Road safety: deep anaysis on car accidents
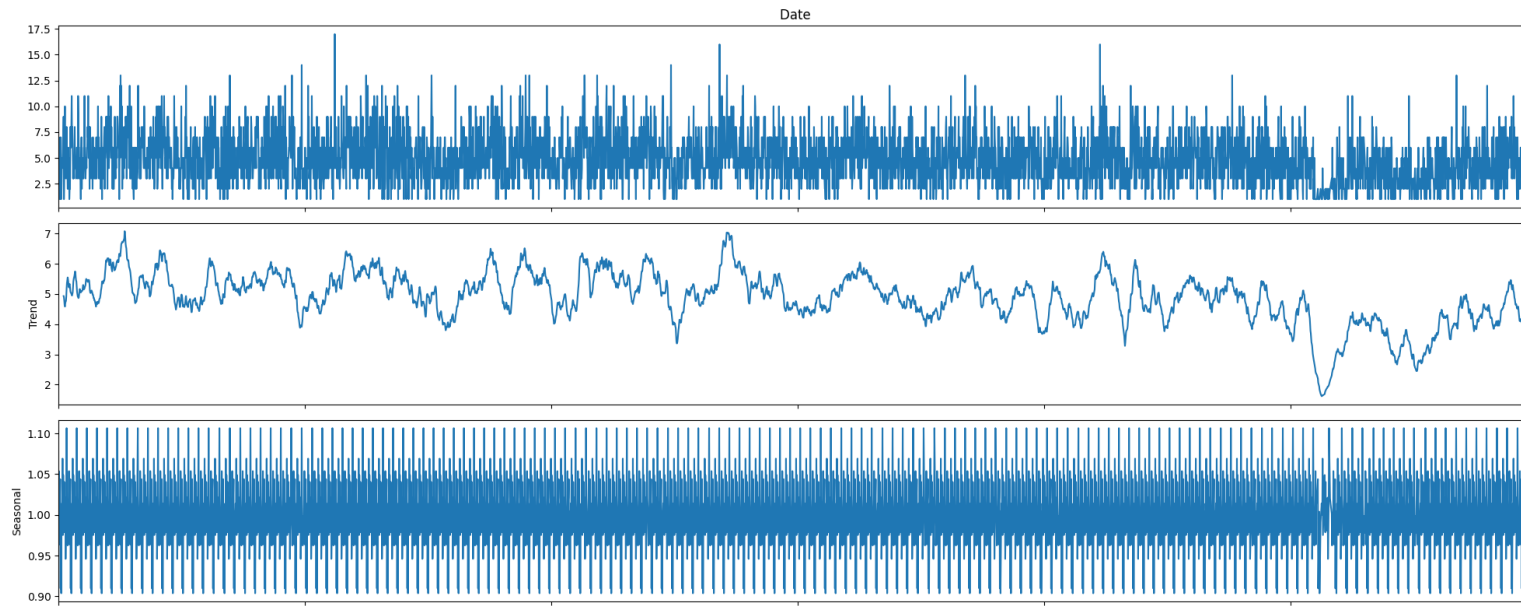
Introduction

this analysis aims to discover what factors cause the most serious road accidents, to be able to mitigate their risk in the future.

The analyzed dataset takes into consideration road accidents in Catalonia from 2010 to 2021

We will highlight what are the main factors that lead to accidents, as well as the periods of the year in which you need to pay more attention to driving.

Finally, we will predict how many accidents, victims and serious injuries there will be in the years to come.
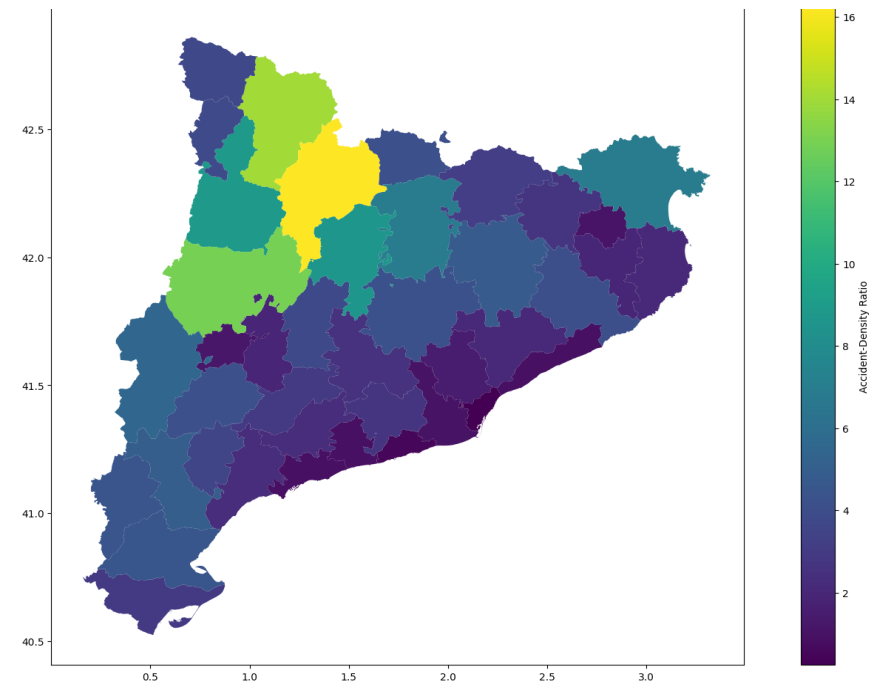
Accident's trend

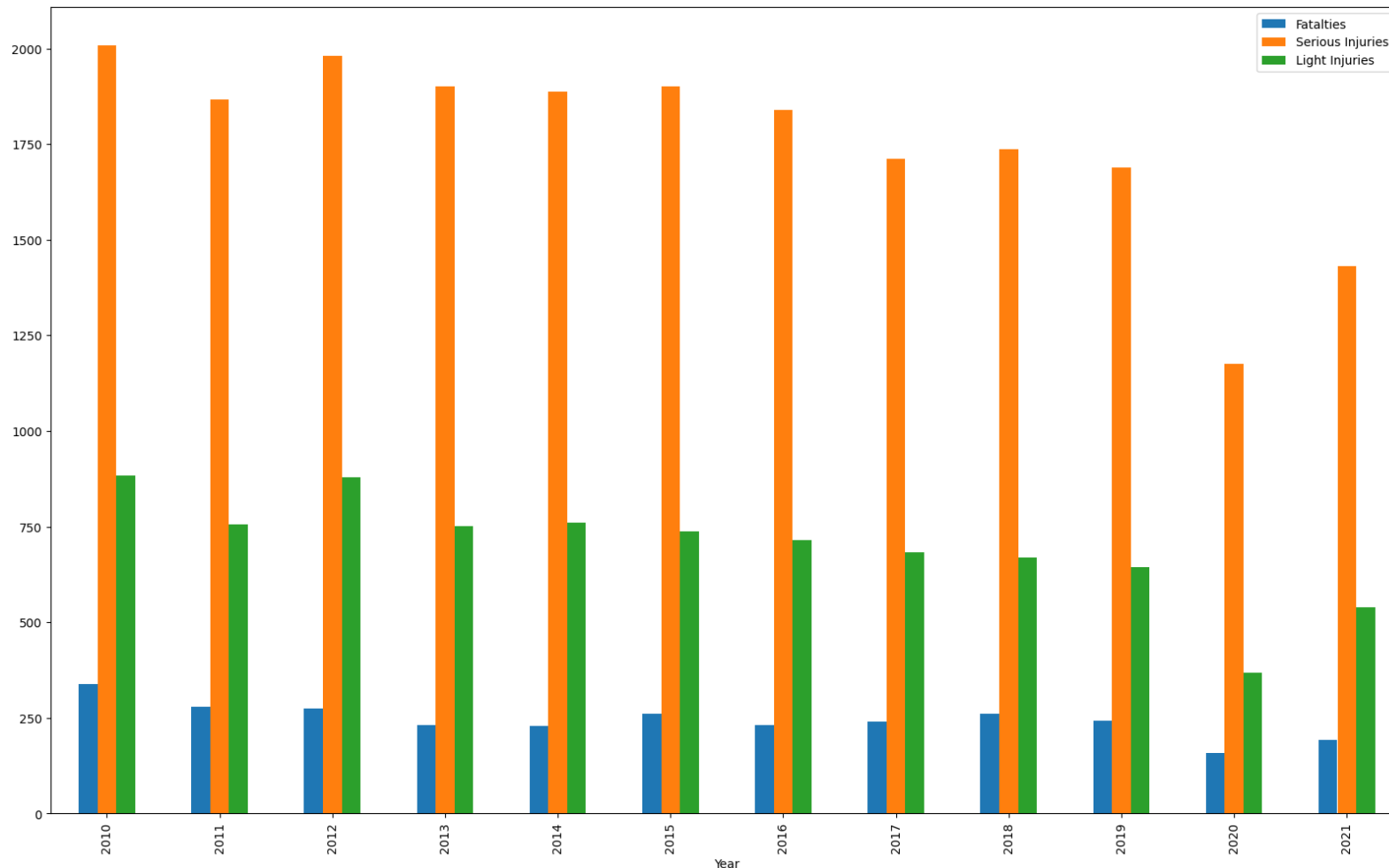
Occurrences

Trend

Seasonality

Although the graph of accidents can say little, its breakdown into trends and seasonality already shows us interesting data.
In fact we can see how in recent years the trend has tended to be decreasing.
While a weekly pattern is very clear from the seasonality analysis, in which accidents have a greater incidence during weekends.
This is likely due to a greater number of vehicles on the road during those times of the week.

Accidents and altitude: a dangerous combination

In the graph on the left, the number of accidents in each region normalized by the density of the inhabitants. It is interesting how the data follows the altitude map. The higher the altitude the greater the probability of encountering serious accidents. Drive carefully!

How it went

An annual analysis shows that in the last 10 years all types of accidents have decreased, with particular intensity in 2019 when the Spanish government issued some laws that lowered speed limits on various roads in the nation.

https://trans.info/new-speed-limits-are-in-force-in-spain-from-today-124104