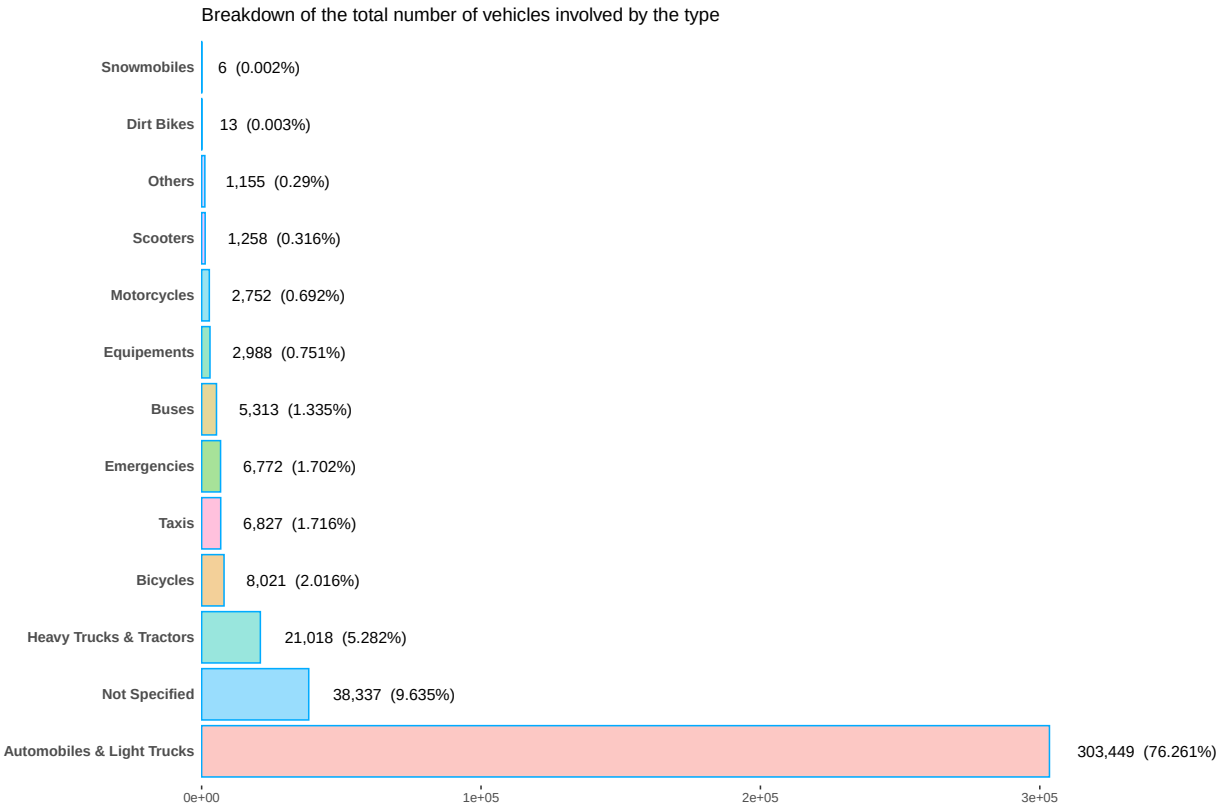


The second group breaks down the injuries. We have the following groups:

- NB_VICTIMES_TOTAL: Total number of victims
  - NB_MORTS: Number of dead victims.
  - NB_BLESSES_GRAVES: Number of victims severely injured.
  - NB_BLESSES_LEGERS: Number of victims lightly injured.
- NB_VICTIMES_PIETON: Total number of pedestrian victims.
  - NB_DECES_PIETON: Number of dead pedestrians.
  - NB_BLESSES_PIETON: Number of injured pedestrians (severe or light).
- NB_VICTIMES_MOTO: Total number of motorcyclist victims.
  - NB_DECES_MOTO: Number of dead motorcyclists.
  - NB_BLESSES_MOTO: Number of injured motorcyclists.
- NB_VICTIMES_VELO: Number of cyclist victims.
  - NB_DECES_VELO: Number of dead cyclists.
  - NB_BLESSES_VELO: Number of injured cyclists

The third group breaks down the type of vehicles involved in the accident. As above, we have:

- NB_VEH_IMPLIQUES_ACCDN: Total number of vehicles involved.
  - nb_automobile_camion_leger: Number of automobiles and lightweight trucks.
  - nb_camionLourd_tractRoutier: Number of heavy trucks and tractors.
  - nb_outil_equipement: Number of Tool vehicles and equipment.
  - nb_tous_autobus_minibus: Number of buses, school buses and minibuses
  - nb_bicyclette: Number of bicycles.
  - nb_cyclomoteur: Number of scooters.
  - nb_motocyclette: Number of motorcycles.
  - nb_taxi: Number of taxis.
  - nb_urgence: Number of emergency vehicle.
  - nb_motoneige: Number of snowmobiles.
  - nb_VHR: Number of dirt bikes.
  - nb_autres_types: Number of other types of vehicles.
  - nb_veh_non_precise: Number of vehicles with unknown type.



There are 3 rows with null values for all features above.

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3. Accident nature

This group concerns the type of accidents and contains two variables:

- CD_GENRE_ACCDN: Type of accident. It has the following values
  - 31: Collision with a vehicle.

  - 32: Collision with a pedestrian.
  - 33: Collision with a cyclist.
  - 34: Collision with a train.
  - 35: Collision with a deer.
  - 36: Collision with a moose, bear, or a caribou.
  - 37: Collision with another animal.
  - 38: Collision with a temporary obstacle.
  - 39: Collision with a detached object (either from a vehicle or a construction).
  - 40: Collision with a street lamp.
  - 41: Collision with a traffic light.
  - 42: Collision with a public pole.
  - 43: Collision with a tree.
  - 44: Collision with a guardrail.
  - ....
  - ....
  - ....
  - : Not specified (4.9% of the data).
- CD_SIT_PRTCE_ACCDN: Describes a particular situation for when an accident happens. Mostly null values (97.7%).
  - 1: Spill.
  - 2: Load loss.
  - 3: Snow removal car is involved.
  - 9: Other particular situation causing the accident.
  - : Not specified. (97.7%)

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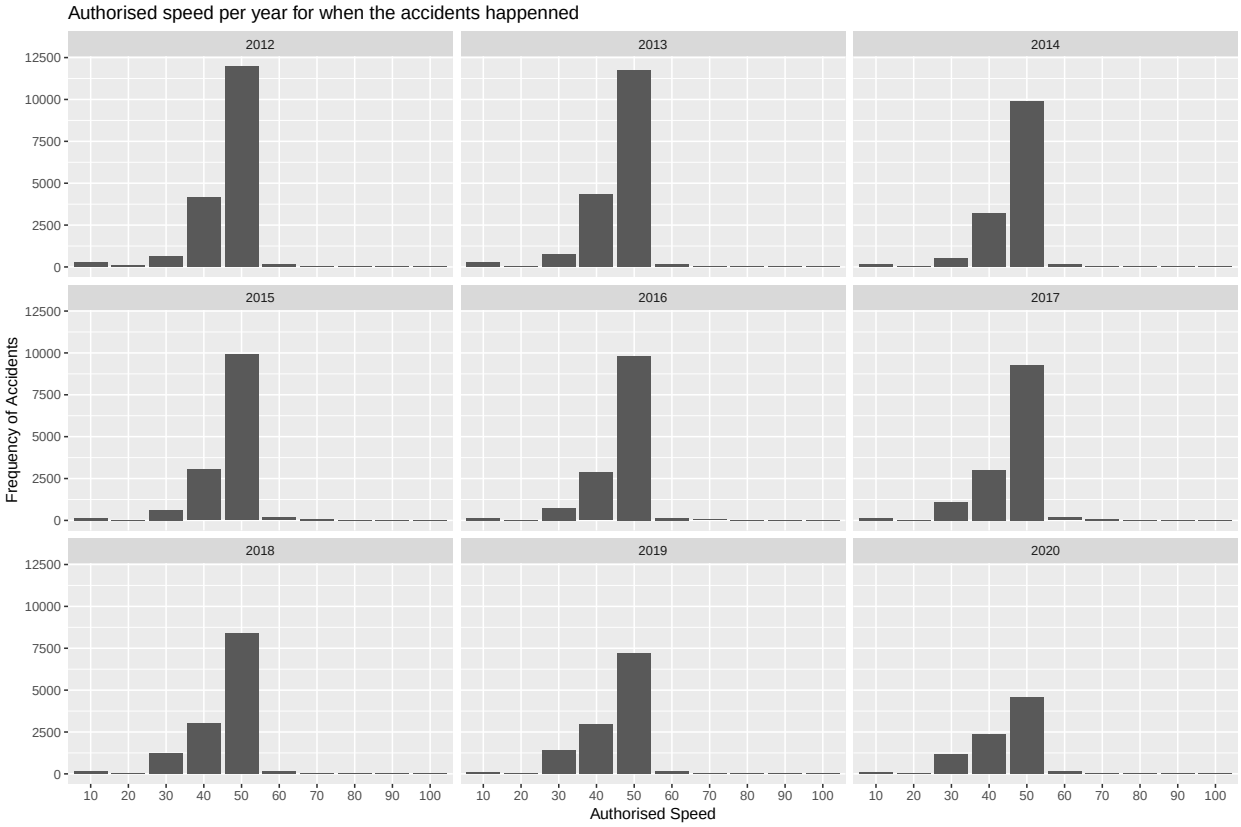
4. Location variables

Finally, we look at the location and street conditions. There are 25 features, however, we have chosen a relevant subset.

- VITESSE_AUTOR: Authorized speed in KM/H. (39.4% not specified)


Authorised speed per year for when the accidents happenned
2012
2013
2014
2015
2016
2017
2018
2019
2020
Frequency of Accidents
0
2500
5000
7500
10000
12500
10
20
30
40
50
60
70
80
90
100
Authorised Speed