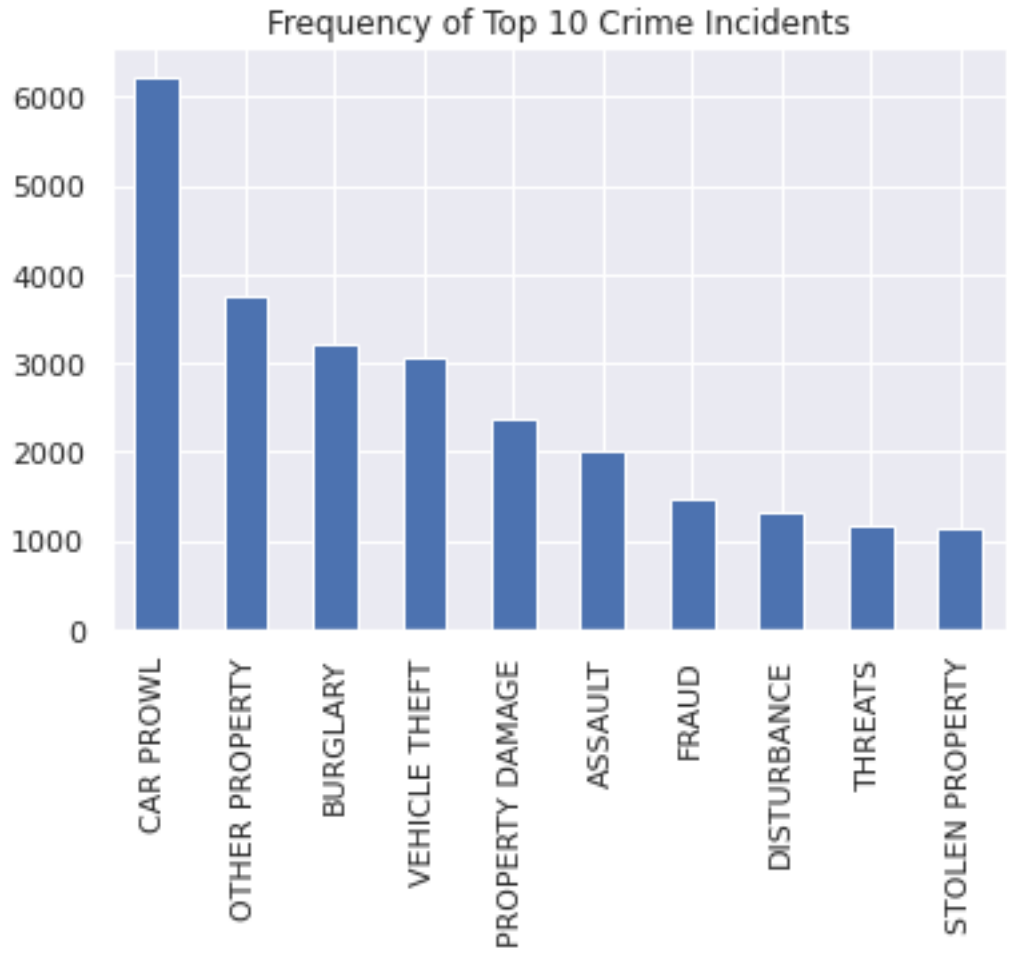
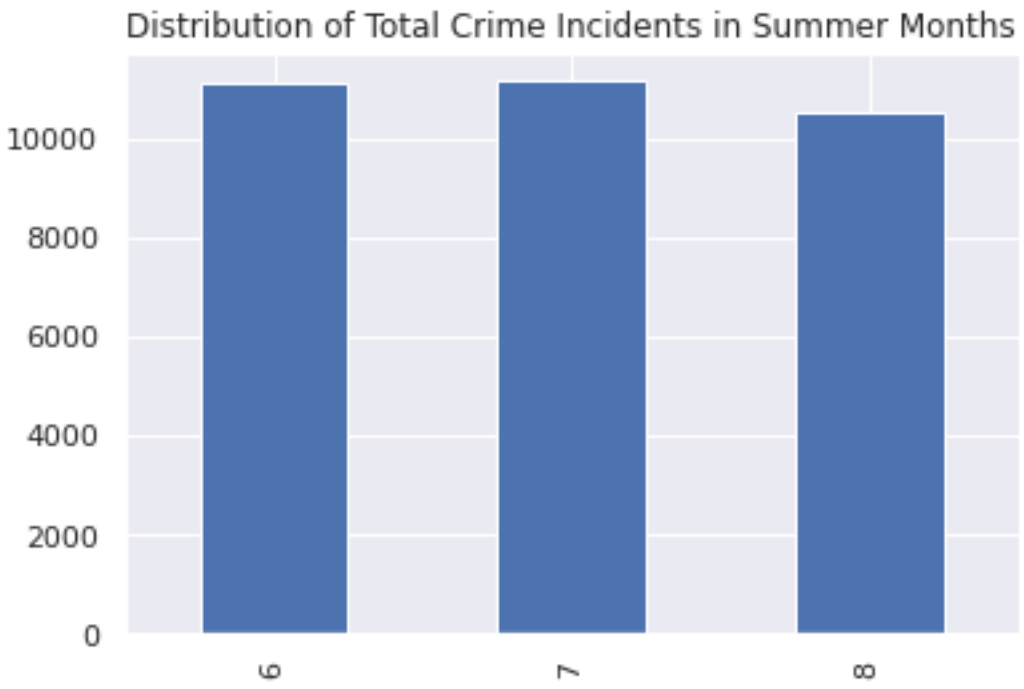
Vehicle Theft Incidents Decrease as Summer Progresses in Seattle

In this article, we will try to analyze if there is any correlation between different crime incidents with Summer Months in Seattle. We have a reduced dataset, given in the assignment, which contains several columns, such as the crime types along with the location, time, and the months of the occurrence. First, we check the frequency of top 10 most occurring incidents. The crime incident type is a categorical variable (more specifically it is a nominal data type). We have run the value_counts() command for the column “Summarized Offense Description”, and then plotted it.

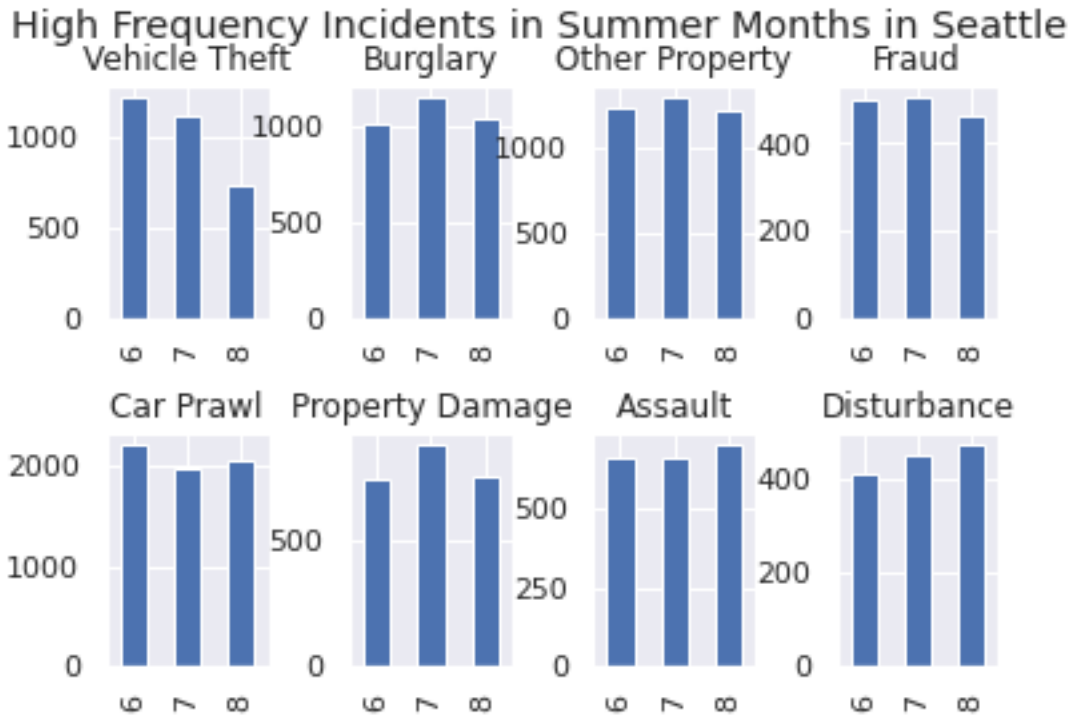


We observe that “Car Prowl” is the most occurring crime incidents among all, followed by “Other Property”, “Burglary”, “Vehicle Theft” etc.

Next, we plotted the distribution of the total number of incidents in the three months of the summer, and we observed the total number crime incidents in each month are almost similar as shown in the next Figure.



Then we plotted the distribution of top frequent 8 crime incidents in the summer months to check any non-uniformity of the incidents across the summer months.



As per this plot, most of the crime incidents are uniformly distributed in the summer months. “Burglary” and “Property Damage” peak in the mid-summer month. However, the incident of “Vehicle theft” monotonically decreases as the summer progresses. The incidence of vehicle theft in August is almost halved in comparison to that in June.

Summary of the findings:

Although the crime incidents are mostly uniformly distributed in the summer months, the incidence of vehicle theft significantly decreases as the summer progresses.

The Jupyter Notebook link for the assignment is in the following link:

https://colab.research.google.com/drive/1VkJK2gE8uWNVuRmAOa-aWgPyqPL9l1zk?usp=sharing