

Traffic accidents with casualties in Estonia

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Introduction

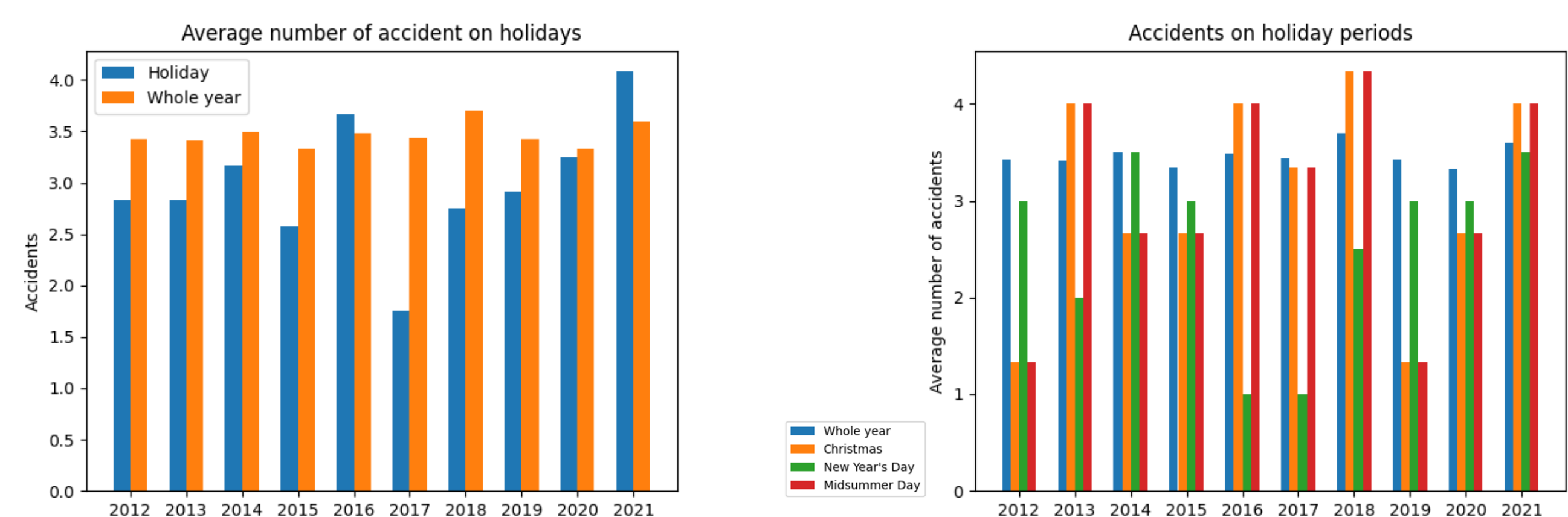
There are a lot of myths surrounding traffic accidents, one of them is that more accidents occur during the holidays. We wanted to find out how true that myth is and find out when and where is really the most dangerous to drive.

The Data

Our initial data, a dataset of car accidents with sustained injuries in Estonia between the years 2011 and 2021, is from the Estonian Open Government Data Portal. It includes each accident's exact location, date, time, weather conditions, road conditions and some information about the accident's consequences. It is important to note that this dataset does not include minor crashes with no injuries.

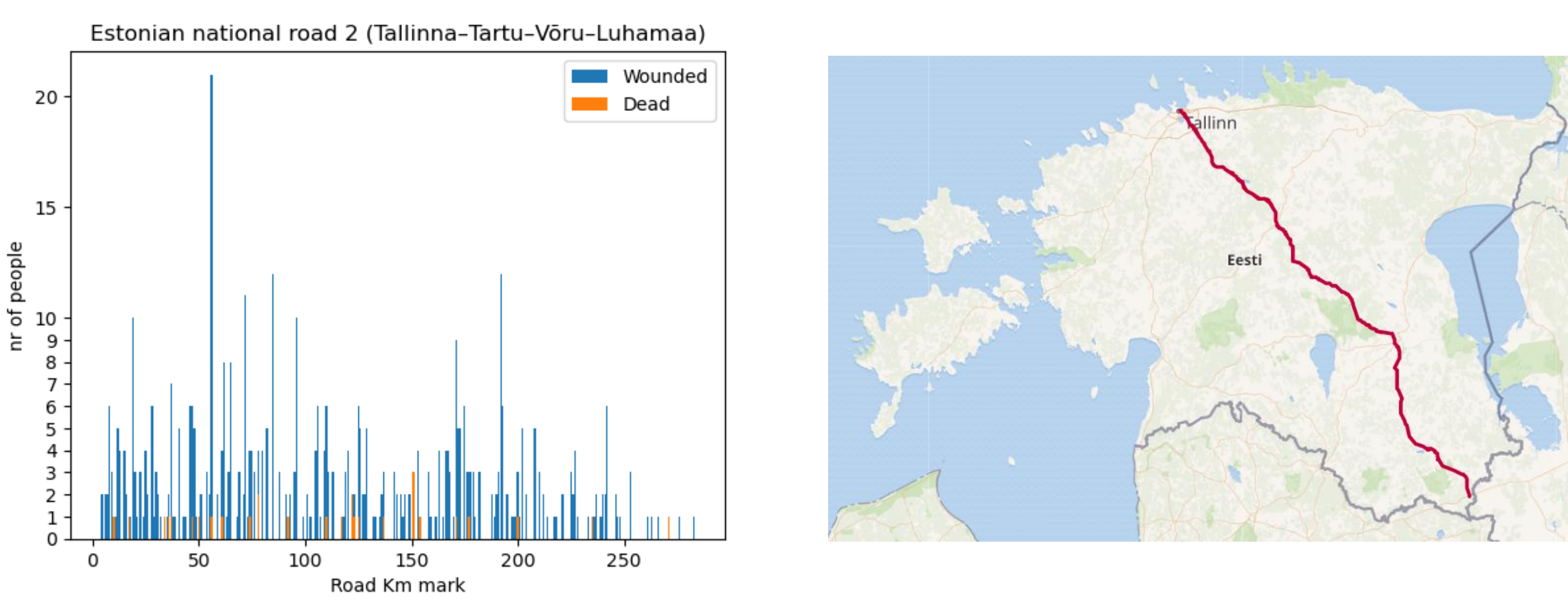
Accidents on holidays

By comparing the average number of accidents on holidays to the average number of accidents for the whole year, we found that the average number of accidents on a given day does not depend on whether that day is a holiday or not.



Road conditions

We looked at individual roads and assessed their lethality. Here, the Estonian national road 2 is shown with its accidents as it had the highest accident count. Non-lethal accidents are more prone to happen around cities, whereas lethal accidents seem to happen between towns.



By comparing the average number of accidents around Christmas, Midsummer Day and New Year's Day to the average number of accidents for the whole year we concluded that there might be more accidents on the holidays, but it is clear that the holidays are no more dangerous than driving on a normal day.

We found that there is no strong correlation between overall adverse weather/road conditions, and the lethality of an accident. What is interesting, is actually the lack of correlation in some cases, as for example the weather seems to not affect accident lethality at all.

Traffic accident hotspots

To visualize some of the more problematic locations regarding accidents, we created a heatmap where it is possible to get a complete overview of all traffic accidents with injuries in the last 10 years as well as apply certain filters. The map is available to browse by scanning the QR code.

