1. Overall Crime Statistics Dashboard:

a. For personnel and resource management, the department needs to understand the count and types of crimes reported across the city. Mark the locations on a geo-map highlighting the locations with recent criminal history. – In the Geo-map located at the bottom left corner of the dashboard we can see that , Offence involving children is prominent in the Southern Ashland Avenue near the Brighton Park with 2166 reported crimes. South of this in the New City region Interference with public disorder is prevailing with 1174 reported case. In the South Rockwell Avenue up north we can find that crimes related to Narcotics are at large with over 12k reported crimes. And lastly Other crimes in this region of Chicago and its outskirts are prevailing with over 16k reported crimes.

b. Identify the most common criminal incidents reported – In the north left corner of the dashboard, we can clearly see that, Among all the Criminal activities “Theft” is the most reported crime in this region with over 58k reported crimes. Offences involving car “Battery” is at the second place with over 46k reported crimes. In the third place offences involving damages caused by criminal activities is highest with over 26k reported crimes.

c. In this introductory dashboard, include a live crime feed to exhibit the total number of crimes reported to date for the current year and the most recently reported crimes with their time and locations – In the live crime feed at the centre of the dashboard we can find that total no of crimes in the current year and also the preceding years. Below this we can find the table with recently committed crimes, with their dates, and a thorough description the location where it was committed i.e. district, ward and timing.

2. Time Period Analysis Dashboard: Along with locations, the study of crime statistics across time statistics is also crucial for understanding the patterns and planning those preventive strategies.

a. Study distribution count of crime incidents across different time periods, such as day of the week or hour- In the left side of the dashboard the columns represents the dates from 1 to 12 and the rows represents hours of the day when the crimes were committed. From this table we can also infer that in all the 12 days, rate of crime increases after the noon and continues at almost the same rate till the midnight. In terms of days we can find that from day 1 to day 5 an increasing rate of crime is prevalent. While after the 5th day the rate of crime declines for the next two days, then spikes up a bit in 8th day, and again shows an almost declining trend till the 12th day.

b. Further, explore the percentage of incident reporting for several time blocks (morning, afternoon, evening, and night)- In the right panel of the dashboard we can find that the rate of crime is highest in night time, with over 41% and lowest in the morning with below 25% reported rate of crime.

3. Trend Analysis Dashboard:

a. Create a dashboard to study the change in crime rate over different years- In the upper part of the dashboard we can observe that the number of crimes over different year shows a varied change. As the change is highest from 2018-2019 while it is lowest from 2021-2022.

b. Compare the change in the incident reporting over the years for the same date and time-

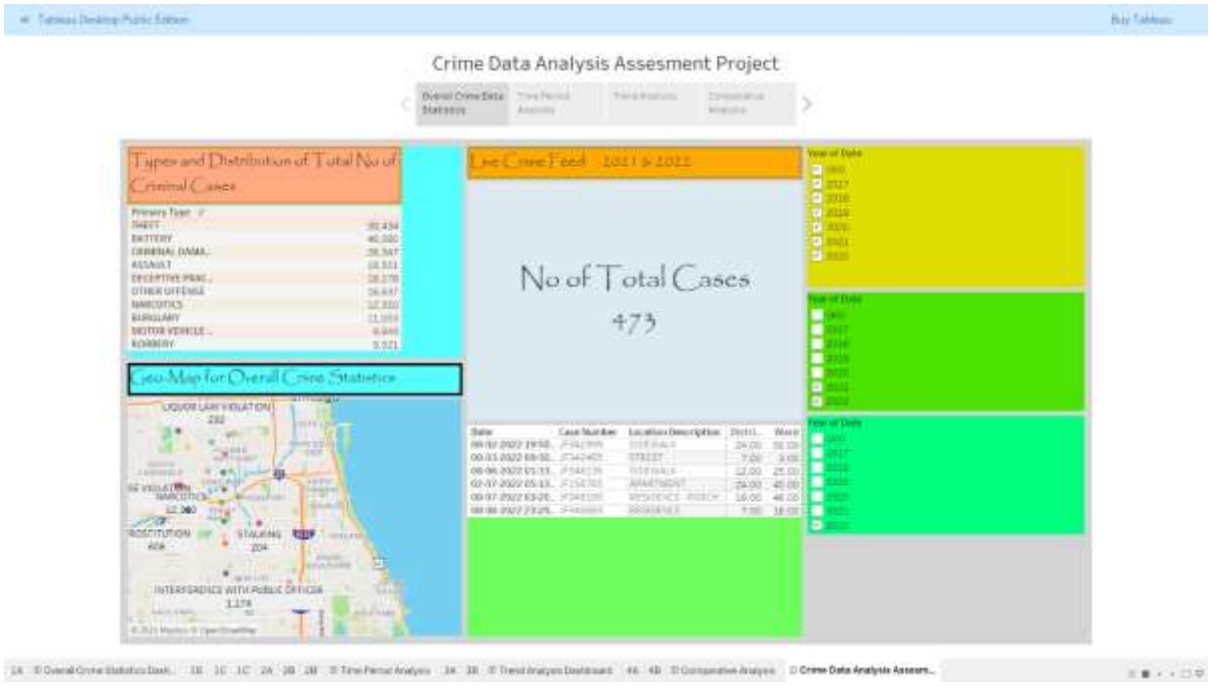
In the lower panel of the chart we can observe from the chart that number of change in cases is highest in 1st January 2017 with 112 reported cases. Moving forward we find first a decling trend of change in reported cases, followed by a constant trend which spikes up in 1st January 2018. After this the whole trend of changes in reported cases is a declining one.

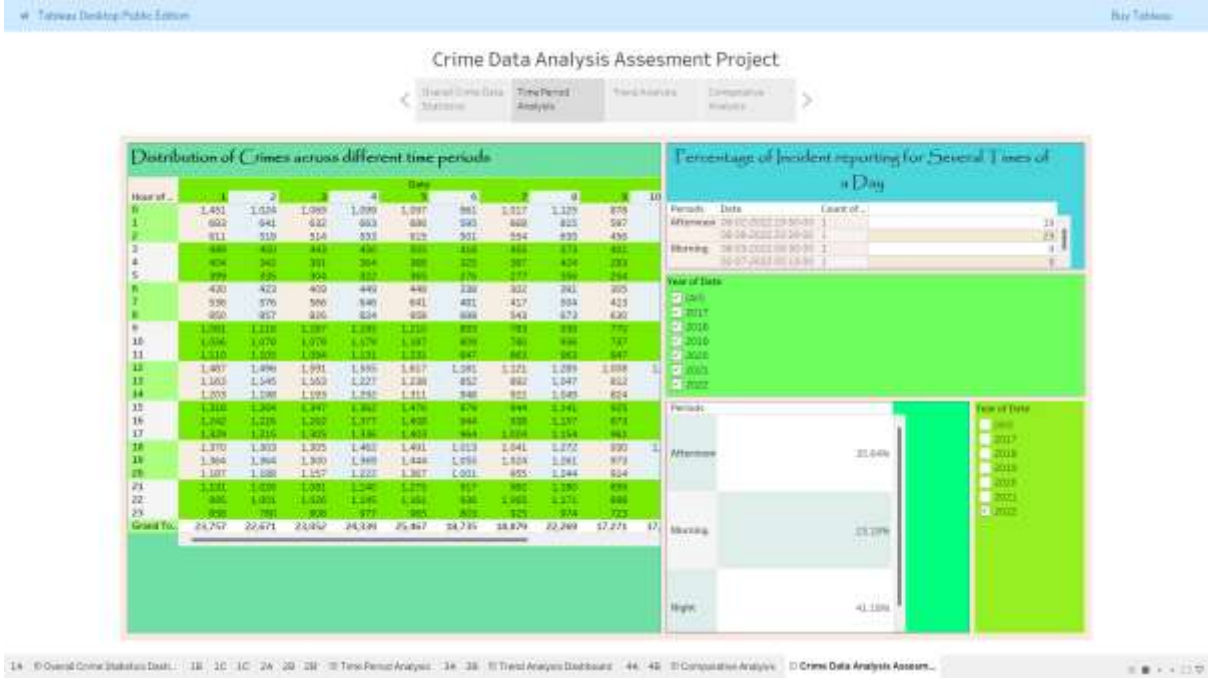
4. Comparative Analysis:

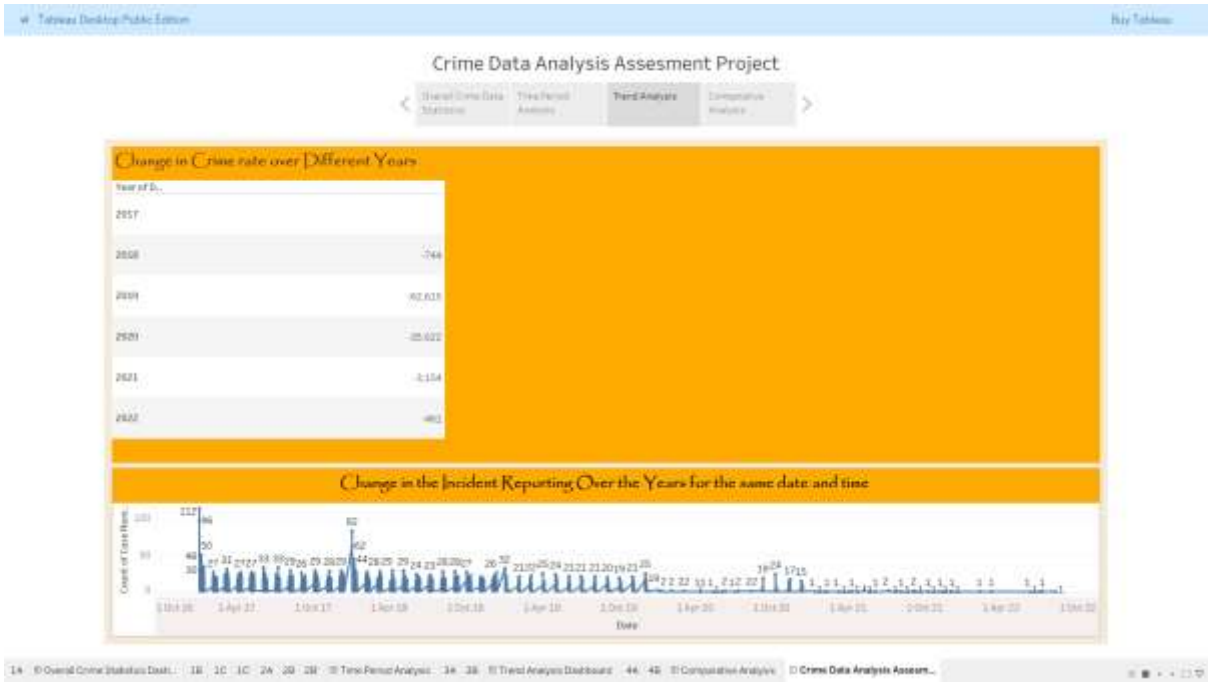
a. Study the distribution of incidents reported where an arrest was made vs. not- In the top left corner of the dashboard we find a bubble chart which clearly depicts that whether an arrest was truly made in-correspondence with the reported crime or not. From the chart we can easily infer that in most of the time arrest was not made which is shown by the "False" bubble.

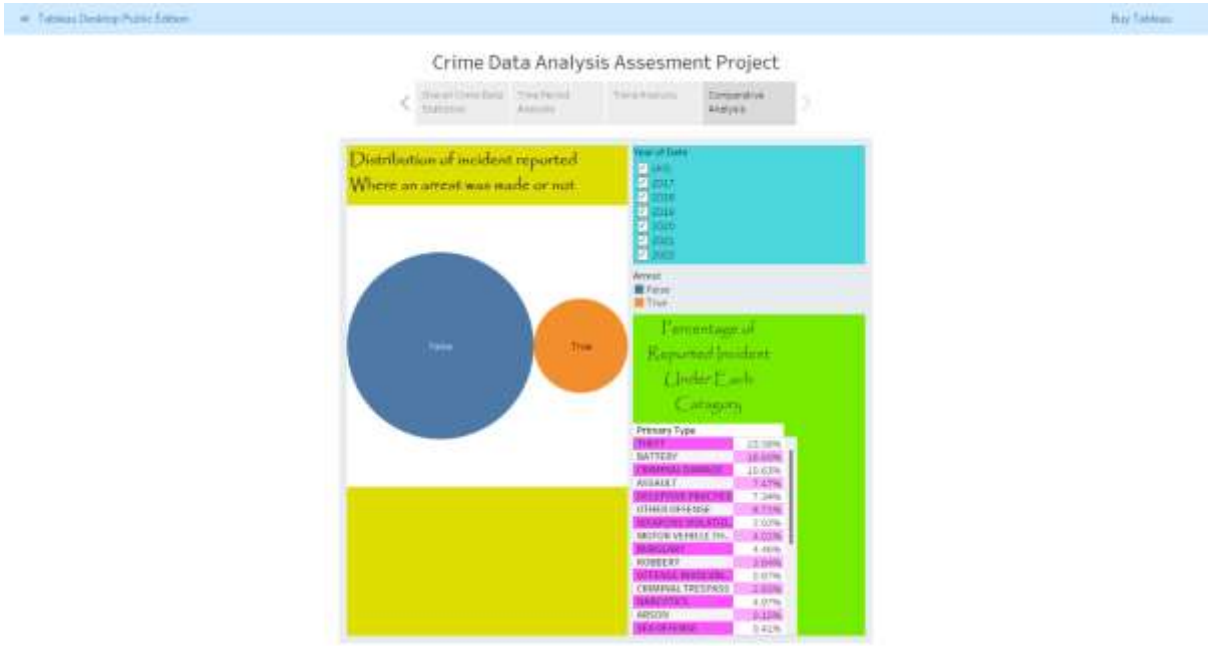
b. Identify what percentage of the reported incidents under each incident category are severe – In the bottom right corner of the dashboard we can find a table which depicts the reported crimes in a decreasing order for all the years in-terms of their percentage. Thus from this we can clearly infer that "Theft" and "Battery related Crimes" are most prevailing ones in the whole period with 23.58% and 18.60% rate of occurrence among all.

c. To make the dashboard interactive, provide filters for incident type and location in these dashboards for a granular study-


Crime Data Analysis Assesment Project
Overall Crime Data Statistics
Time Period Analysis
Trend Analysis
Comparative Analysis
Types and Distribution of Total No of Criminal Cases
Primary Type
THEFT 80,434
BATTERY 46,000
CRIMINAL DAMA... 28,567
ASSAULT 18,551
DECEPTIVE PRAC... 18,178
OTHER OFFENSE 16,647
NARCOTICS 12,000
BURGLARY 11,000
MOTOR VEHICLE ... 9,699
ROBBERY 9,521
Live Crime Feed 2021 & 2022
No of Total Cases
473
Year of Date
Geo-Map for Overall Crime Statistics
LIQUOR LAW VIOLATION
232
PROSTITUTION
406
STALKING
204
INTERFERENCE WITH PUBLIC OFFICER
1,174
Date
Case Number
Location Description
Distri...
Ward
1A
1B
1C
1C
2A
2B
2B
3A
3B
4A
4B
Crime Data Analysis Assesm...


Crime Data Analysis Assesment Project
Overall Crime Data Statistics
Time Period Analysis
Trend Analysis
Comparative Analysis
Distribution of Crimes across different time periods
Date
Hour of ...
Grand To...
Percentage of Incident reporting for Several Times of a Day
Periods
Count of ...
Afternoon
Morning
Night
Year of Date
1A
1B
1C
1C
2A
2B
2B
3A
3B
4A
4B
Crime Data Analysis Assesm...


Crime Data Analysis Assesment Project
Trend Analysis
Change in Crime rate over Different Years
Year of D..
2017
2018
2019
2020
2021
2022
Change in the Incident Reporting Over the Years for the same date and time
Count of Case Num..
Date


Crime Data Analysis Assesment Project
Comparative Analysis
Distribution of incident reported Where an arrest was made or not
Year of Date
Arrest
False
True
Percentage of Reported Incident Under Each Category
Primary Type