

# ANALYSIS OF TRAFFIC ACCIDENT IN FRANCE

LETS GET STARTED



Ahmad Sholihin  
Triya Maulana Setya Putra  
Titan Bagus Bramantyo



# TABLE OF CONTENTS

01

## BACKGROUND

brief presentation on the topic of analysis

02

## PROBLEM

overview of the analyzed problem

03

## BUSINESS QUESTION

analysis objective points

04

## ANALYSIS EXPLANATION

interpret the analysis performed

05

## CONCLUSION

the answer of analysis objective points





## BACKGROUND

Accidents do not occur for no reason. Many factors contribute to the occurrence of fatal accidents, including weather conditions, road physical conditions, vehicle conditions, and the presence of human error.

As a result, it is required to conduct an analysis in order to identify patterns of common causes of accidents so that the level of victim safety is increased while the variables that cause accidents are minimized.

# PROBLEM

**What can be done to increase the chances of survivors of a traffic accident in France?**

To find out the causes of traffic accidents in France by analyzing the factors that cause traffic accidents.





# BUSINESS QUESTION

- 1 In terms of lighting conditions, which conditions cause the most accidents?
- 2 Do accidents happen more at crossroads/inter-section?
- 3 In what weather conditions are the most common accidents?
- 4 Is there any correlation between the type of crossroads/inter-section and the type of collision?
- 5 When do the majority of accidents happen?
- 6 How serious is the condition that many accident victims face?

# ABOUT DATASET



To accommodate this case analysis process, we use the following data.

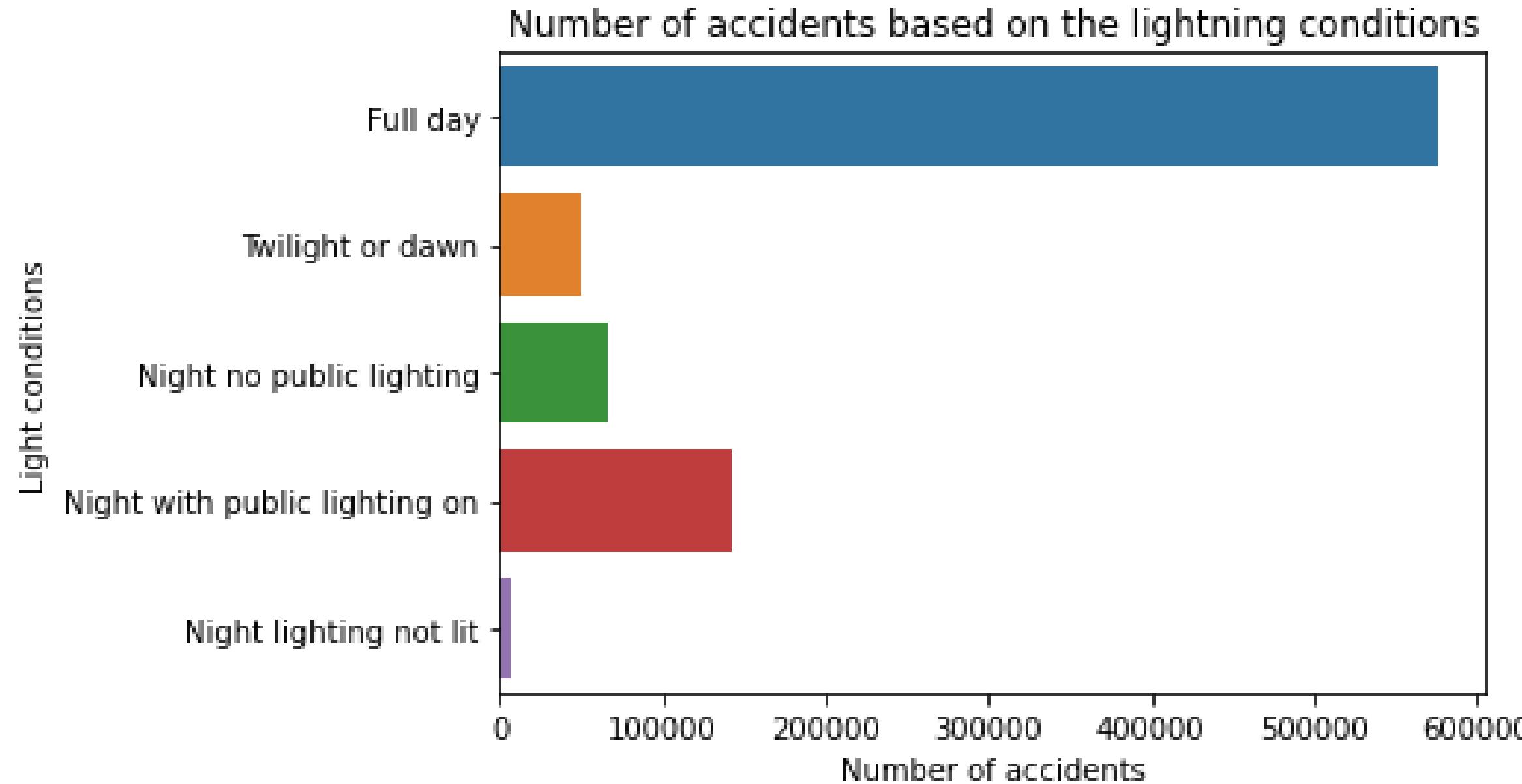
Our dataset is taken from Kaggle.com which contains data on traffic accidents in France from 2005 until 2016

The dataset consists of 1.876.005 rows, and 27 columns

# FEATURES

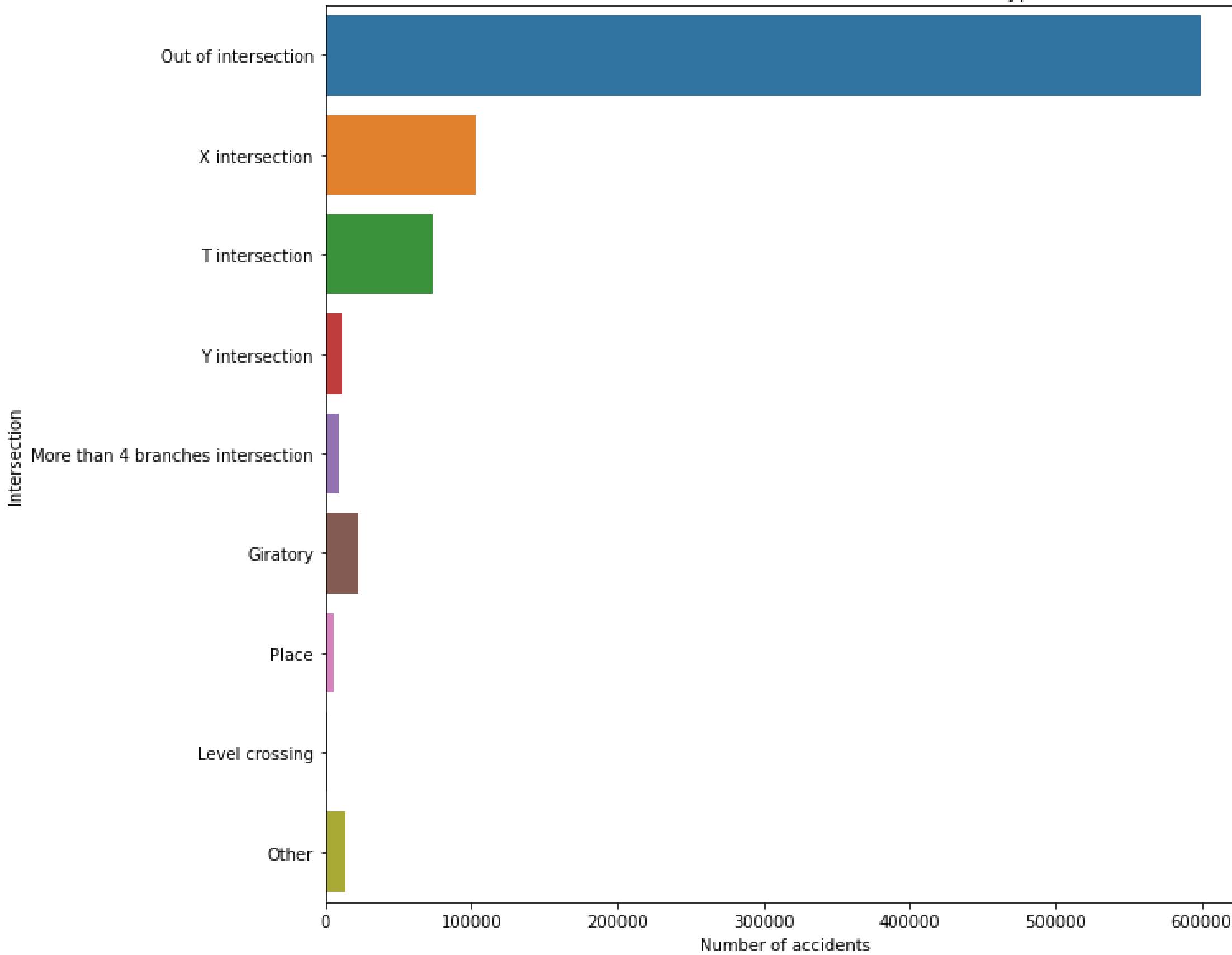
- Num\_Acc : Accident ID
- jour : Day of the accident
- mois : Month of the accident
- an : Year of the accident
- hrmn : Time of the accident in hour and minutes (hhmm)
- lum : Lighting : lighting conditions in which the accident occurred
- int : Type of Intersection
- atm : Atmospheric conditions
- col : Type of collision
- adr : Postal address: variable filled in for accidents occurring in built-up areas
- gps : GPS coding: 1 originator character
- Geographic coordinates in decimal degrees
- catu: User category
- grav: Severity of the accident
- secu: The existence of a safety equipment

# ANALYSIS EXPLANATION

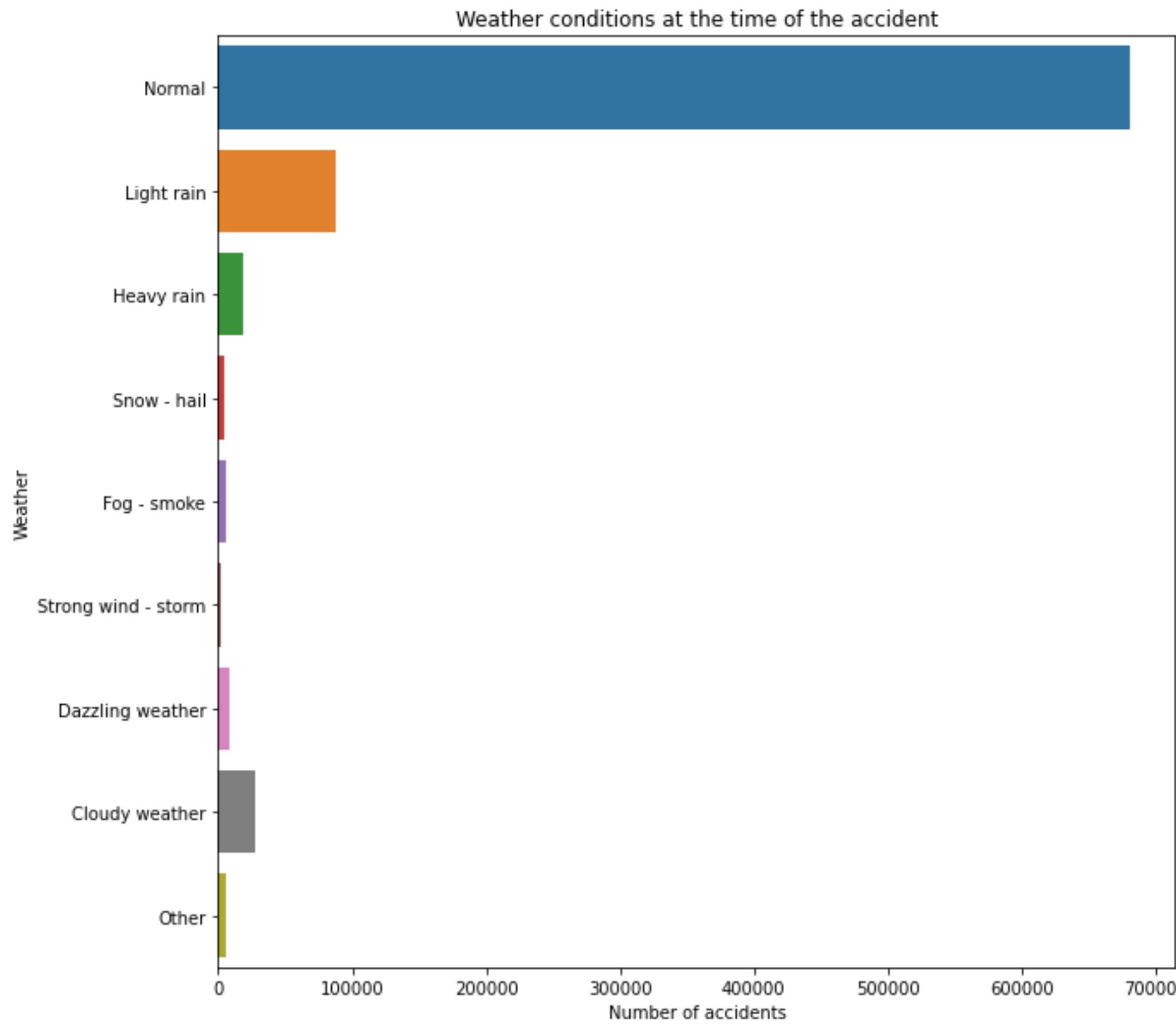


**MOST ACCIDENTS OCCUR IN DAYLIGHT (FULL DAY) CONDITION**

Number of accidents based on the intersection type

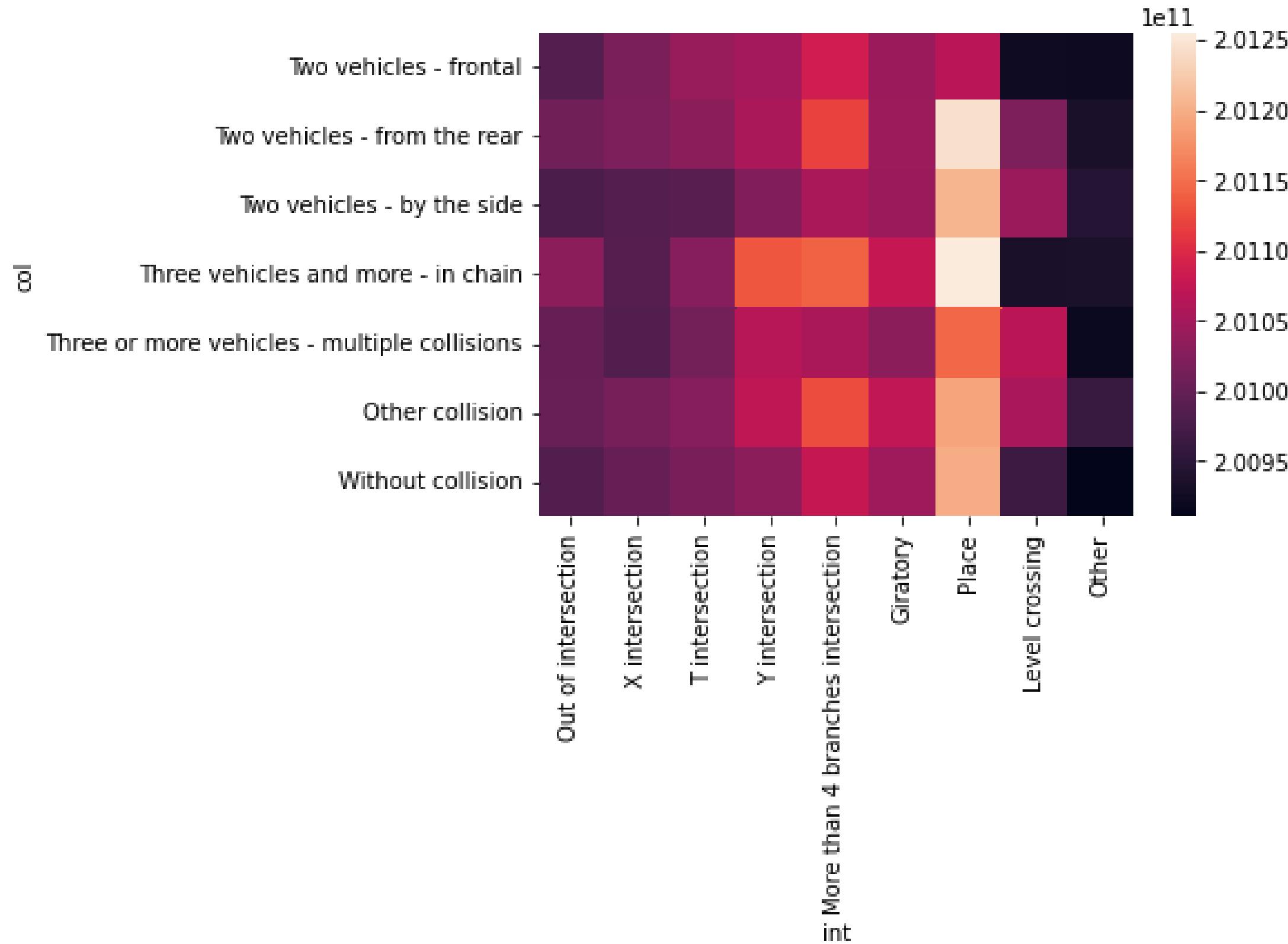


**MOST ACCIDENTS HAPPEN OUTSIDE THE INTERSECTION**

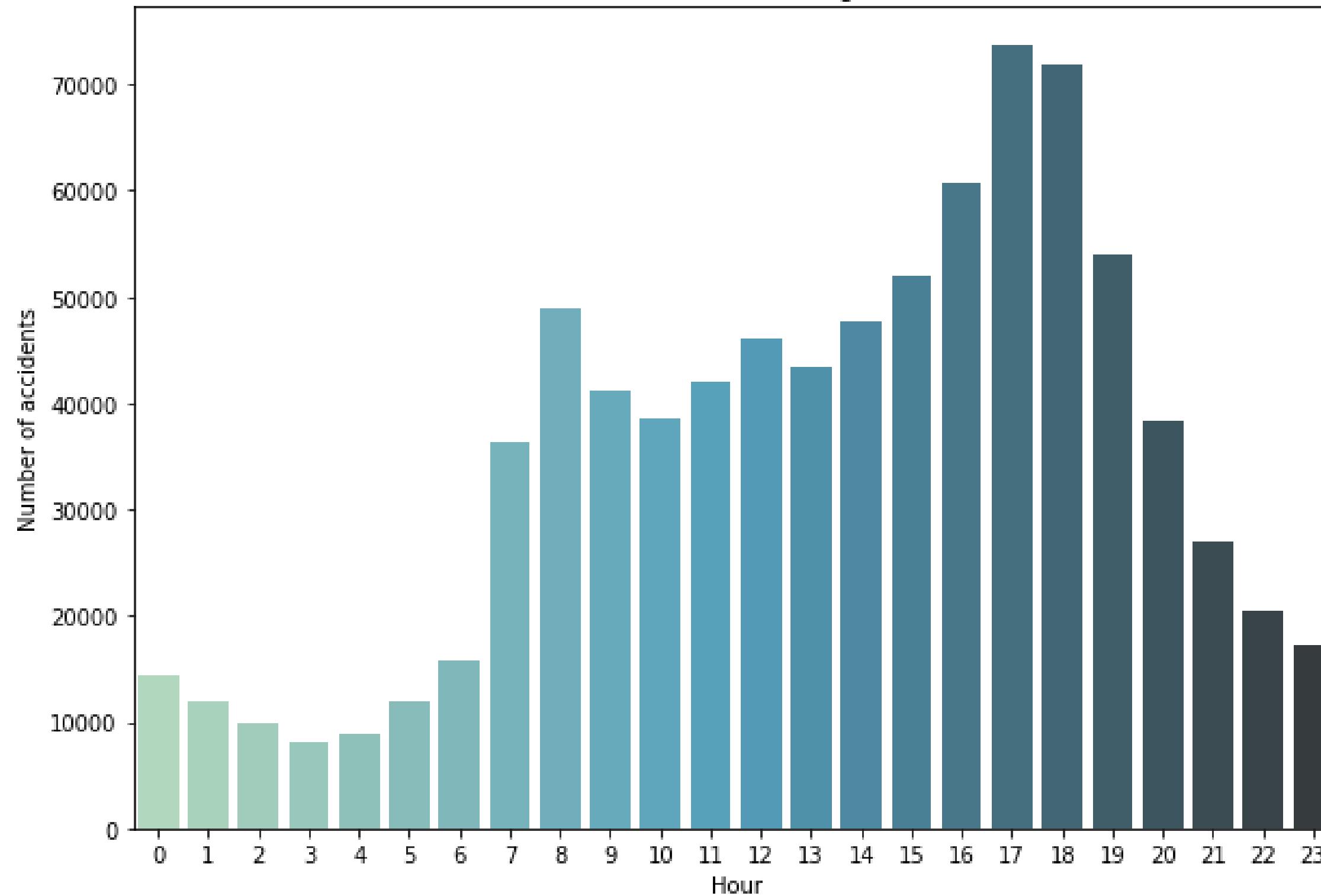


**MOST ACCIDENTS HAPPEN IN NORMAL WEATHER**

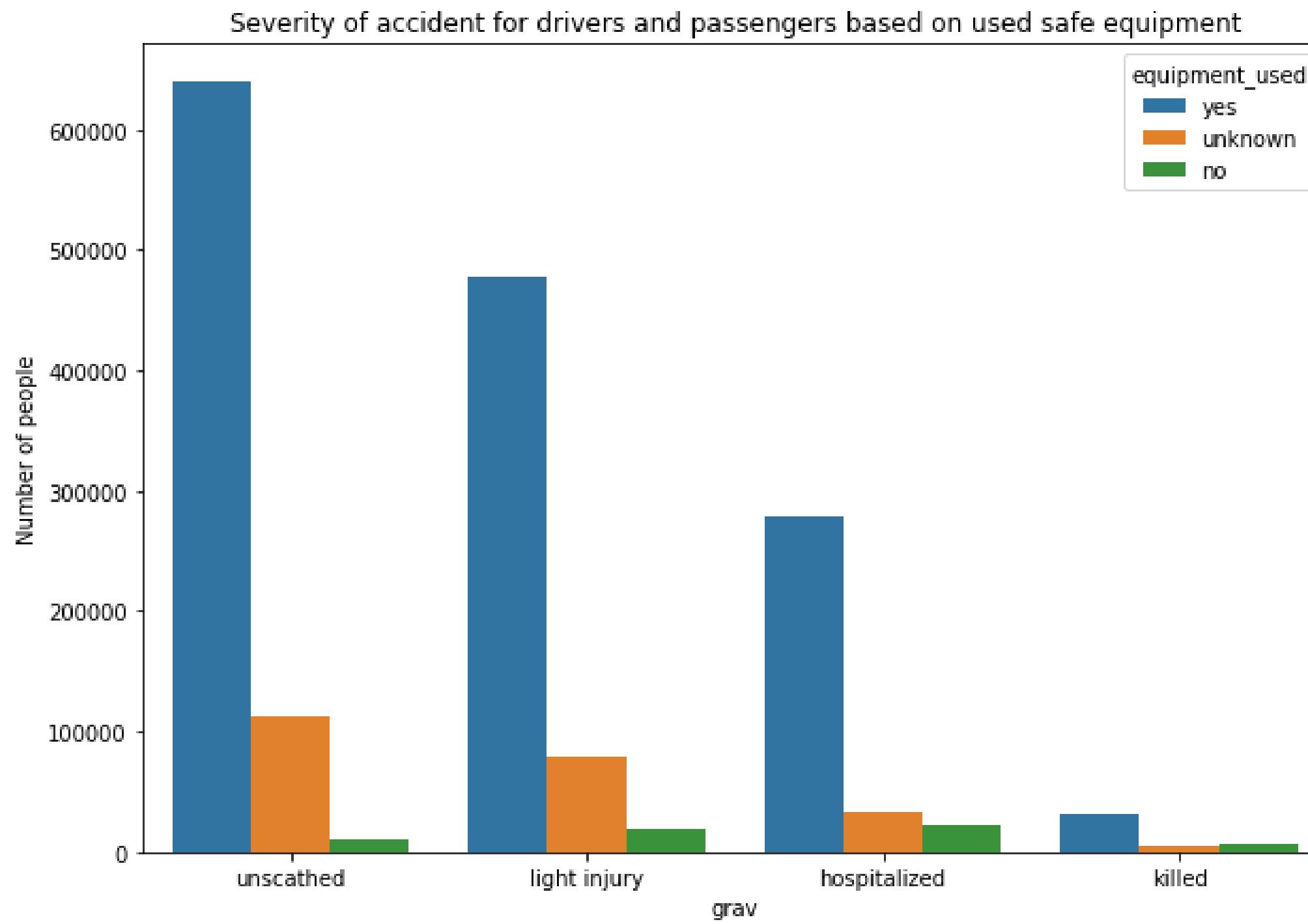
# CORRELATION BETWEEN INTERSECTION & TYPE OF COLLISION



Number of accidents during 24-hours

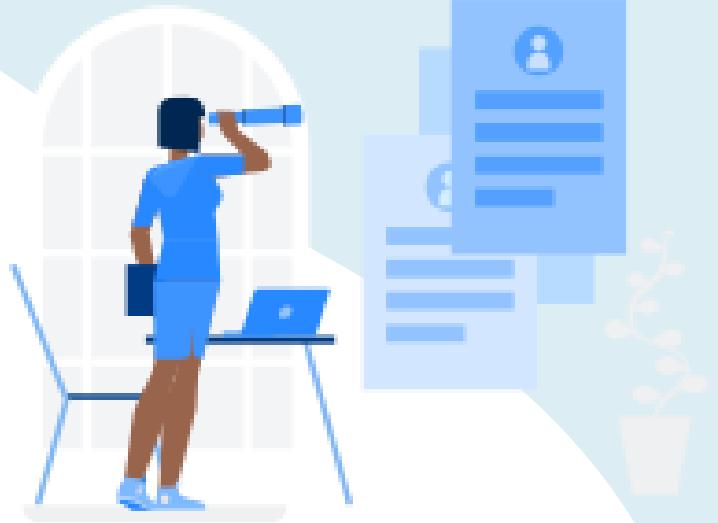


**MOST ACCIDENTS HAPPEN DURING THE FULL-DAY**



**VICTIMS WHO USE MORE SAFETY EQUIPMENT ARE LESS INJURED  
IN ACCIDENTS**

# INSIGHT

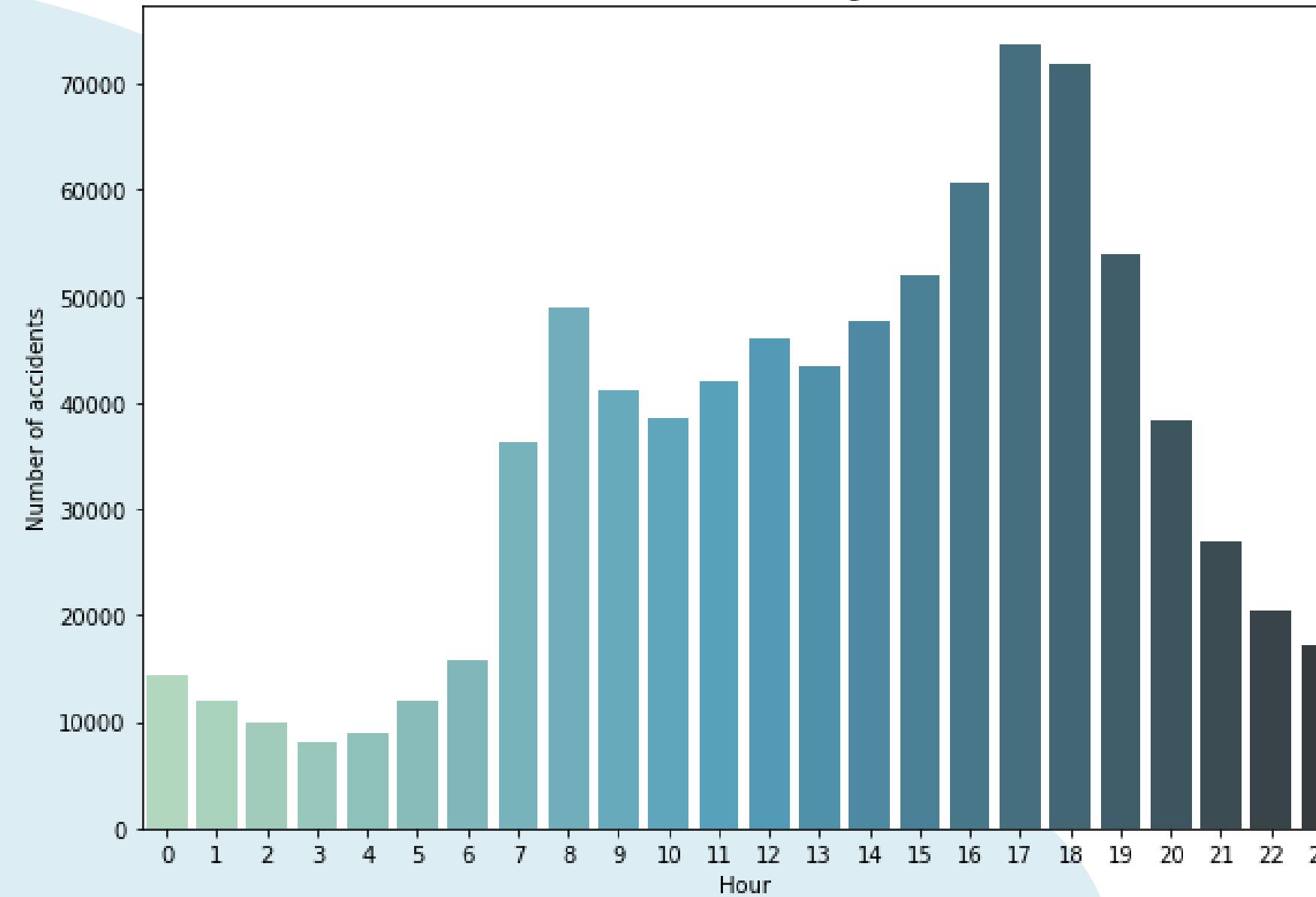


Here are some insights we got from analysis process.

- In terms of lighting, most accidents happen during the day when the sun is shining brightly
- Most accidents happen outside the intersection
- Most accidents happen in normal weather condition
- There is a correlation between the intersection and the type of collision, especially at the Y intersection and more than 4 branches type
- Most accidents happen during the full-day
- Victims who use more safety equipment are less injured in accidents



Number of accidents during 24-hours



Sunrise and sunset in Paris (France)

sunrise

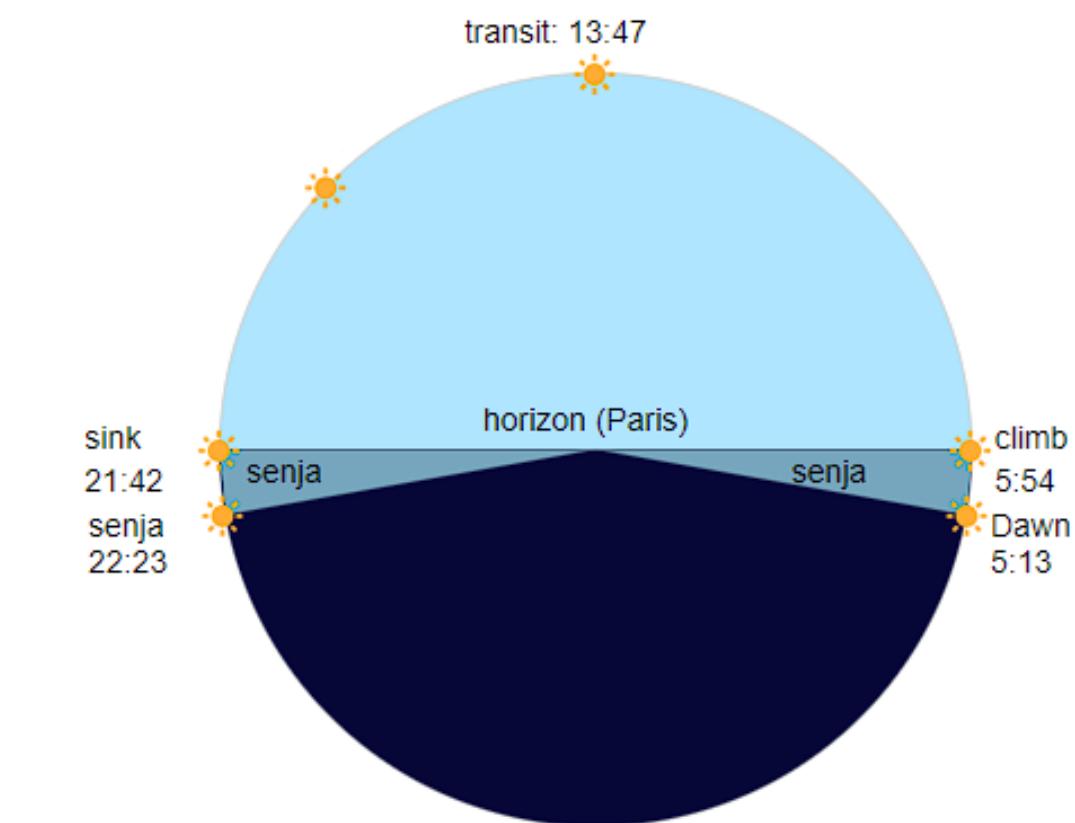
Sundown

day length

5:54

21:42

15 hours 48 minutes





# CONCLUSION

According to the data collected and analyzed, the majority of accidents occur under normal circumstances (daytime, normal weather, good lighting, etc.). For example, everyone could travel usually due to normal weather conditions. These conditions make the driver more careless, and the driver becomes more quickly exhausted as a result of the busy road conditions (traffic jam).

When it comes to the use of safety equipment, it will increase the chances of surviving an accident or avoiding injury. Accidents, on the other hand, are unpredictably occurring incidents, therefore this pattern cannot be identified surely.



# SOLUTION

Knowing the conclusions, we can advise the French Ministry of Transportation and other stakeholders to notify health-care facilities (such as ambulances) during high-risk hours.

Furthermore, the French Ministry of Transportation and stakeholders have the option of placing signs in accident-prone areas. Drivers must also be educated on the importance of being aware and always using safety equipment, because accidents can happen anytime.

# THANK YOU

