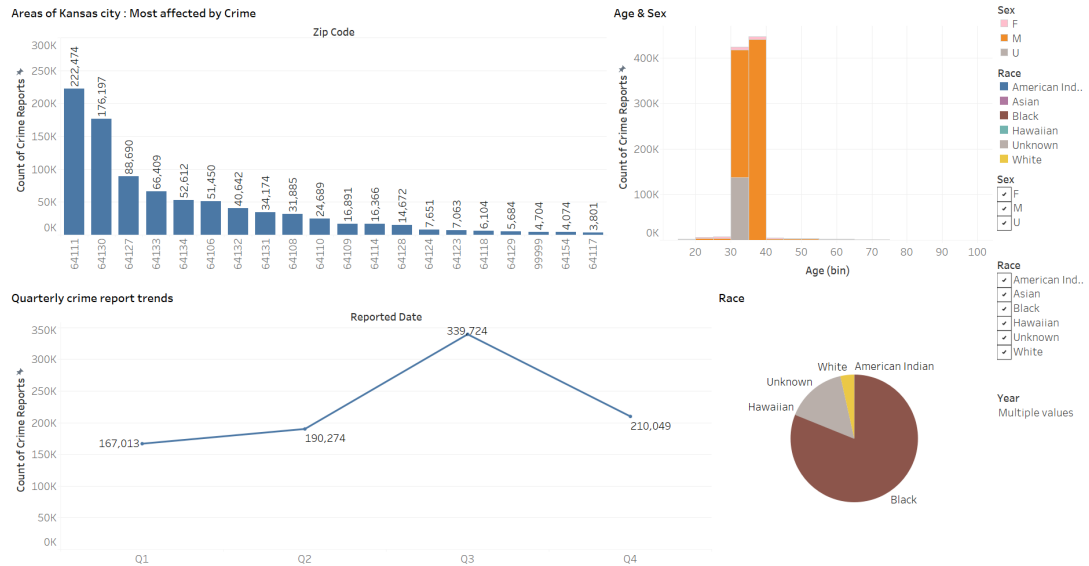


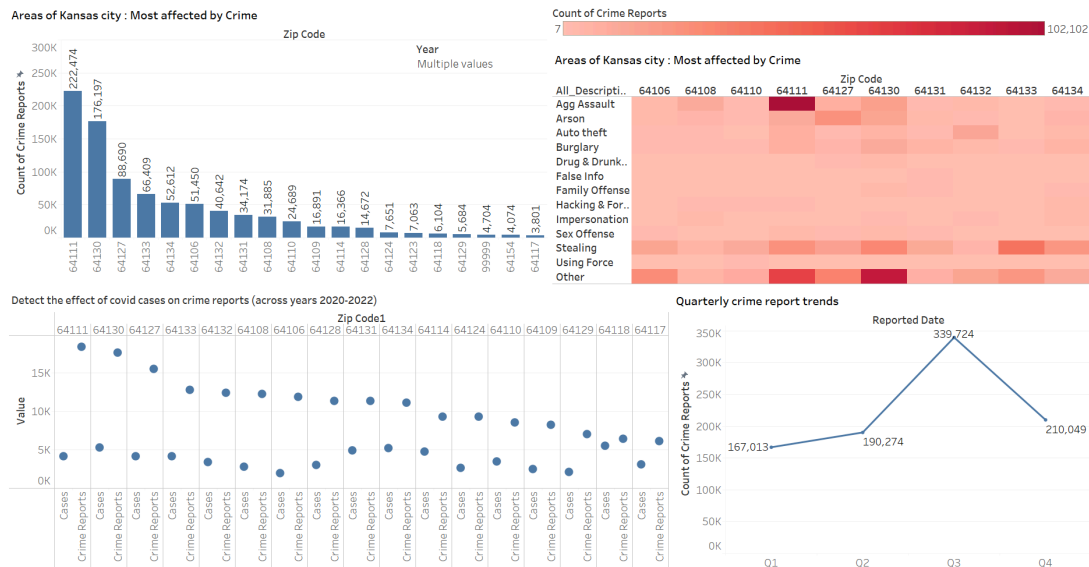
## DELIVERABLE 4:

I have created 2 dashboards [MDV1, MDV3] and a tableau story combining the both. For the new dashboard [MDV3], I just added 2 more tasks (T4V2,T6V1) which explore much deeper into the crime reports such as the distribution of types of crime reports(description) and effect of covid cases.

### MDV1



### MDV3



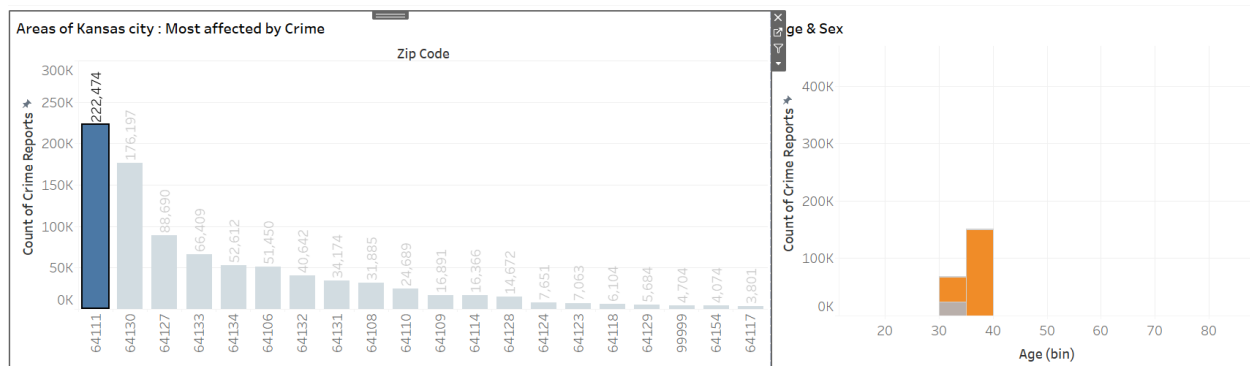
## Dashboard Interactions and Inferences from MDV1:

In our dashboard[MDV1], “Areas of Kansas city : Most affected by Crime”[T3V1] is the **anchor sheet**.

### Inference 1:

1. The sheet “**Age & Sex**” when interacted with the **anchor** sheet, gives us the information about the distribution of sex and age in that particular selected zip code. At the same time, when I select on any of the age bars or sex bars, it gives us the ranking of zip codes (according to crime reports). I couldn't get any of the above information from a single view.

The static image of the dashboard without any interaction with it is attached above as MDV1. Our target audience for the dashboards are Law Enforcement Agencies. So if an officer wants to check the age and sex distribution in the zip code 64111, the officer can use the “**filter**” interactive mechanism aided by the “**select**” action which will show us the corresponding distribution of age and sex in the “age & sex” chart.



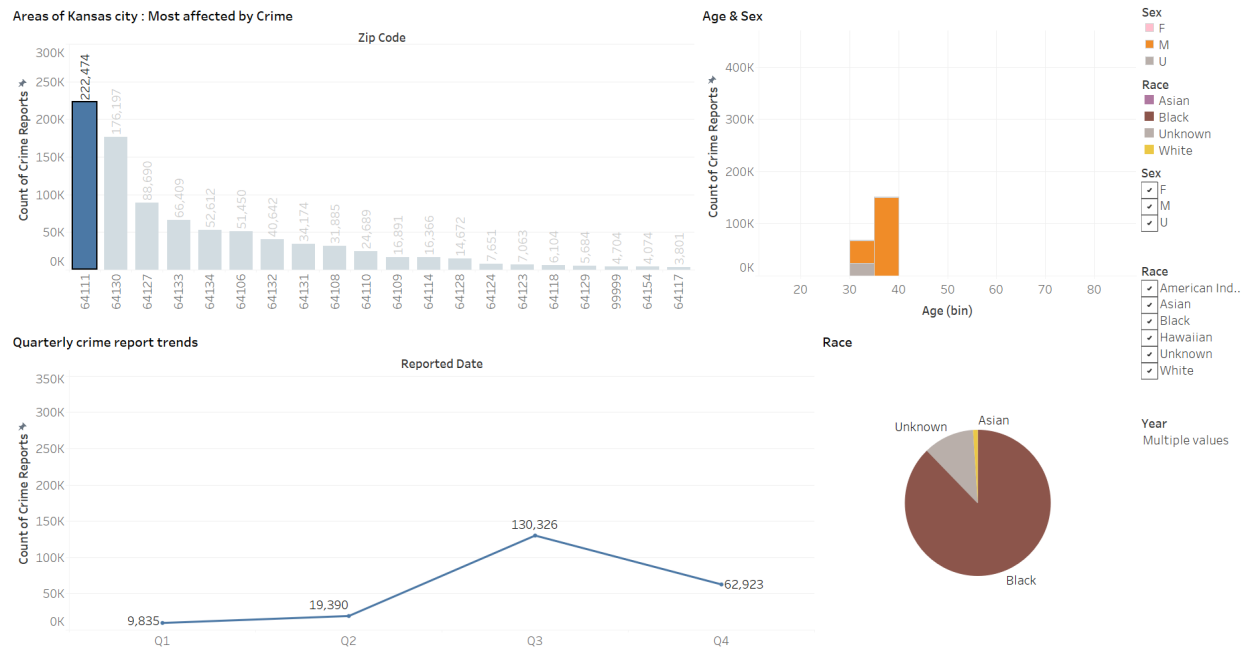
The officer can observe that all the crime reports are being done in the 30-40 age group where more than 80% of them are male.

### Inference 2:

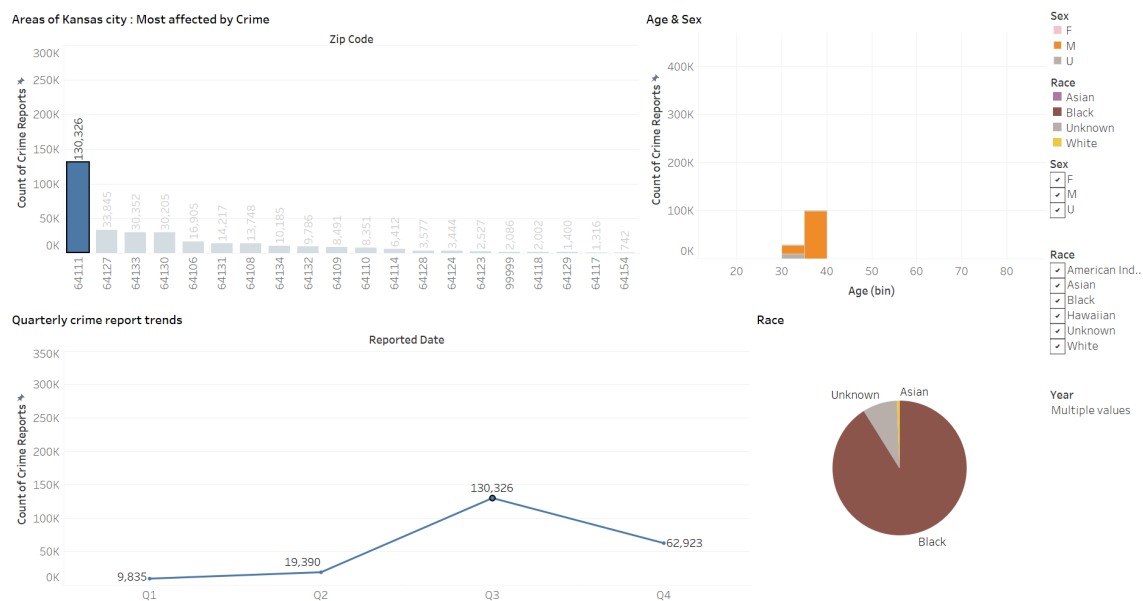
2. Integrating the “**Age & Sex**”, “**Race**” sheets with the “**Quarterly crime report trends**” sheet can give us the information about how certain demographics are active during post covid and pre covid times using the “year” interactive mechanism. For example, I can select 2017,2018 years to look at the pre covid distribution and can select 2021,2022 years to look at the post covid distribution. I can also compare how the zipcode distribution has changed during this covid transition by integrating the **anchor sheet**.

Let's say the officer wants to check what's the distribution of demographic variables in each zip code and in each quarter.

First the officer can interact with the anchor sheet to select the desired zip code (let's say 64111)



Then he can see that there is a high amount of crime reports in Q3, now if he wants to look at the demographic variable distribution in that particular quarter, he can select on Q3 which will show the corresponding distribution.

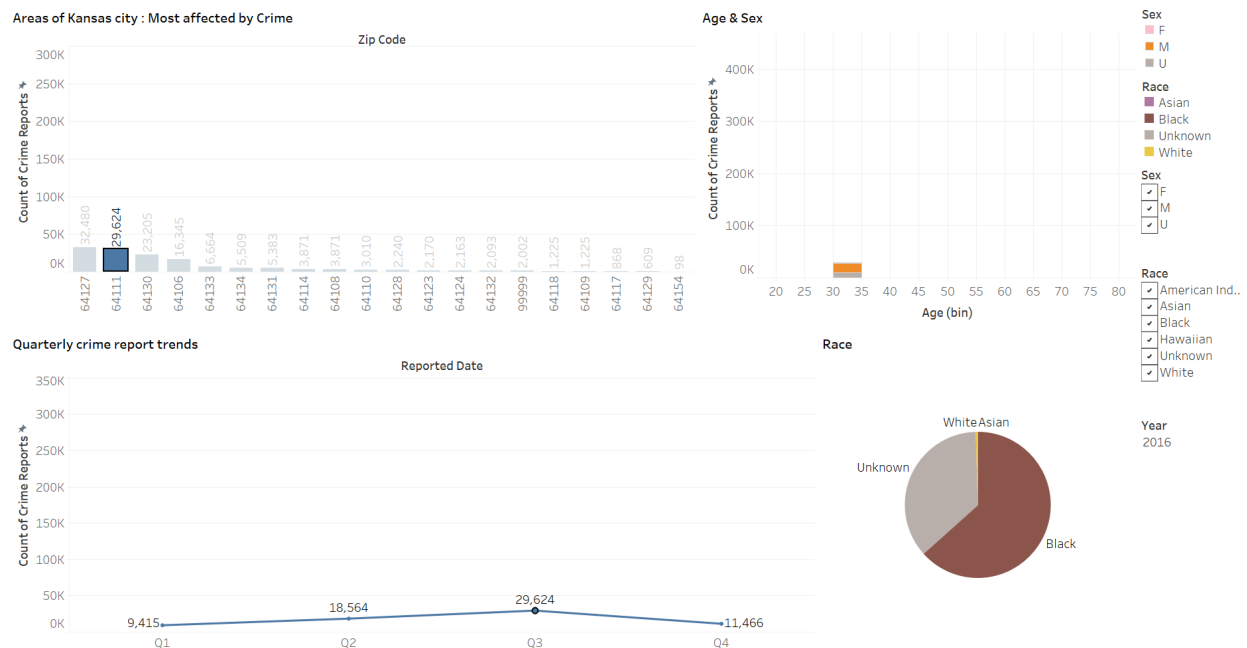


As you can see, in the line chart, I selected the Q3 which changed the distribution in age,sex and race sheets.

In the above series of interactions, any individual can grasp that the more crime reports are being registered in Q3 in the zip code 64111 with a high number of 130326 crime reports, from where I can see that around 100000 crime reports are in the 35-40 age bin with more than 95% being male and black.

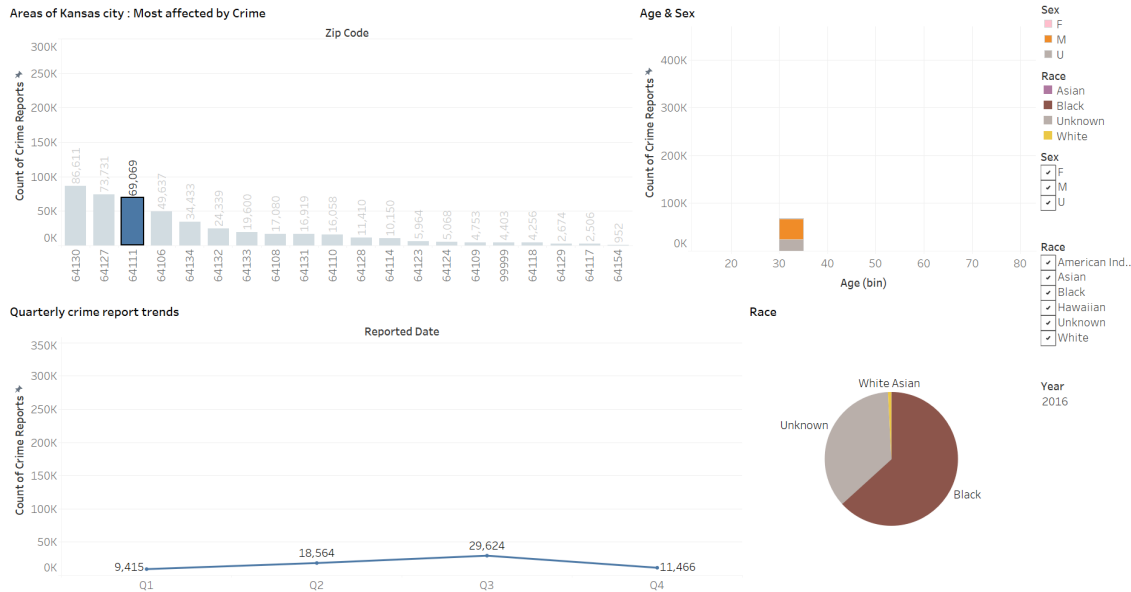
Now let's say the officer wants to check the crime reports across the years rather than the collective years.

If the officer wants to check the crime reports in 2016, he can use the “**filter dropdown**” interactive mechanism on the far right corner where it will prompt the years. After selecting the desired year, the entire dashboard will automatically update.



This is the updated dashboard snapshot after selecting only the year 2016. From this combination of view interactions and using of select and filter interactive mechanisms, I can clearly see that in 2016(Q3), the zip code 64111 hasn't recorded the highest total number of crime reports as opposed to the collective 2016-2022, which shows that there is a gradual increase as the years pass by. Now the enforcement team can allocate the resources actively using this data driven approach.

Note: As I have already selected Q3 in the previous interaction step, the above image shows us the crime report count only in Q3. Lets see the entire 2016 year, i just deselected Q3 which will update again with all the quarters. The updated dashboard screenshot is given below.



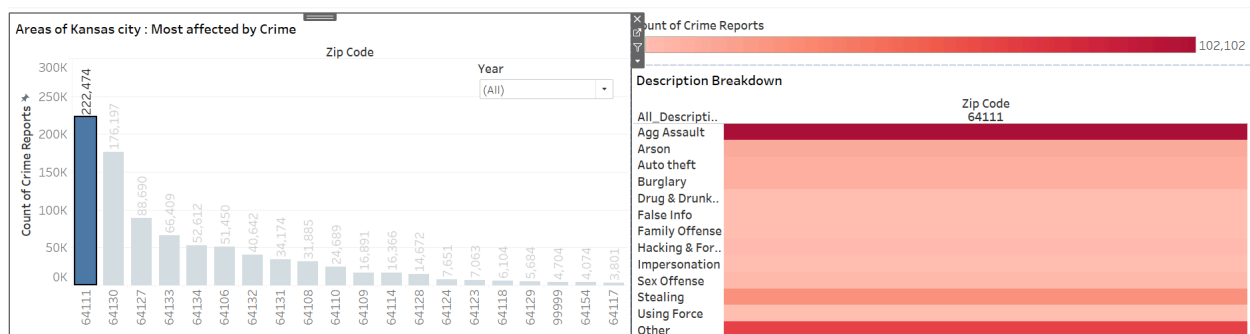
As you can see, 64111 is ranked 3rd.

By using the combination of various views which compliment each other with the use of filters and select interactive mechanisms, it benefits the end user in generating the above inferences.

### Dashboard Interactions and Inferences from MDV3:

Inference 1: The sheet “Description Distribution” when interacted with the anchor sheet, will give us the distribution of types of crime reports.

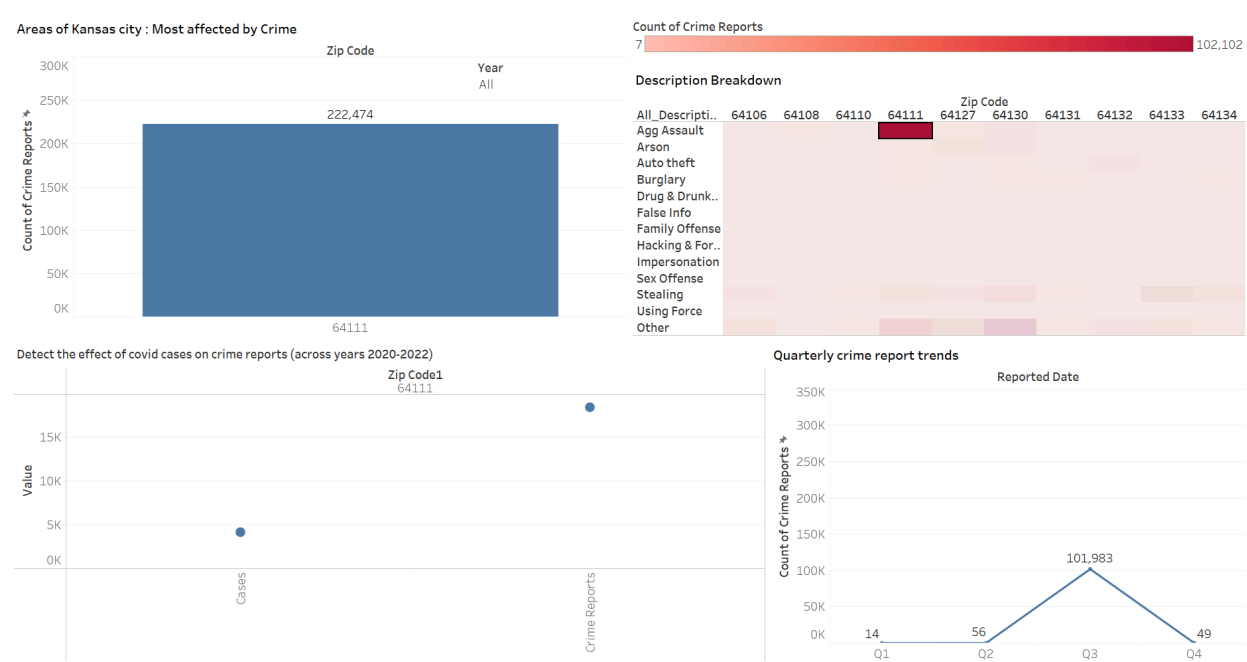
Let's say our end user wants to know the types of crimes committed in the zip code 64111, the user can use the select interactive action which will reflect the heatmap showing us the types of crime reports that are being registered in that desired zip code. As per the color legend, the end user can observe that aggravated assaults are being registered in high numbers.



Inference 2: The sheet “Description Distribution” when interacted with other sheets leads the end user to explore more into the crime reports.

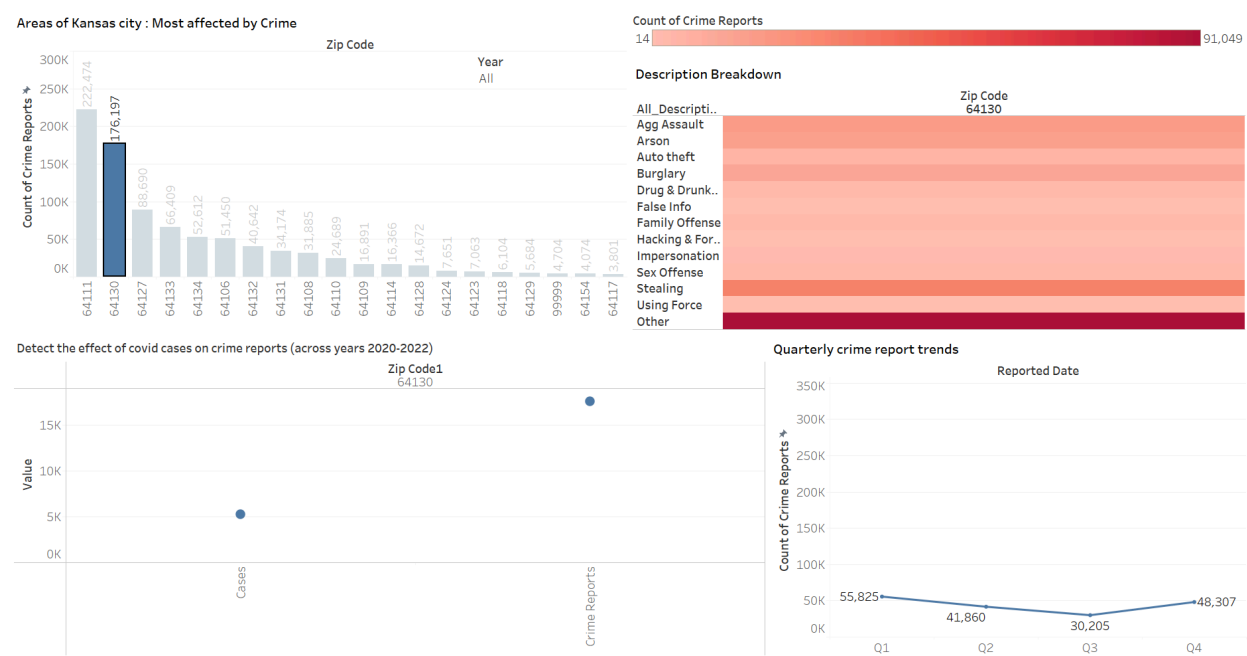
When a user clicks on a specific cell within the heat map, they are selecting a visual representation of a particular type of crime that occurred in a specific ZIP code and year. This helps users see detailed information about that crime incident.

Let's say the user wants to check what's the quarterly of that bright red block (64111 & Aggravated assaults). The user can select on that particular cell which automatically updates the other views, where you can see that there is a hike in Q3.

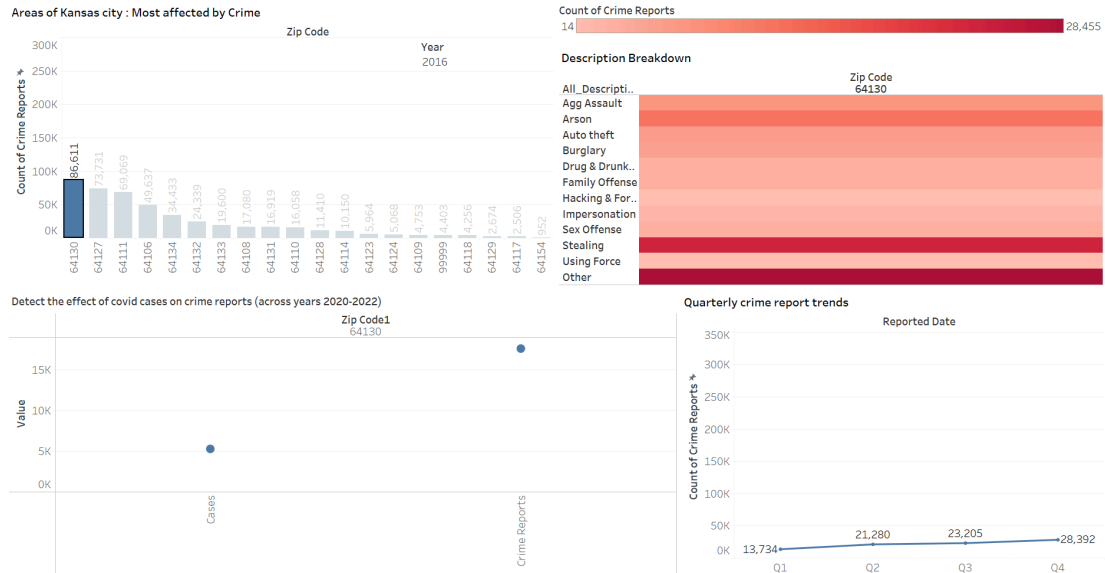


Inference 3: The anchor sheet when interacted with other sheets gives us an overall view of how covid is affecting.

Let's say the end user wants to know what's the effect of covid cases on zip code 64130. The user can use the select feature and select the desired zip code which updates the covid cases sheet on the bottom left where I can see that the covid cases are less in that zipcode which resulted in the increase of crime reports.



In the same way, i can use year filter to check the distribution in the year 2016. Where I can see the increased number of crime reports.



In the above 2 dashboards, I used various interactive features to aid the tasks in creating effective inferences.