

Road Accidents

Univariate Analysis

2022-05-05

204010

Entries

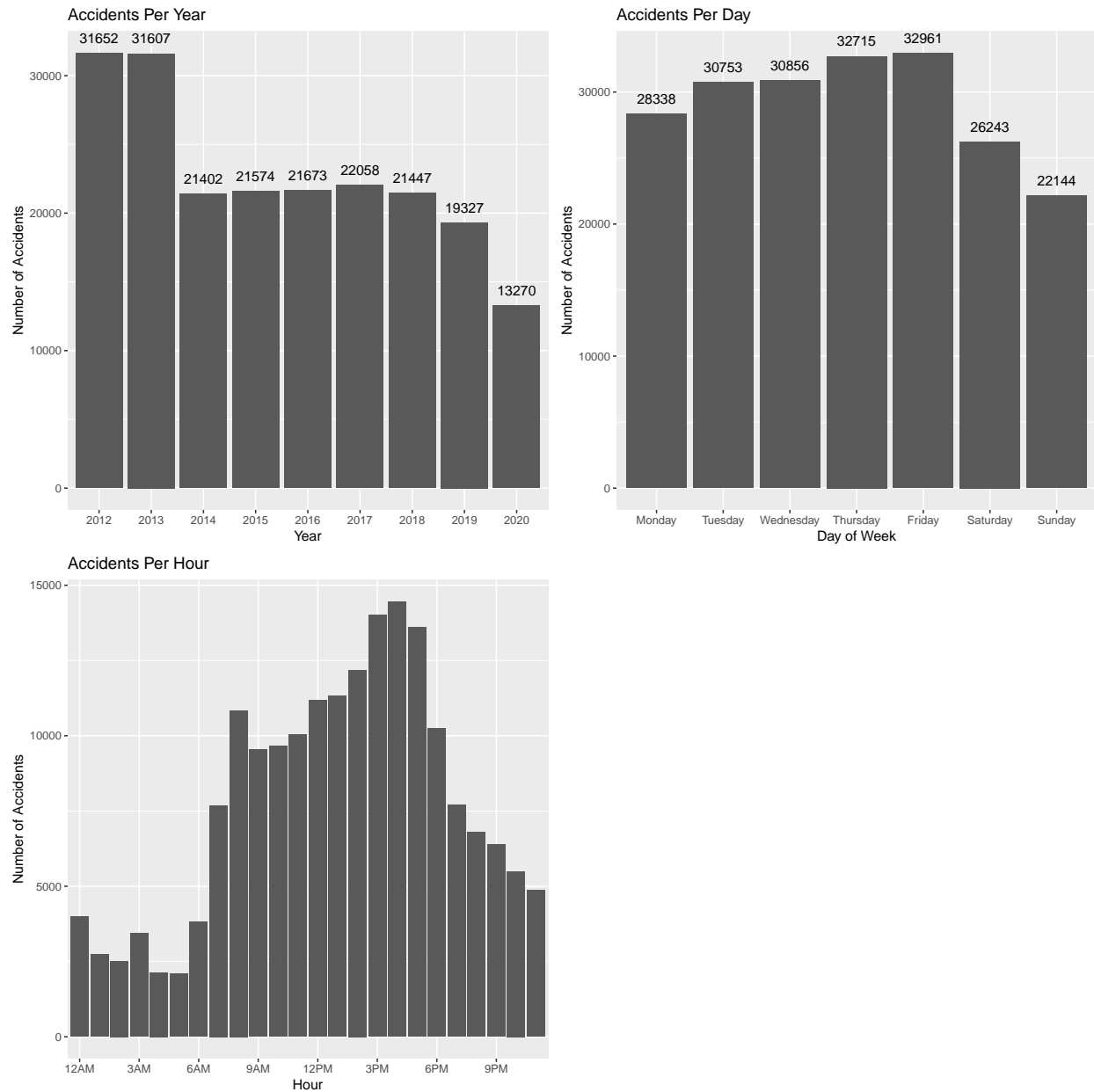
68

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.

2. Losses and Damagaes (27 variables)

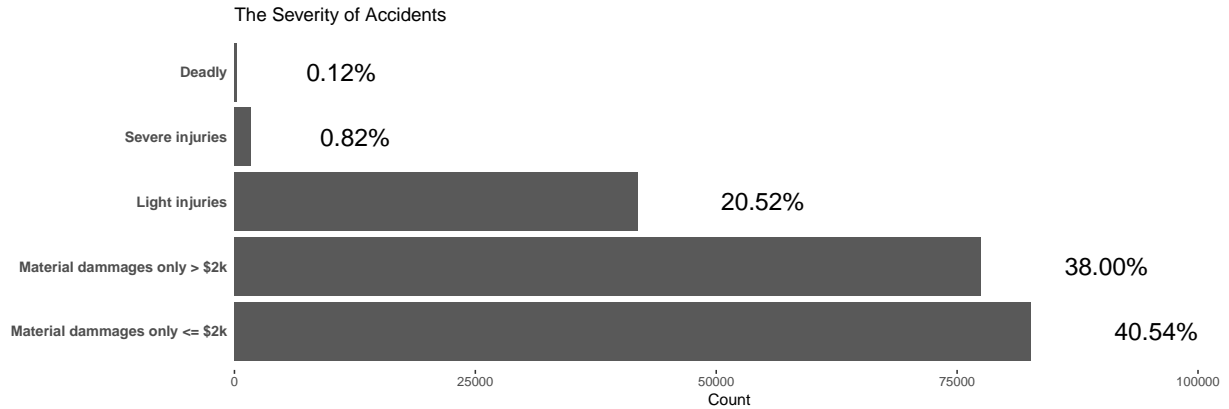
We will divide the 27 variables into 3 groups.

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.

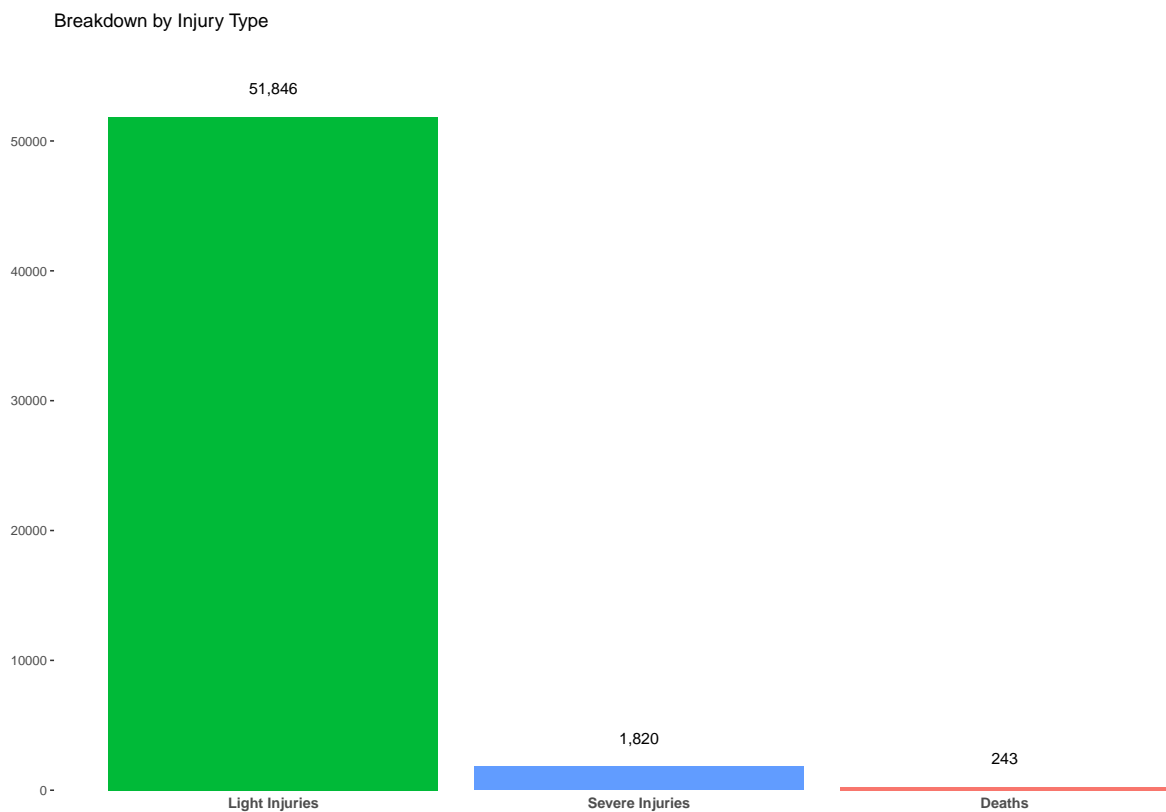
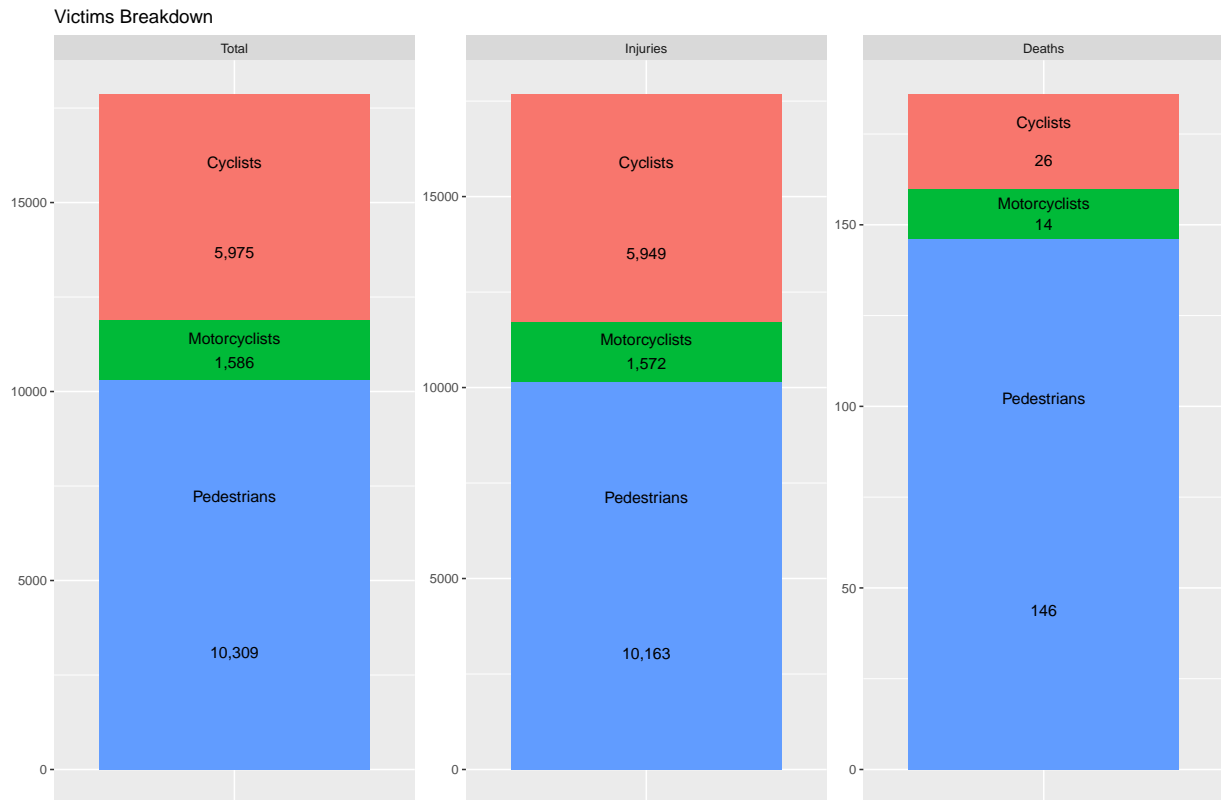
- Severe injuries: At least one victim was severely injured.
- Light injuries: One or more victims were lightly injured.
- Material damage only: Material damage with value exceeding \$2000.
- Inferior material damage: Material damage with value equal to or below \$2000.

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



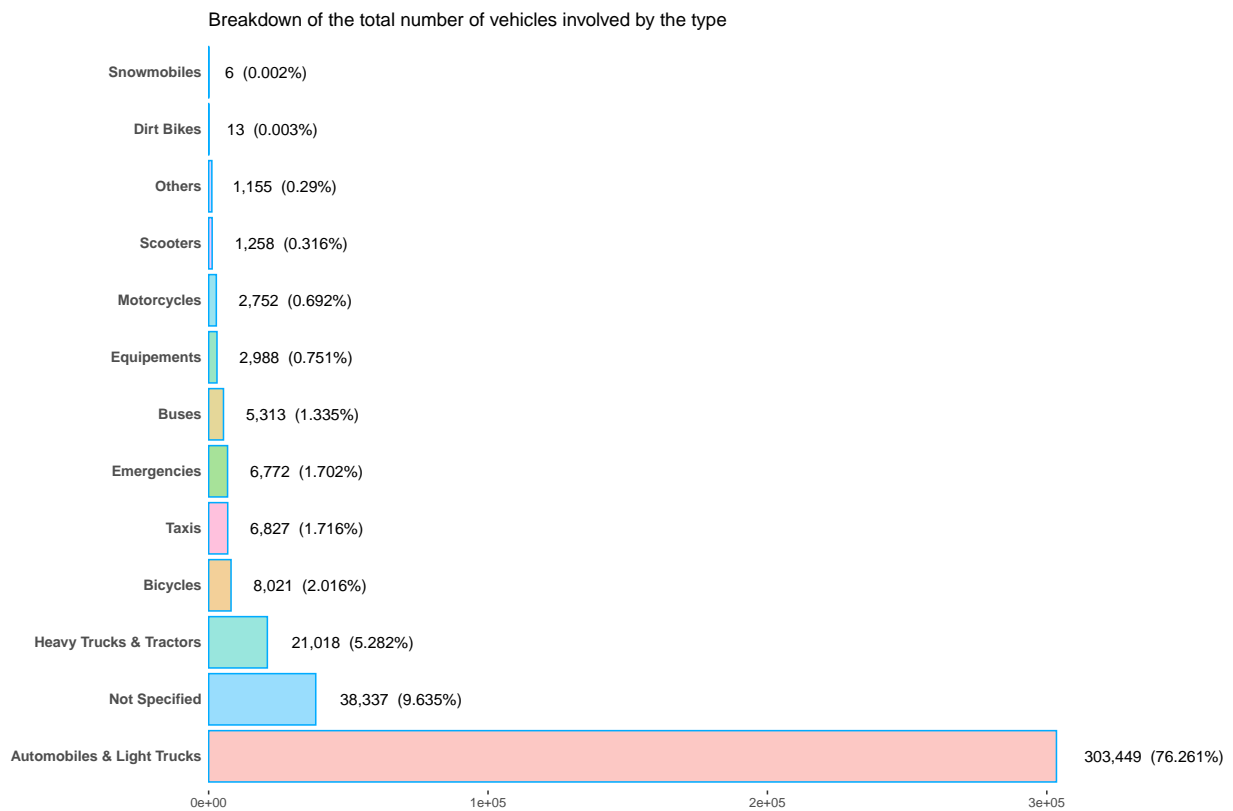
The second group breaks down the injuries. We have the following groups:

- 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.

3. Accident nature

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

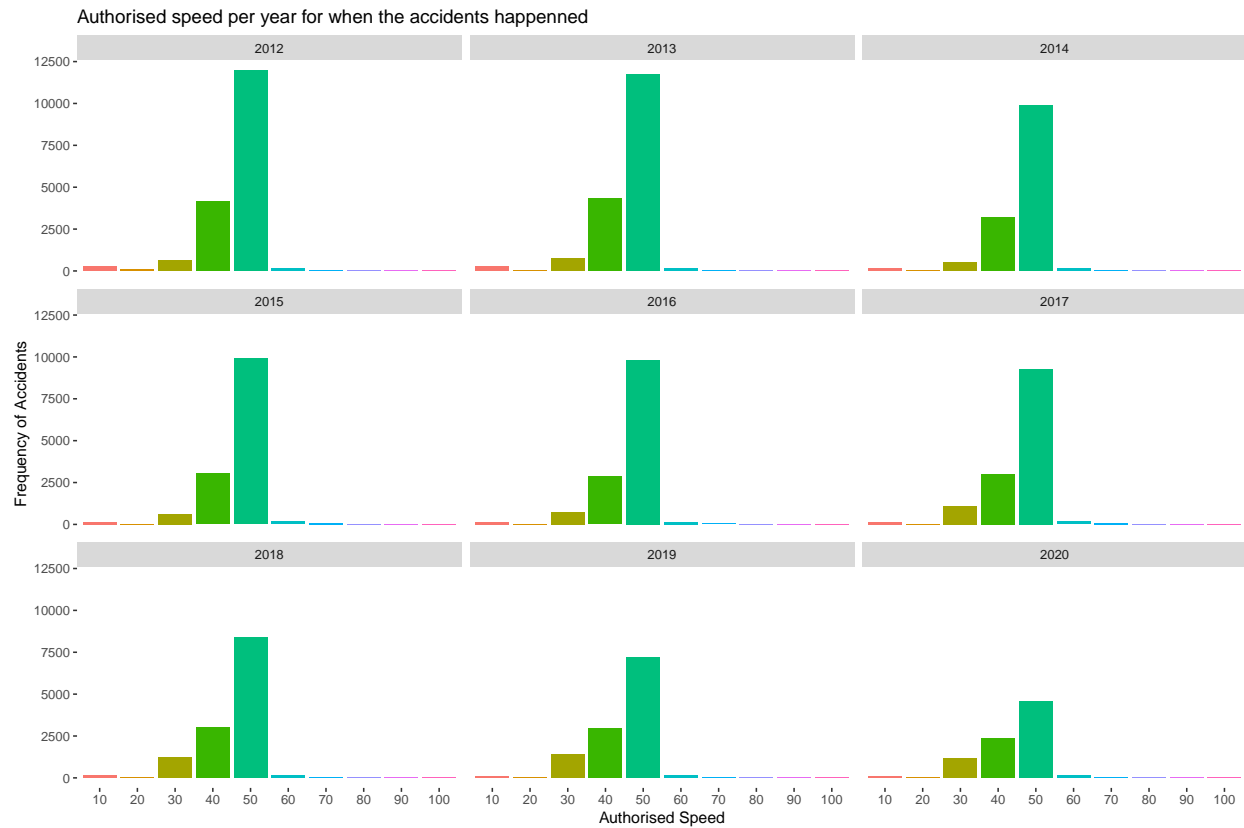
- CD_GENRE_ACCDN: Type of accident. It has the following values
 - 31: Collision with a vehicle.

- 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.
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 - : 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

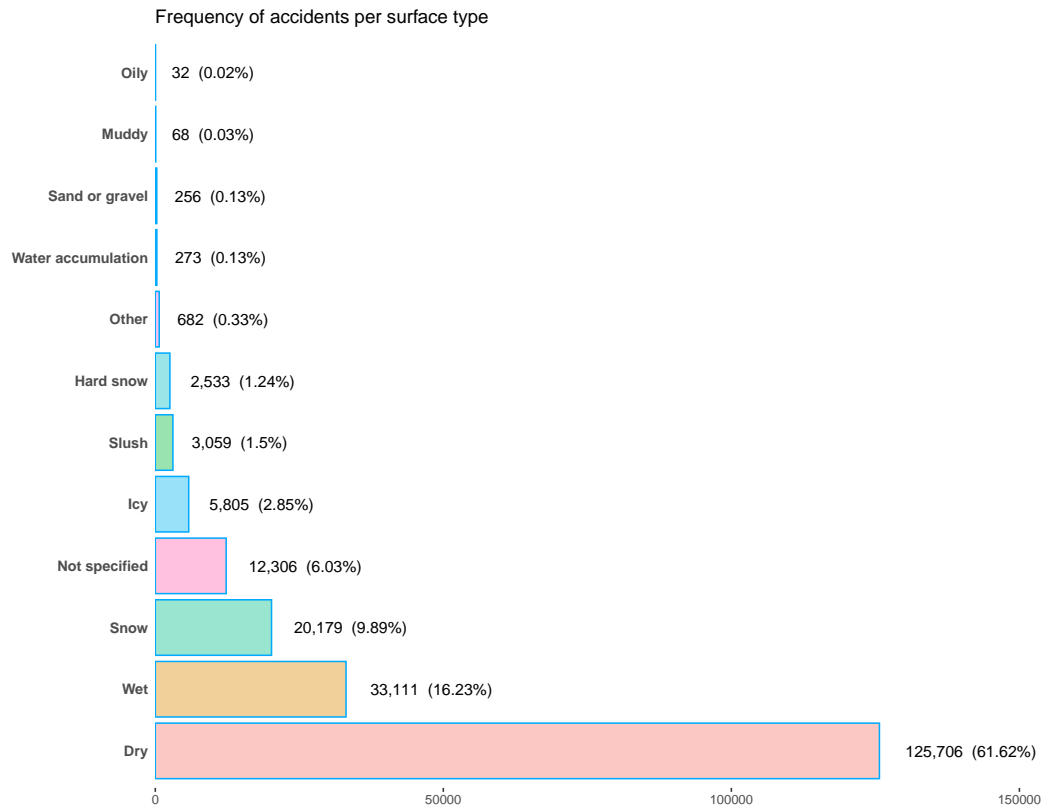
Finally, we look at the location and street conditions. There are 25 features, however, we have chosen a relevant subset.

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

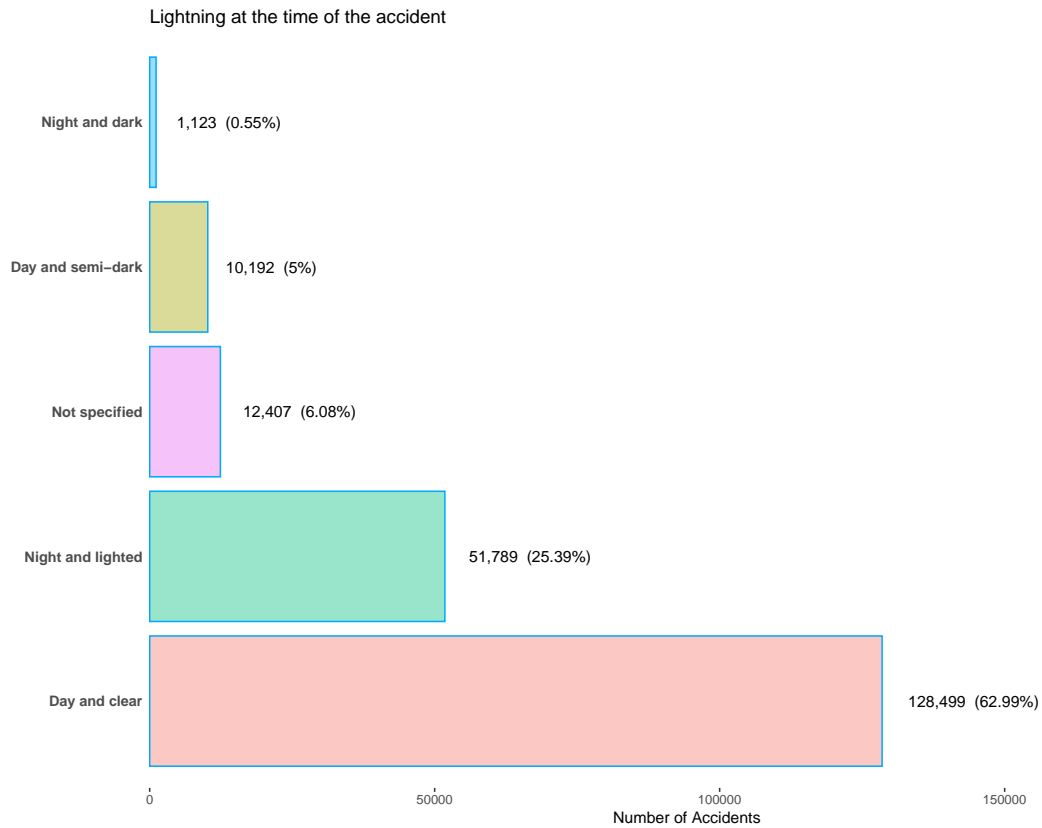


- CD_ETAT_SURF: Surface condition:

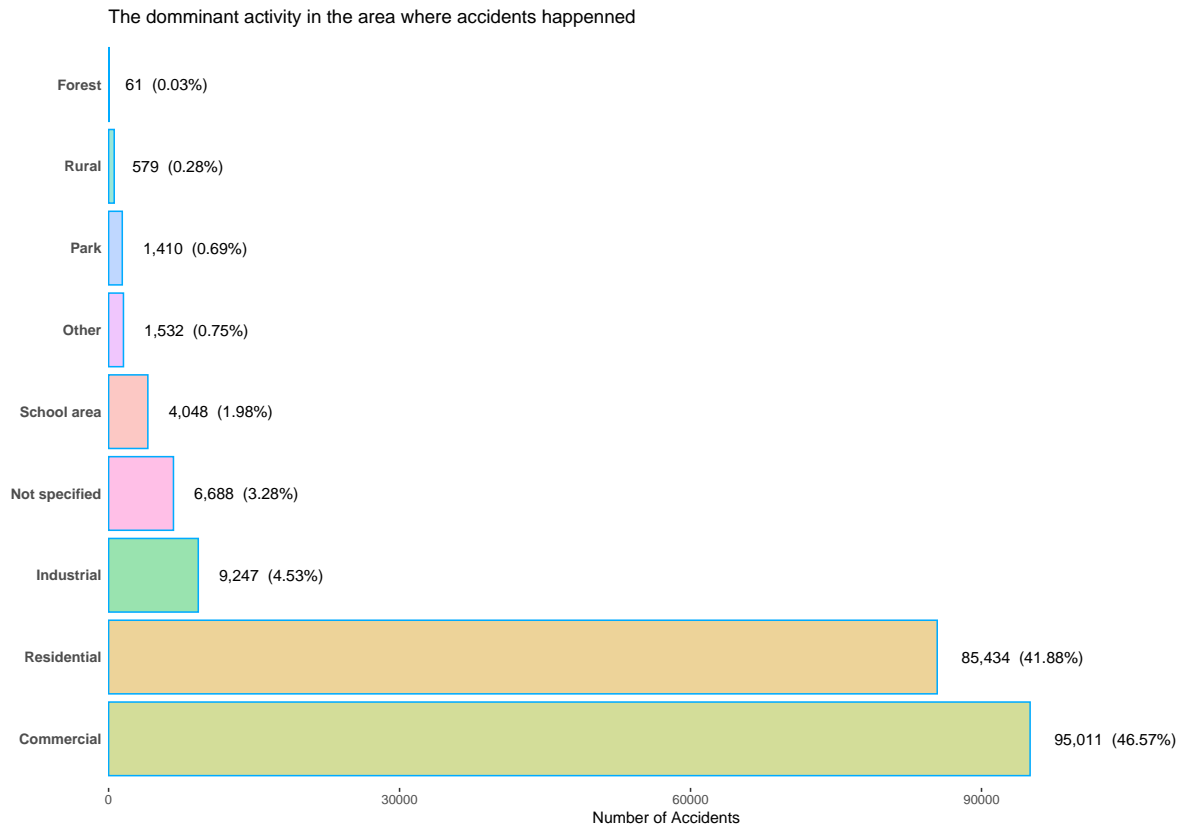
- 11: Dry (No spill)
- 12: Wet
- 13: Water accumulation
- 14: Sand or gravel
- 15: Slush
- 16: Snow
- 17: Hard snow
- 18: Ice
- 19: Muddy
- 20: Oily
- 99: Other (0.3%)
- : Not specified (6.0%)



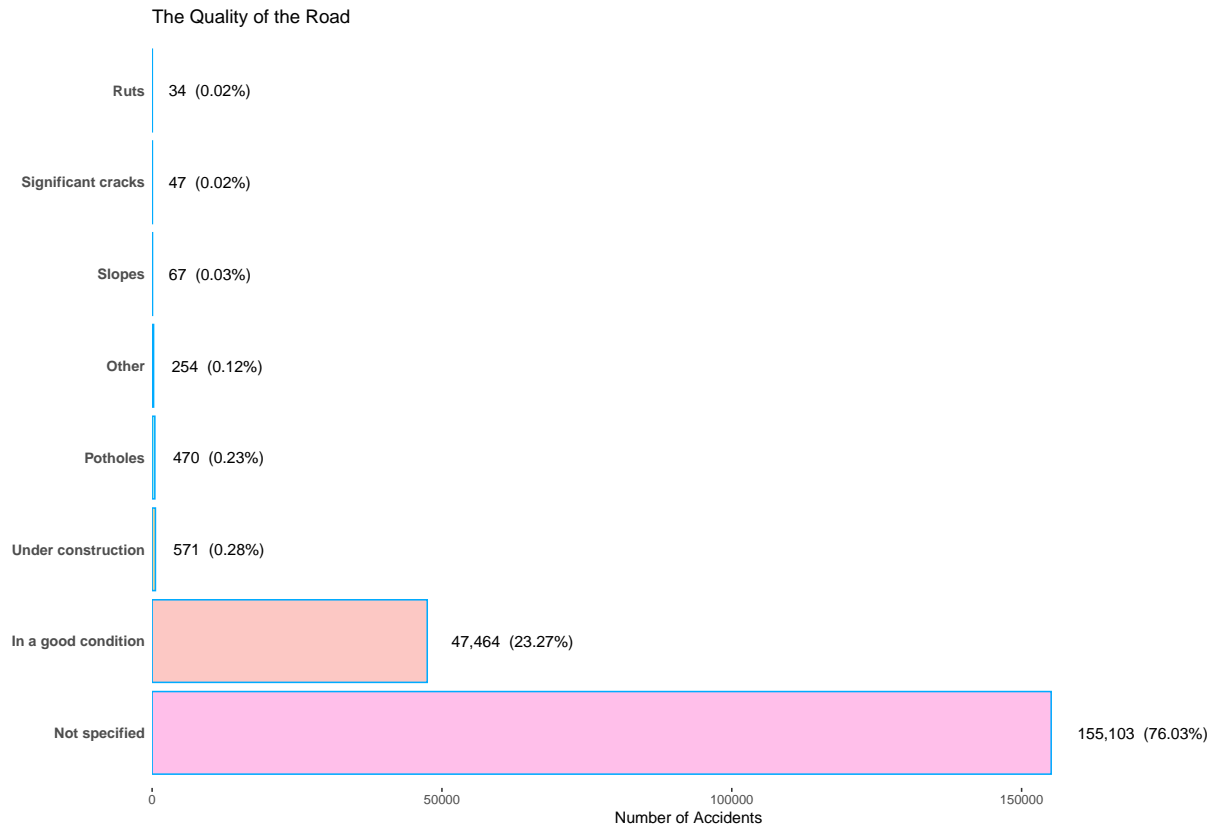
- CD_ECLRM: Lightning at the moment of the accident:
 - 1: Day and clear
 - 2: Day and semi-dark
 - 3: Night and lighted
 - 4: Night and dark
 - : Not specified (6.1%)



- CD_ENVRN_ACCDN: Environment (The dominant activity of the sector where the accident happened):
 - 1: School area
 - 2: Residential
 - 3: Commercial
 - 4: Industrial
 - 5: Rural
 - 6: Forest
 - 7: Park
 - 9: Other (example: lakes)
 - : Not specified (3.3%)



- CD_ETAT_CHASS: The quality of the road:
 - 1: In a good condition
 - 2: Under construction / repair
 - 3: Ruts (Deformation of the asphalt)
 - 4: Significant cracks
 - 5: Potholes
 - 6: Slopes and different leveling.
 - 9: Other (0.1%)
 - 0: Not specified. (76.0%)



- CD_COND_METEO: Weather conditions:

- 11: Clear sky
- 12: Cloudy
- 13: Foggy
- 14: Drizzle
- 15: Heavy rain
- 16: Strong wind (no blowing snow or rain)
- 17: Snow / hail
- 18: Snowstorms and blowing snow
- 19: Black ice
- 99: Other (0.6%)
- : Not specified (6.4%)

