

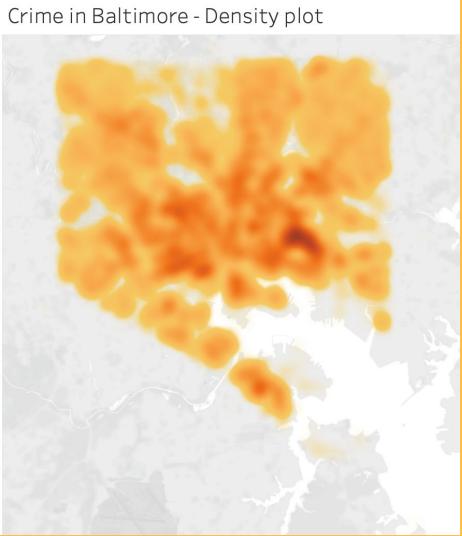
Baltimore Police Department

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Our aim for the analysis

1. To help the police department to decide on where and when to deploy resources;
2. To provide safety advisory to residents/visitors on the likelihood of crime and types of crime at given time and given location

Whoa!

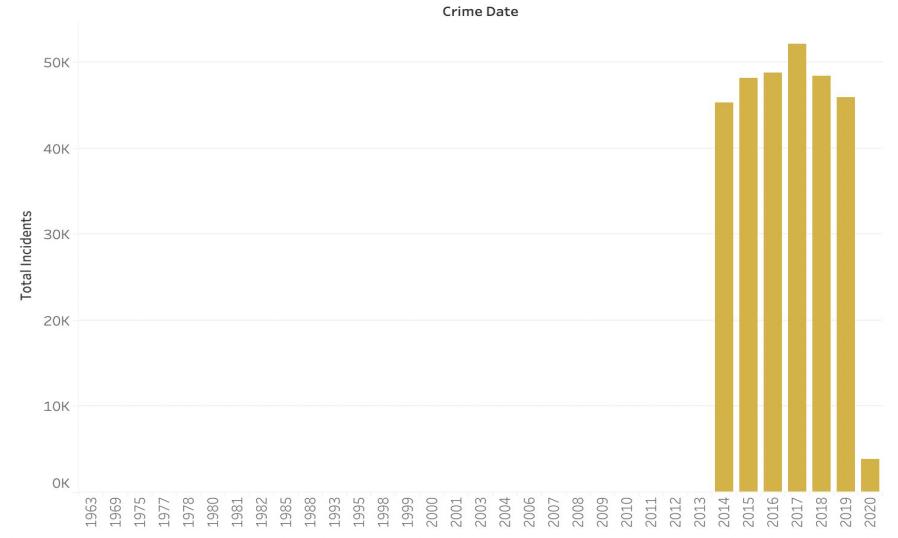


Here is a density plot
which gives us a
rough idea of the
crimes taking place in
Baltimore.

East it is!

Preliminary Analysis

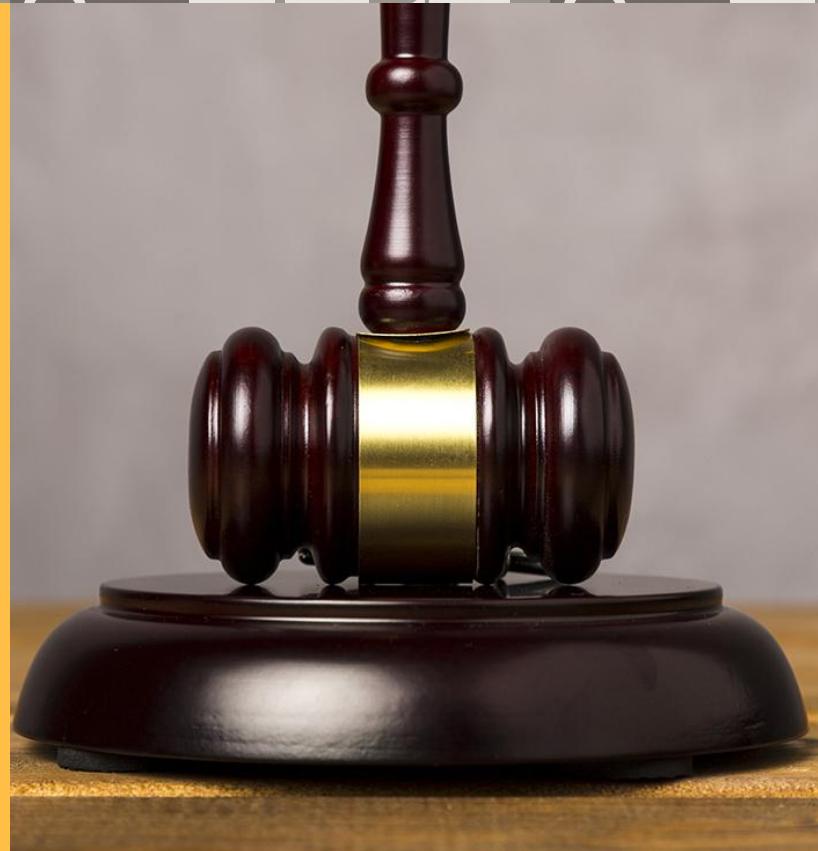
Total crime over the years

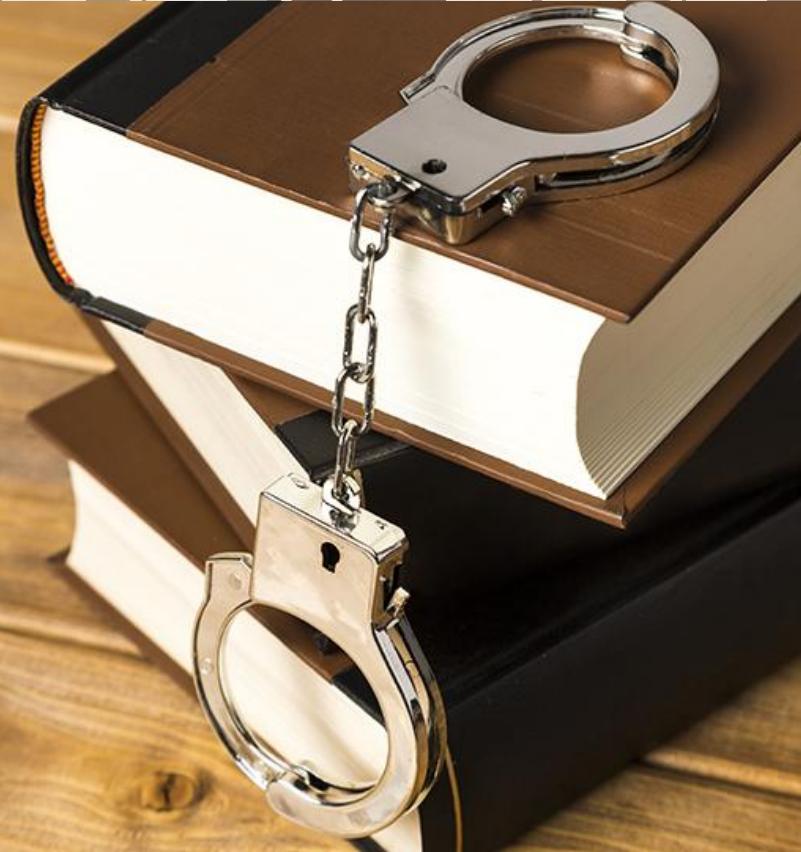


The major number of incidents have taken place over 2014 -2019. That should be our focus considering the information we will get there

01.

AIM 1 Deploying Resources





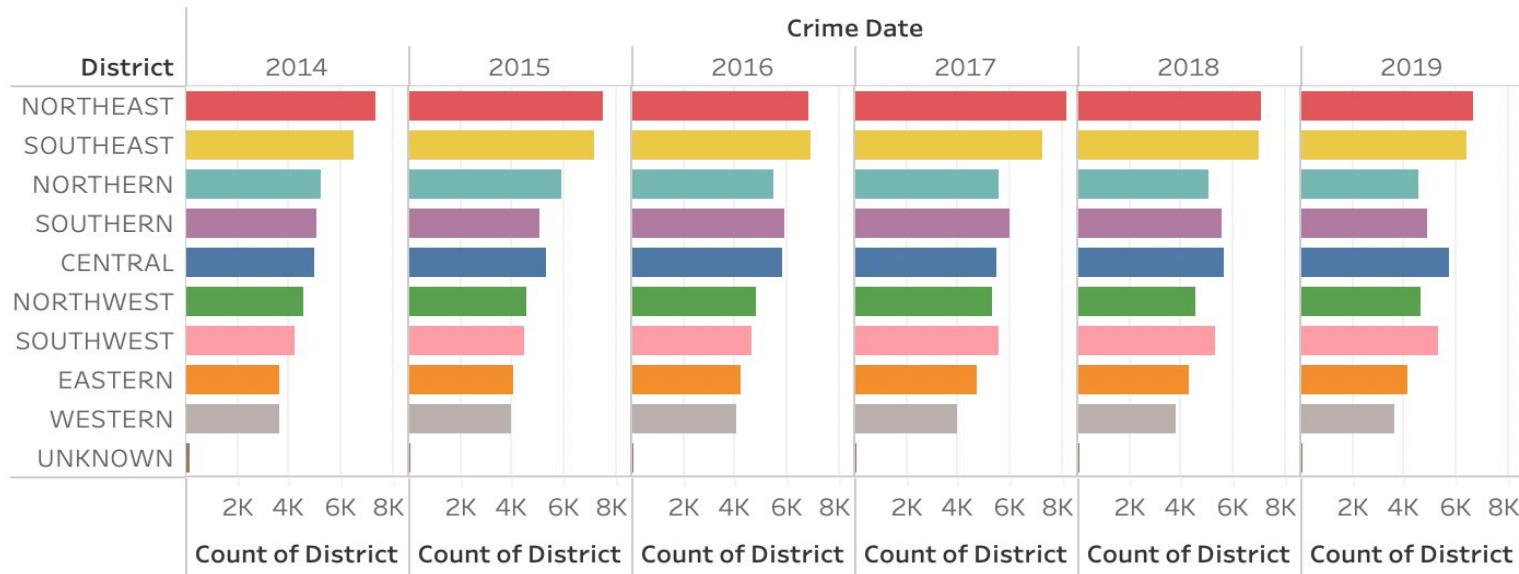
Approach

For understanding where and when to deploy resources we firstly need to understand which area is the one with maximum number of crimes and over the year, month and week how is the crime pattern there. We then will focus on which post handle's the maximum crimes there in that particular district and accordingly those are the ones who need to be ready.

Let's start!!!

Let's find the District with maximum crimes

Total crime over district over the years



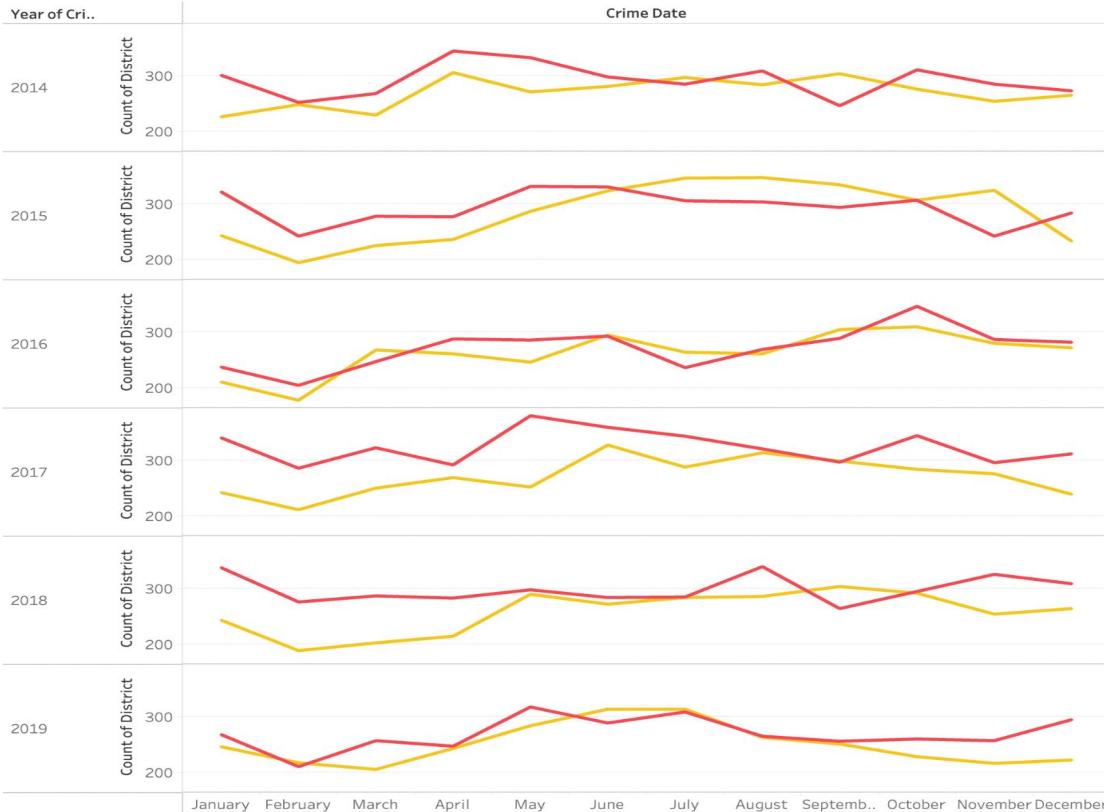
The areas which have highest rate of crime over the period of time are:

Northeastern Southeastern

Do you remember something we saw earlier relating to this?



Monthly Analysis

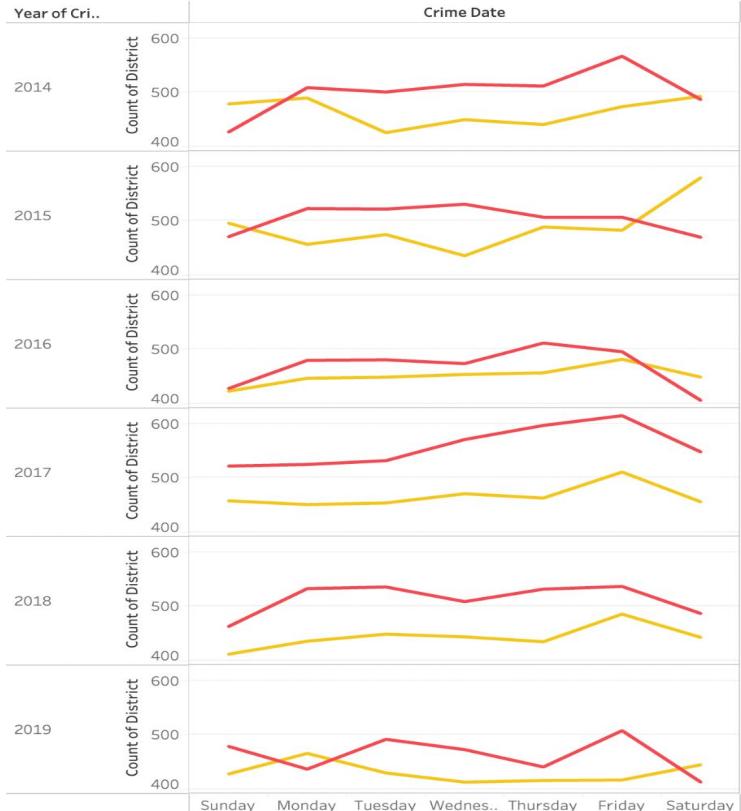


District
NORTHEAST
SOUTHEAST

Monthly Analysis Takeaway

- The pattern observed is there is a **drop** in the number of crimes in the month of **September** in the **Northeastern** district and again a rise in the following months.
- Where Northeastern shows a drop in september it's completely opposite in the **Southeastern** part, where there is a **rise** in the month of **September**.
- The **initial months** of **Southeastern** show a **lower** number of crimes and they gradually increase over the next months.

Weekdays Analysis



District

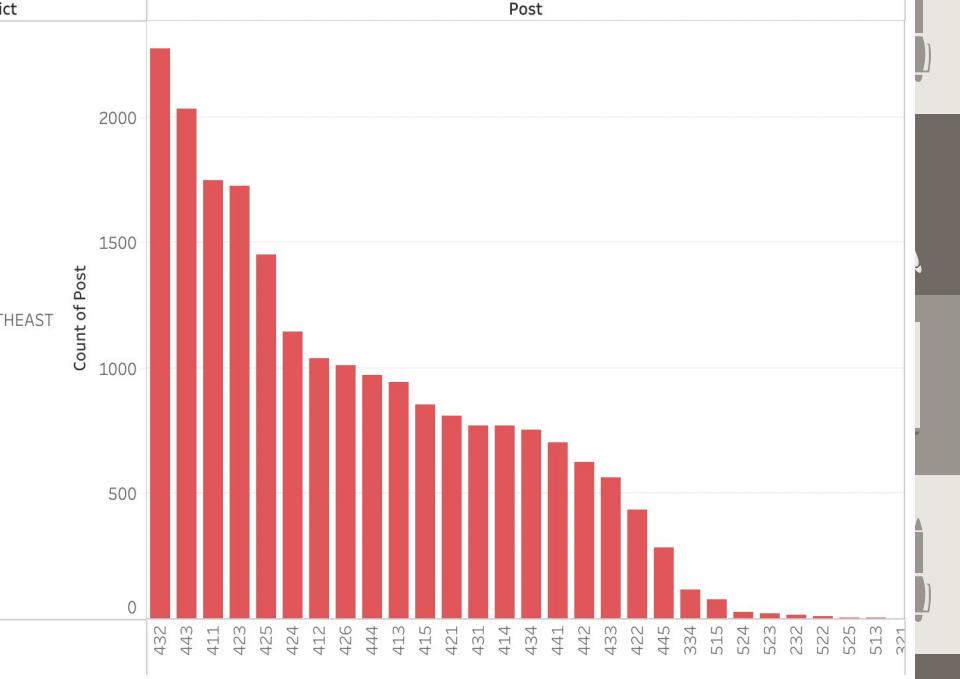
- NORTHEAST
- SOUTHEAST

Weekly Analysis Takeaway

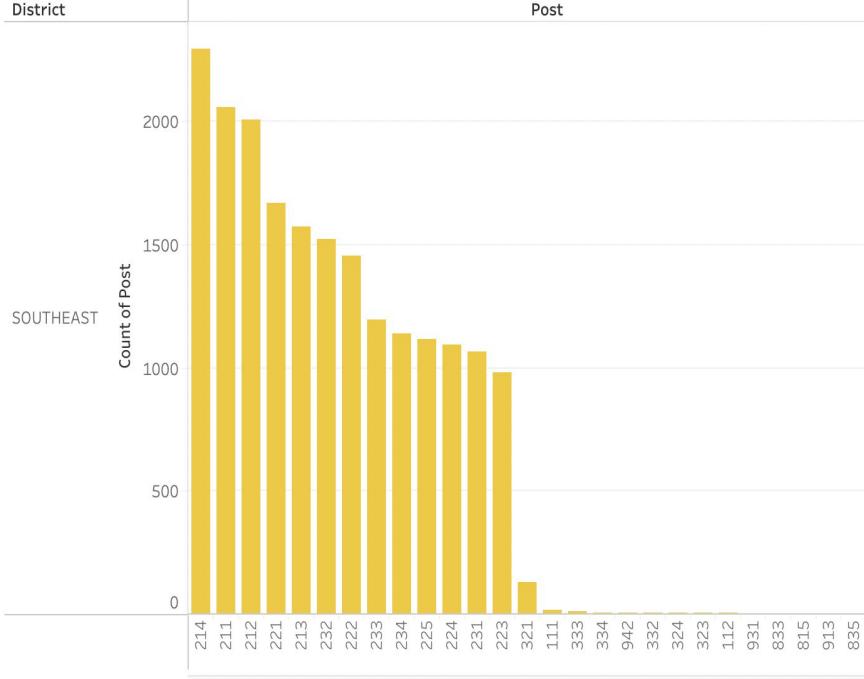
- The pattern observed shows there is a hike seen on Friday in the Northeastern district and then a drop on Saturday.
- The midweek crimes in Southeastern district have a lower number, considering Friday it has a lower number of crimes compared to Northeastern district.



Post - Northeast



Post - Southeast



Post number Analysis Takeaway

- The posts working the most in Northeastern District are 432, 443, 425, 411 and 423.
- The posts working the most in Southeastern District are 214, 211, 212, 213 and 221.

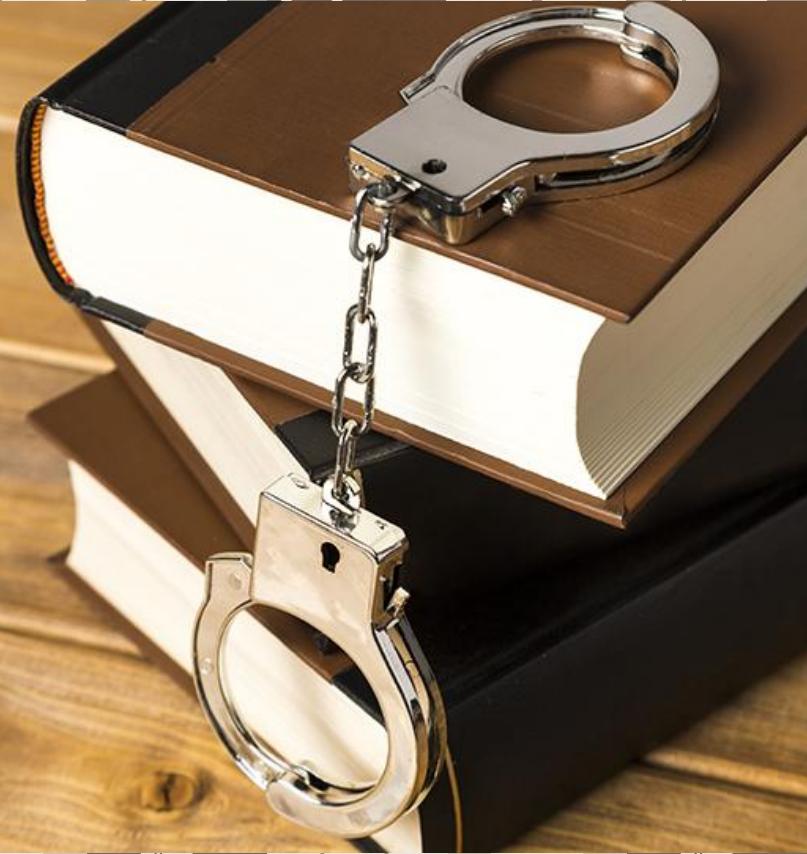
This is how we can deploy when and where we need maximum resources.

02.

AIM 2

Likelihood of Crime



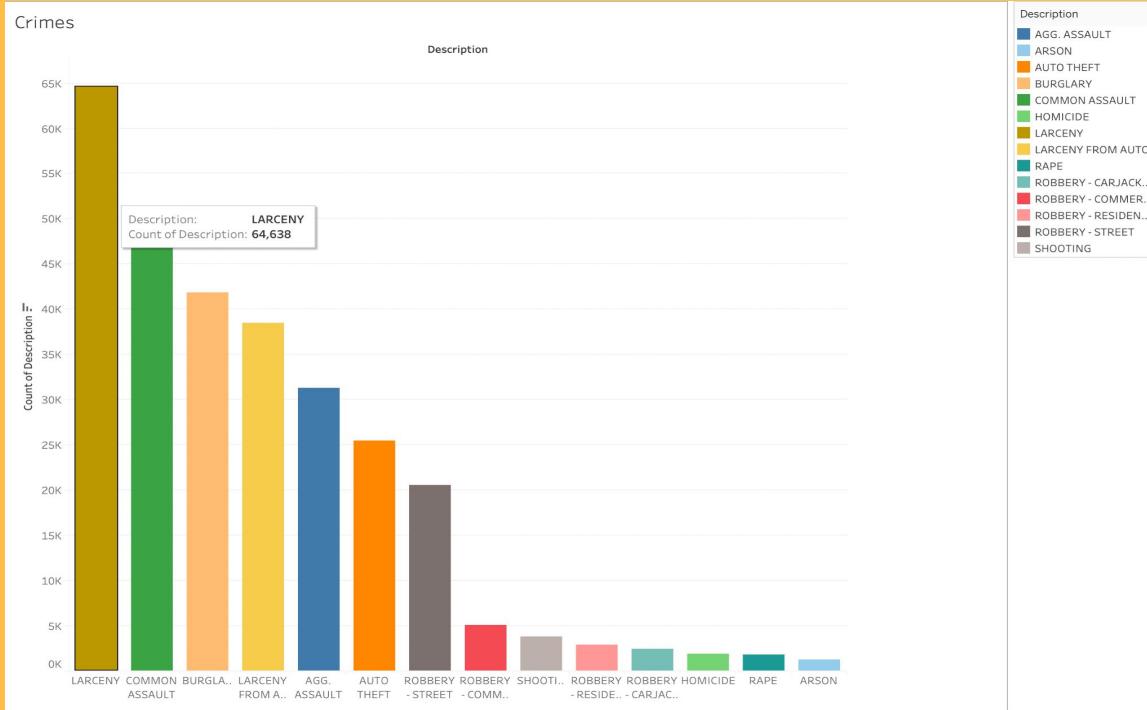


Approach

For understanding where and when the crime would take place we will consider visualizing how the volume of that crime taking place changes over the hours of the day and that will tell us which crime is likely to take place at a given time and day. Let us consider the top 3 crimes taking place.

Let's start!!!

Let's find which crime took place maximum times



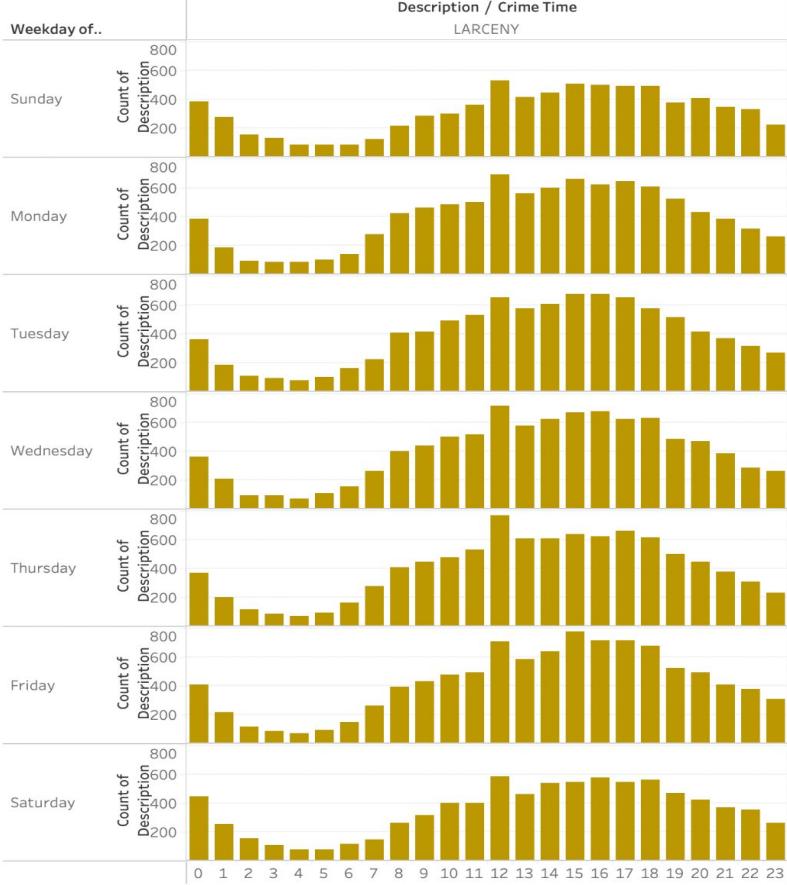


The crimes which have taken place the most are as follow:

- 1. Larceny**
- 2. Common Assault**
- 3. Burglary**

Larceny

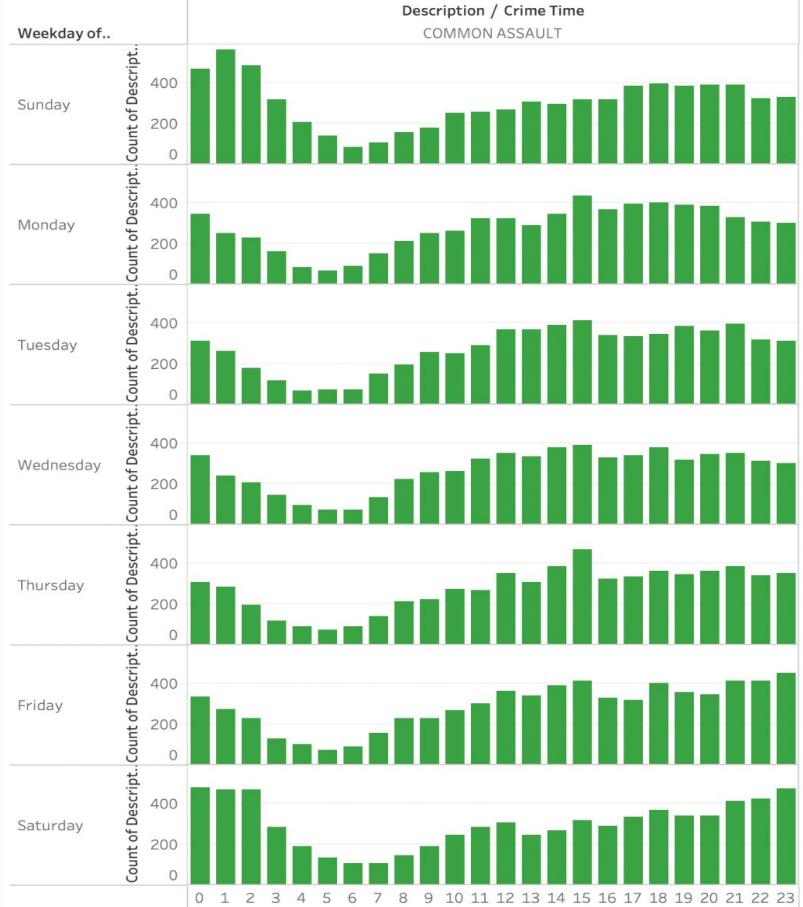
Description
LARCENY



Larceny Analysis Takeaway

- The pattern observed shows there is a hike seen after 7 am almost everyday.
One hour that has the most number of crimes is 12 pm.
- There is almost negligible crime in hours 1 am - 7 am.

Common Assault



Description
COMMON ASSAULT

Common Assault Analysis Takeaway

- The pattern observed shows there is a hike seen in the early morning hours just past the mid night.
- There is a drop from 4 am - 8 am and then again a rise all along the day.

Burglary



Description
BURGLARY

Burglary Analysis Takeaway

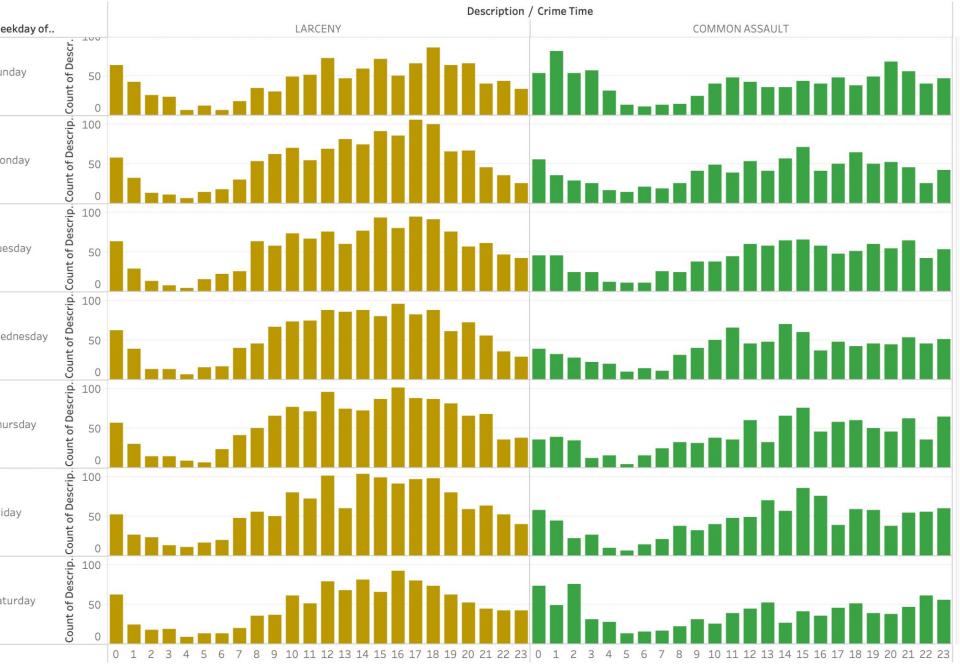
- The pattern observed shows that burglary takes place almost all along the day with just some less amount taking place in early morning hours like 2am-7am
- At 12 pm we can consistently see maximum number of burglaries taking place.

This is how we can find what time it is more likely to face any crime.

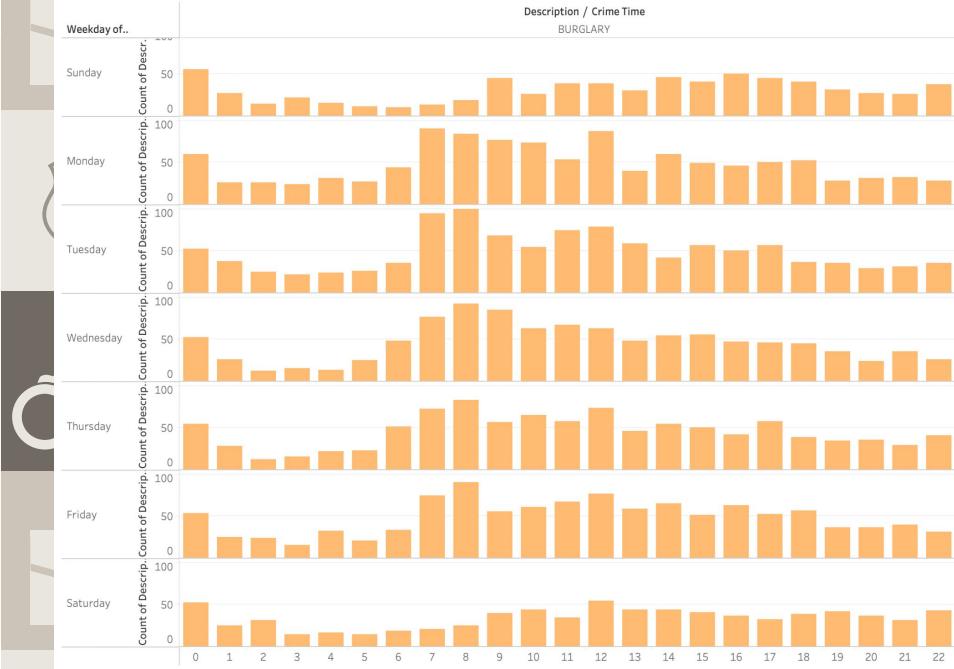




northeast



Northeast



Southeast and Northeast Analysis Takeaway

- We can compare the patterns in both the visualizations above and see which place is more prone to a crime at a given location.

This is how we can find where it is more likely to face any crime.

Important link

- **Github**

[Click here](#) to go to the uploaded project in Github.

I have done question 1 in jupyter notebook.

Question 2, 3, 4 and 5 is done in tableau.

Please ask me if you don't find anything.

Thank you!

Any questions?