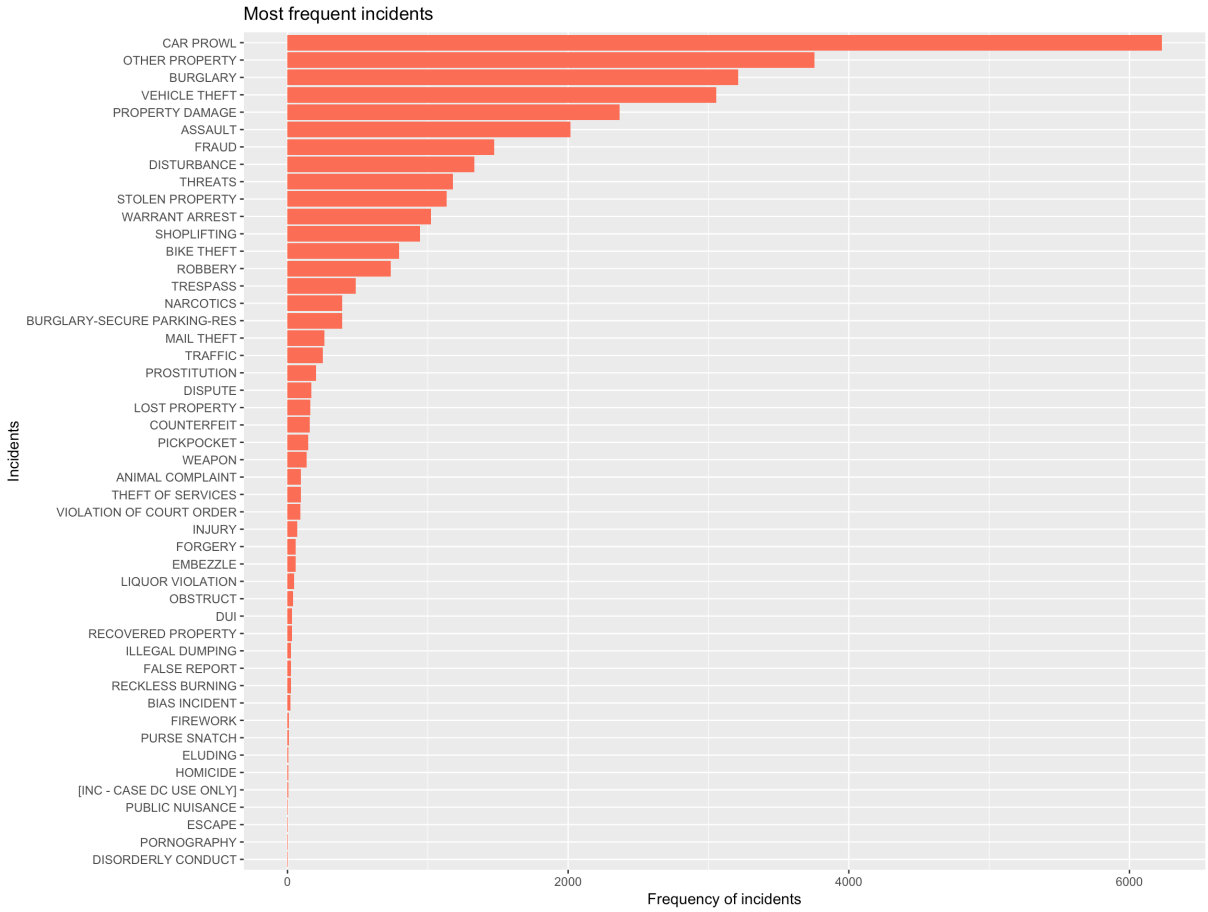
Car prowls becoming Seattle migraine

In January 2009 Christine Clarridge wrote an article in The Seattle Times titled "Car prowls becoming Seattle headache". Basically, she reported that "car prowling – when someone smashes your car window and makes off with your stereo, GPS system or anything else of value – may be Seattle's most frequently reported crime". Based on Seattle police data, I would like to check whether this was still true during the summer 2014... in other words, whether car prowls evolved from simple headaches to chronic migraine.

So, first question: which are the most common incidents reported to the Seattle police in summer 2014… are car prowls at least in the top ten?

Mmmm… surprise!!! **They are still at the very top of the ranking**. In fact, they almost double all other kinds of common incidents, such as burglary and vehicle theft. It seems that car prowl is no longer a headache, but a migraine!



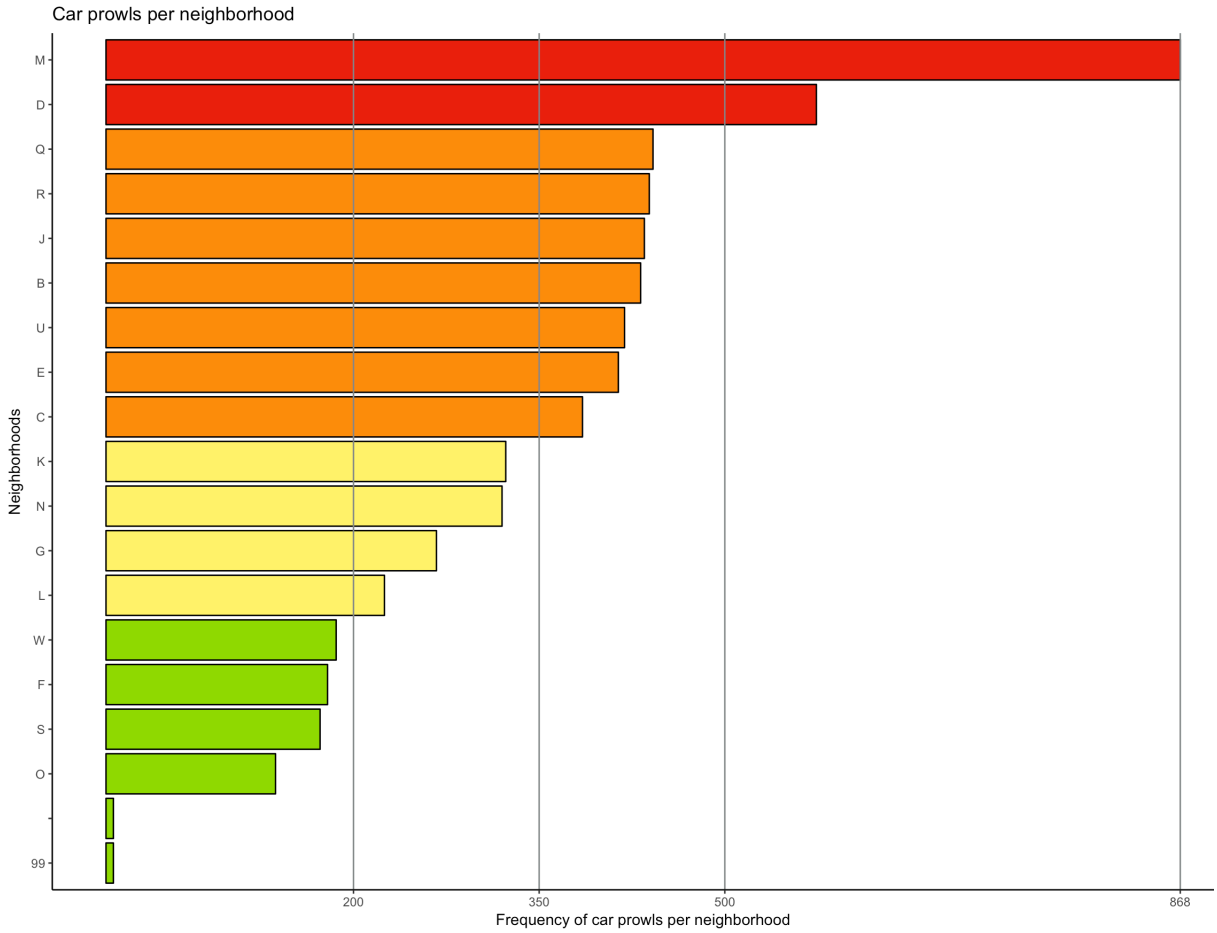
It would be interesting to check whether car prowls are increasing, diminishing or keeping constant among the years (but that would require using another dataset that I don't have at this moment in my computer. I will update this short blog article as soon as I get the dataset for 2009 – 2017).

In the meantime, we can analyze our second question. Christine said in 2009 that "no neighborhood is immune". In my dataset I just have a code for each district in Seattle

and some geographical data that I could use for making a map. Before investing extra time in making a fancy (and very helpful) map, I will first make a simple bar chart and check if all districts are equally affected by car prowls.

Are all districts equally affected by car prowls?

A quick view let us see that it is true that all 17 districts are affected by car prowls. Nevertheless, the bar chart shows that districts M and D are the most dangerous ones, while districts W, F, S, and O have a much lower number of incidents. Or did the neighbors of the “green districts” just gave up and decided to take all their belongings with them when they park their cars, leaving them with open doors – to at least avoid that windows are smashed? We will never know it, at least with the current data set.

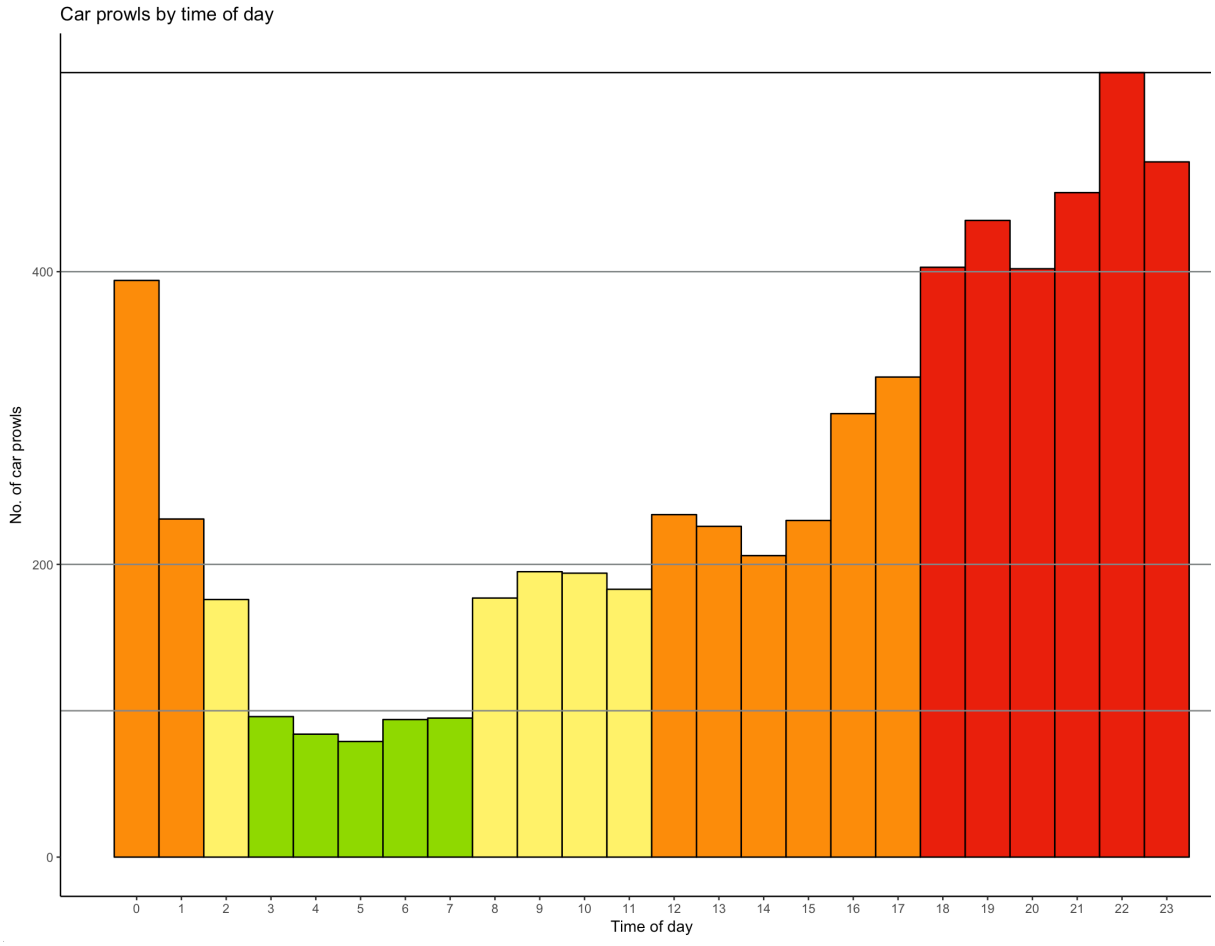


Following my gut feeling, I just divided the districts in four groups: I would definitely take the bus to go to districts M and D and I would be especially cautious when going to the orange area of the city. This information would be more nicely seen in a map, to check whether these districts are adjacent and if they are located in the north, south, etc. of the city… next time, I don’t have time now to check how to make the map ☹.

The newspaper article also suggested that most of the car prowls in residential neighborhoods are occurring between midnight and 6 a.m., but they are first discovered when people want to take their cars to go to work. Unfortunately I don’t know which are the residential districts of the city, so I will have to evaluate the data for the complete city.

During what periods of the day are car prowls most common?

A quick view at the data seems to indicate that windows-smashers are “working” earlier in summer (Christine’s article was published in winter and maybe it was based on winter data. Another mental note: check whether data is affected by seasonality). Most of the incidents are occurring between 6 p.m. and midnight, with extended risk until 1 a.m. The afternoon seems also to be a problematic time slot. Maybe because people are in parks and swimming-pools (especially those with children) and they are distracted? Or do Seattle citizens sleep siesta? To check these hypotheses we need more data. But something is clear: after nighttime activity, criminals need to go back home, sleep 8 hours, and prepare themselves for the next night.



Here you can find the article about car prowls in Seattle:
http://www.seattletimes.com/seattle-news/car-prowls-becoming-seattle-headache/

And here you can see the full code I used for making the visualizations above and some other graphics (with simple R standard package and with ggplot2).
https://github.com/nadiita/Seattle-criminal-data.git