# Crime in Baltimore Data Analysis

# Data Management 604

By,

Team 2:

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# About the Dataset

This dataset involves entities like district, location, type of weapon used, total incidents, date and time of the crime, etc..

# Introduction

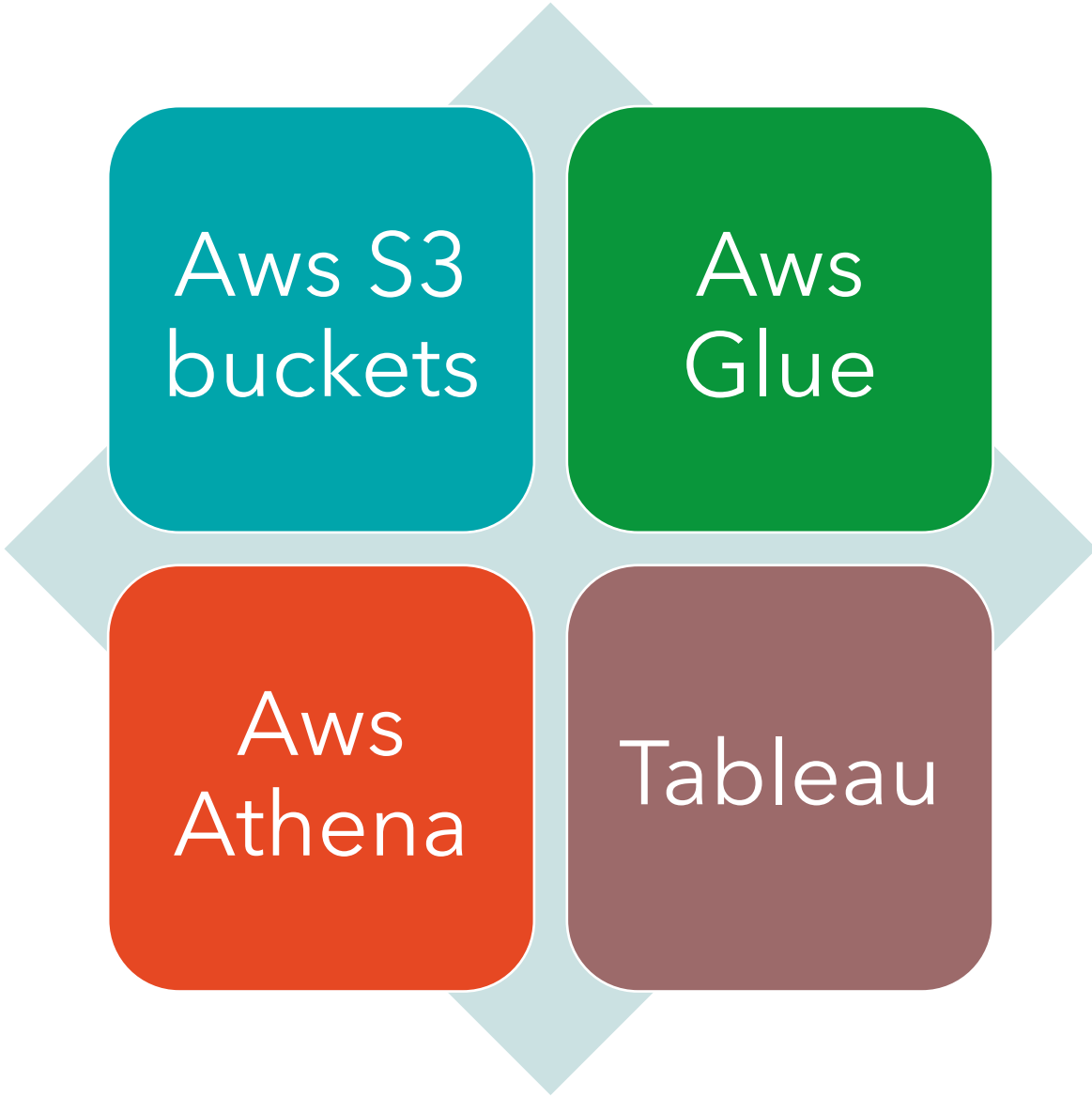
Aim of this analysis is to extract useful insights from crime in Baltimore dataset like:

- Avg. no. of crimes occurred in a day
- At which instance most crimes occurred
- Mostly used weapon
- Most common crime to occur
- and more

# Expected outcome:

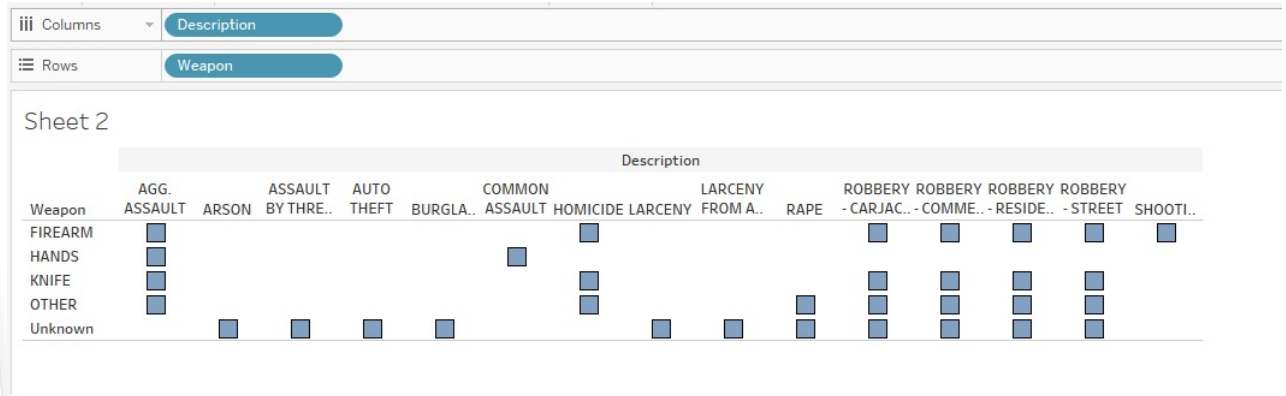
- Visualize the trends in Baltimore crime data.
- The most used weapon and least most made crime type.
- The trends & seasonality in the data.
- The correlation between the crime location and type of crime.
- Identify and visualize the graphs and charts.

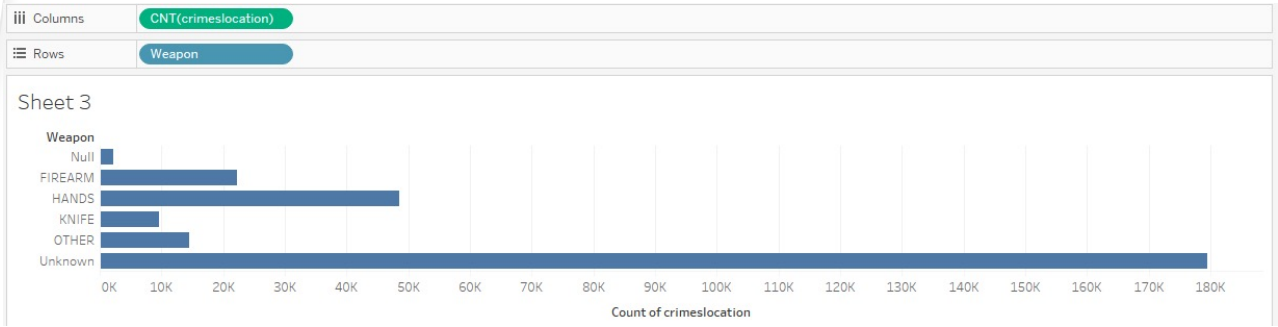
# Technologies used



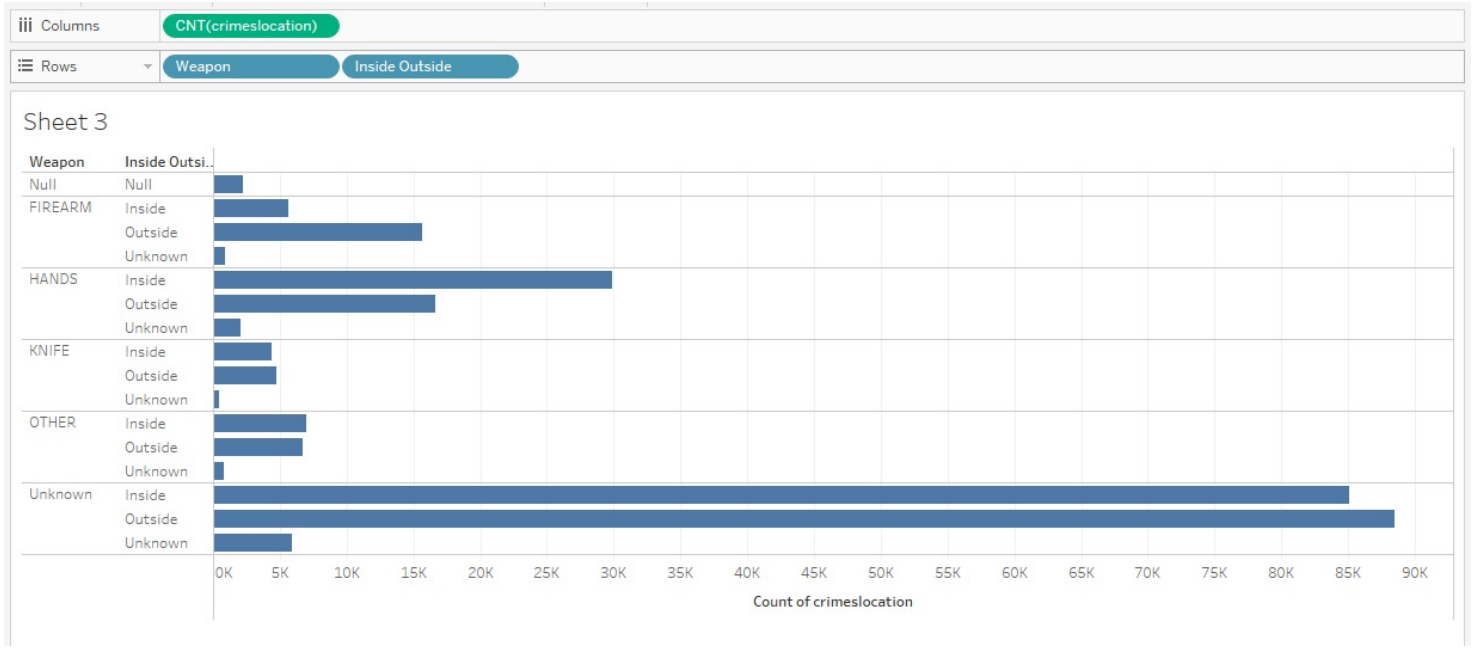
# Data Visualization analysis

1. This data shows which weapon is used for different kinds of crime.
2. This visualization determines the most used weapon in the crime locations.

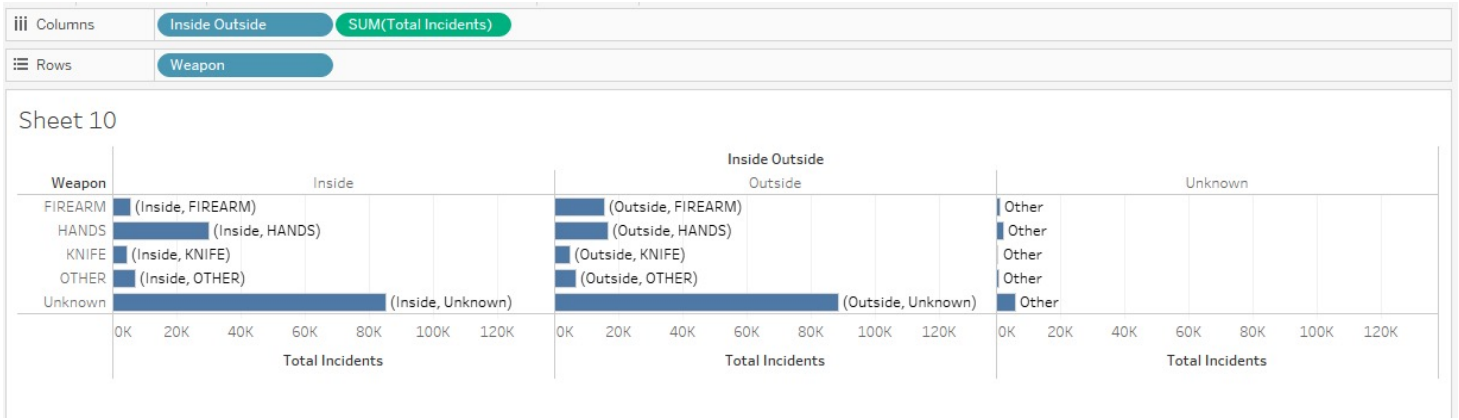


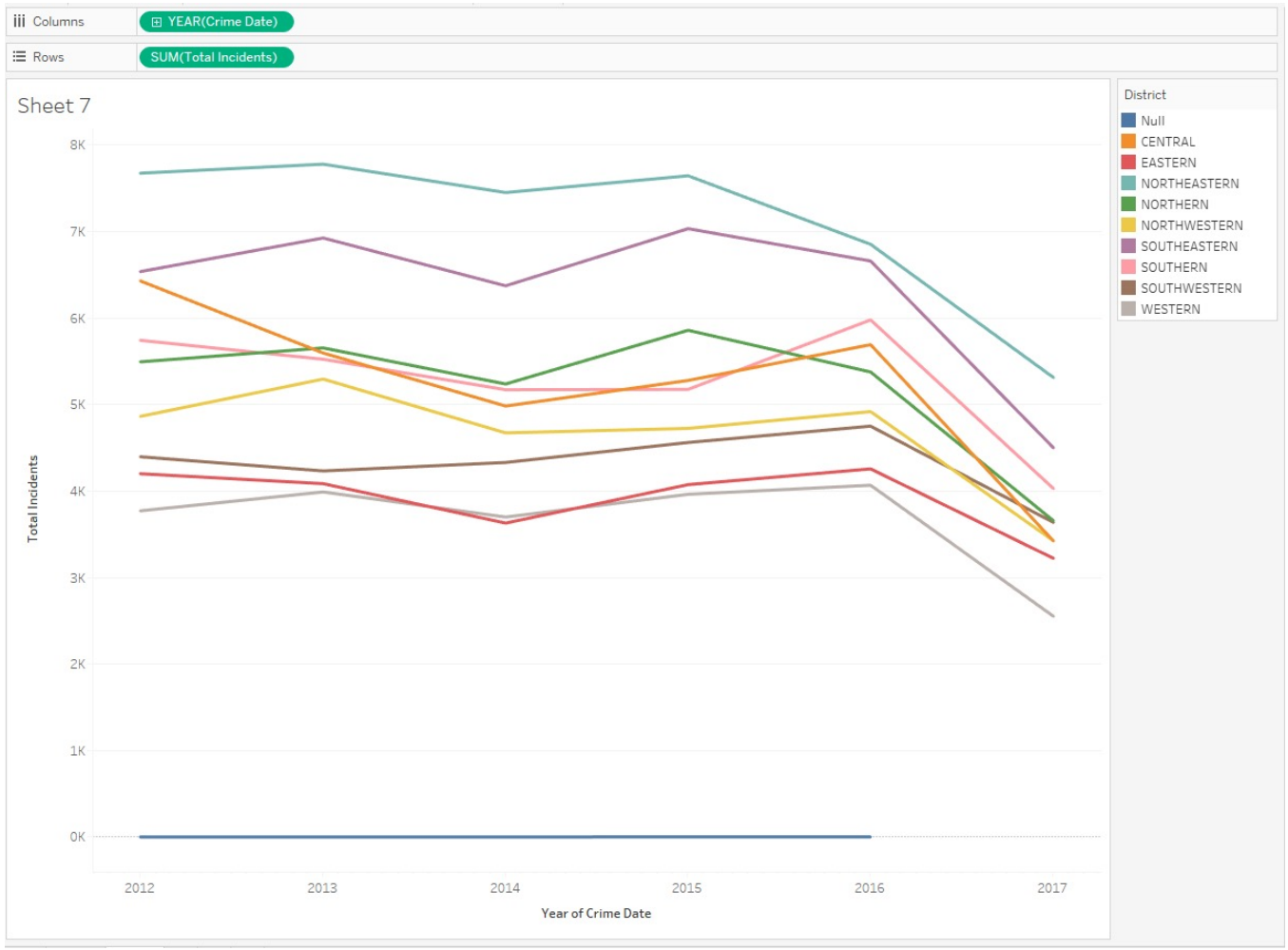
Data shows which weapon is mostly used at inside or outside attempted crimes at many locations .



Data compares the most used weapon for the crimes happened inside and outside to the count of total incidents.

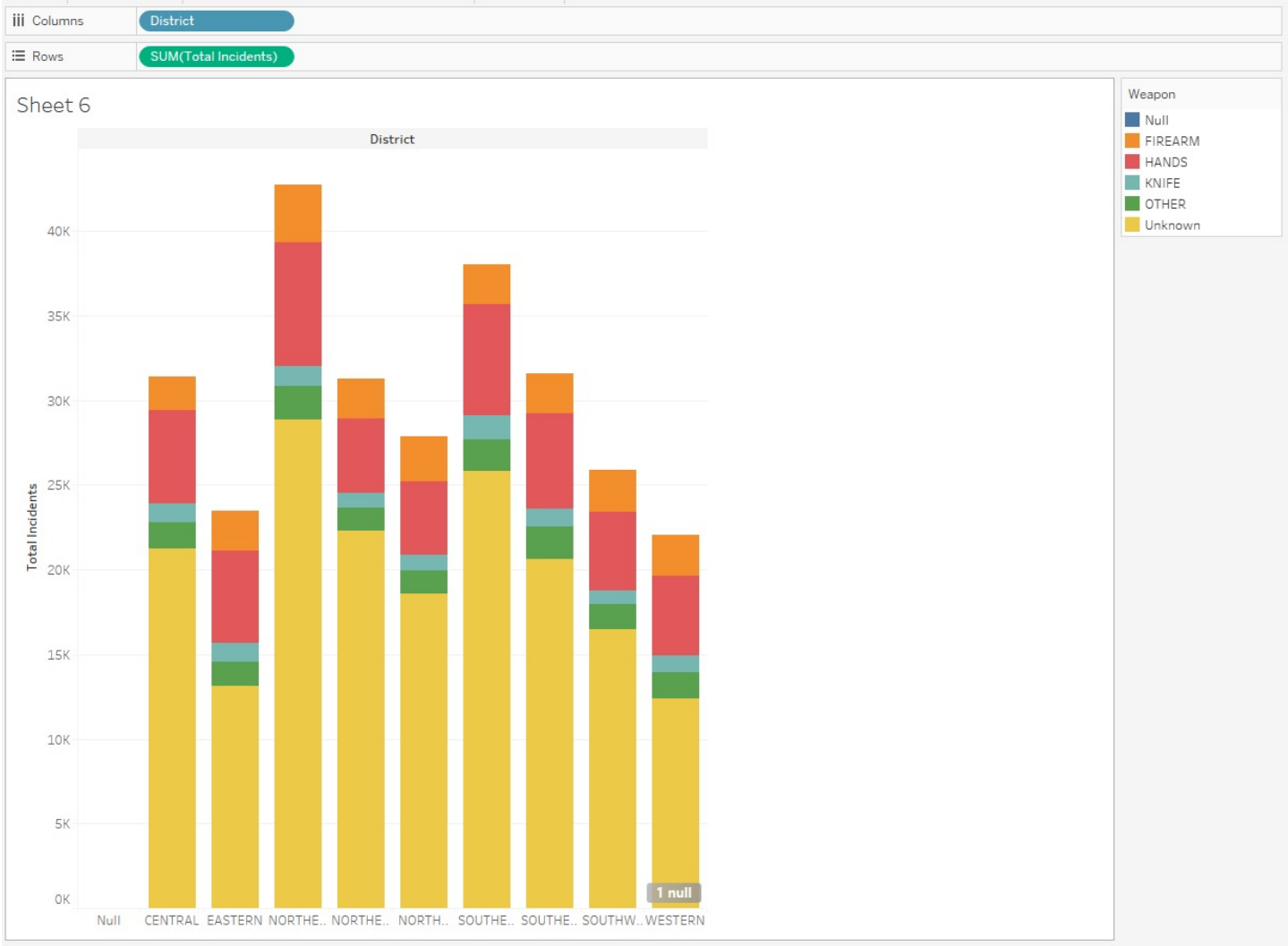


This graph represents total no. of incidents happened during 2012-2017 in every district.

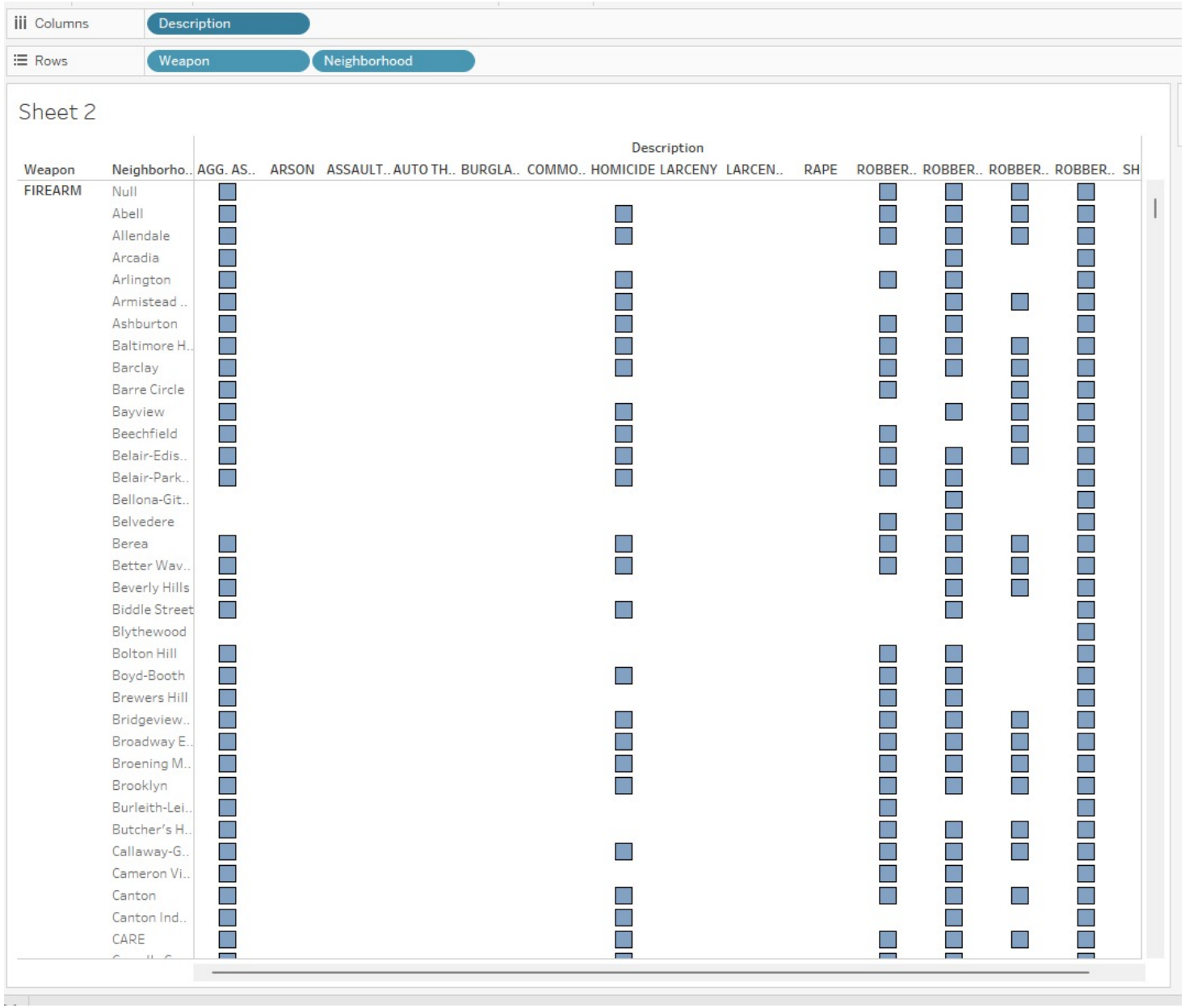


This shows the declined graph of total crimes happened through the years 2012-2017

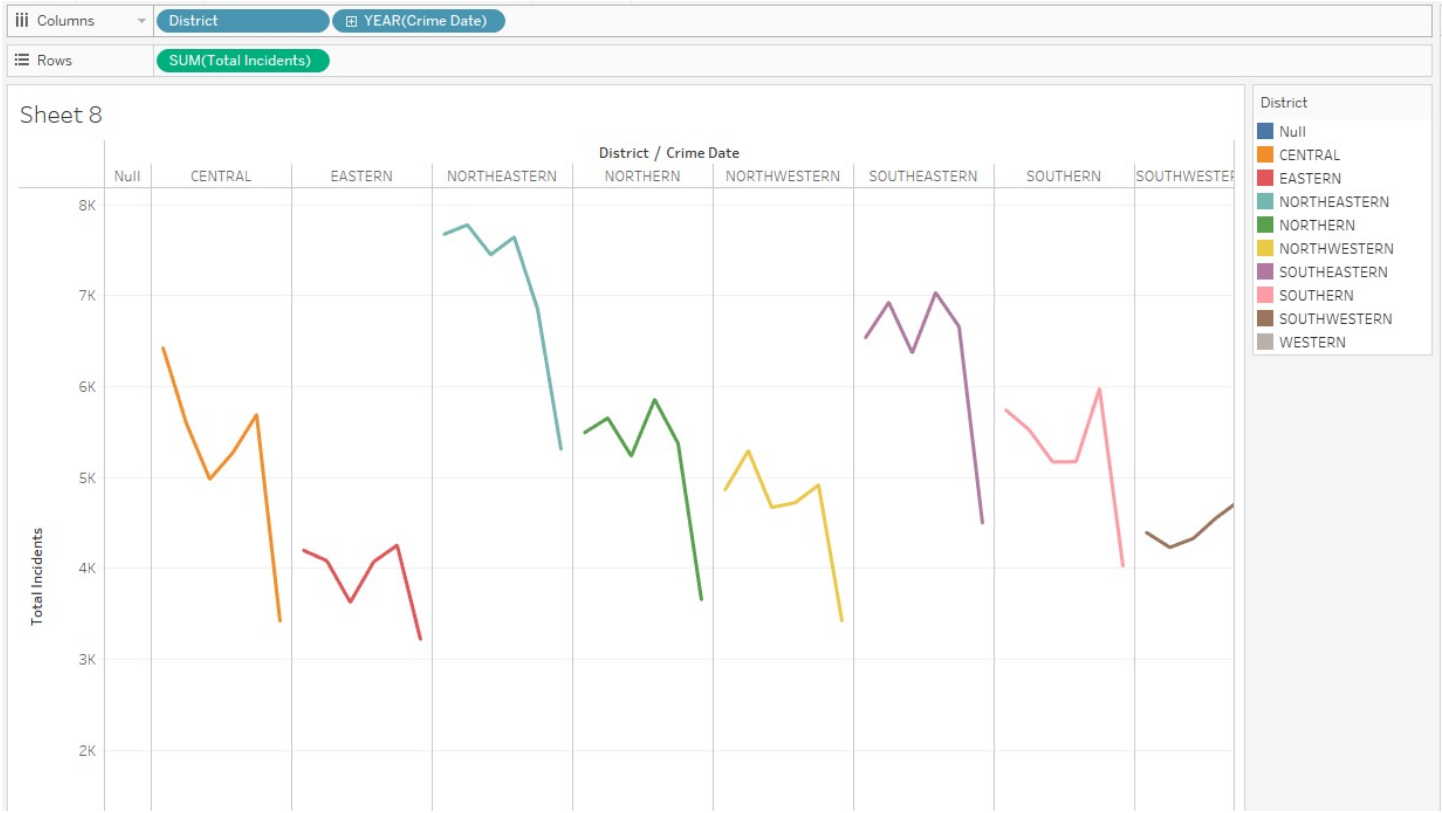
This graph shows total incidents happened in each district with the weapon used the most.



This shows which weapon is used in varied crimes at different neighborhoods.

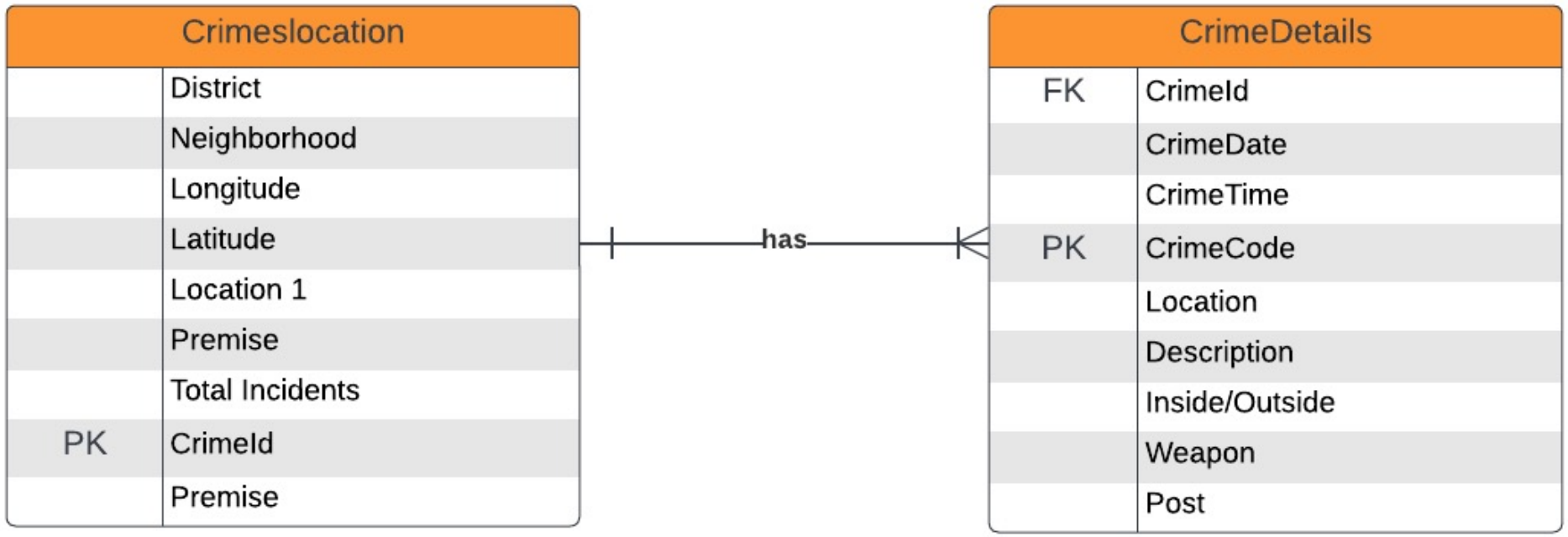


This depicts the year and total crimes happened in each district.

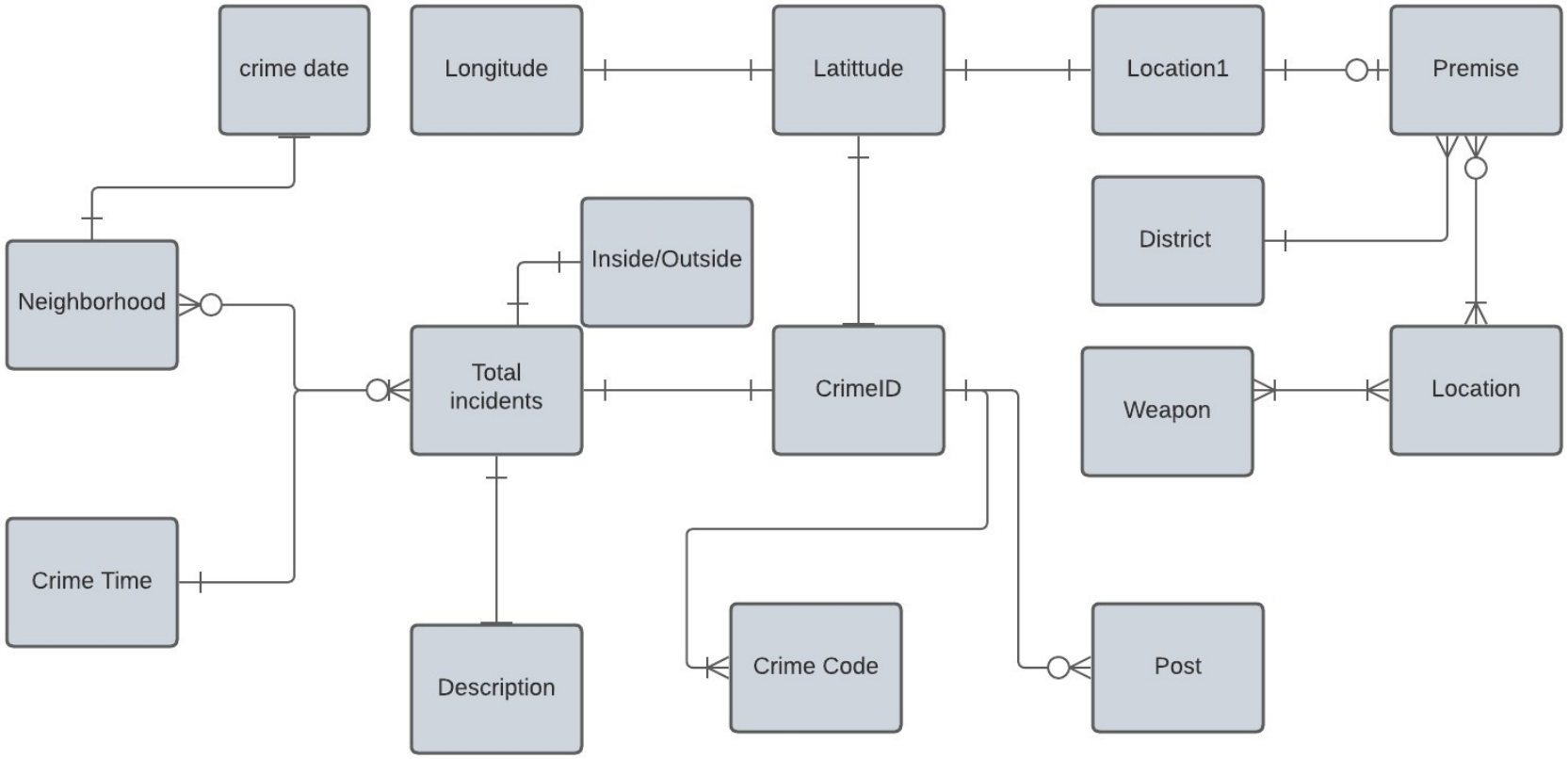


This depicts total number of crimes at each district by every year during 2012 to 2017 which occurred inside and outside.

# Entity Relationship diagram



# Entity Relationship diagram



Query 1 | Query 2 | Query 3

```
1  --1
2  select CrimeTime, count(CrimeID) from databasefor604.read2
3  group by CrimeTime
4  order by count(CrimeID) desc
```

# Case Study 1 :

SQL  Ln 4, Col 29

Run | Cancel | Save | Clear | Create

Completed  Time in queue: 0.1 sec  Run time: 2.766 sec  Data scanned: 21.1

**Results** (100+)

Copy | Download results

Search rows

1 ...

| # | CrimeTime | _col1 |
|---|---|---|
| 1 | 18:00:00 | 6761 |
| 2 | 17:00:00 | 6495 |
| 3 | 16:00:00 | 6067 |

Query 1 | Query 4 | Query 2 | Query 3

```
1  --2
2  select Location, count(CrimeID)
3  from databasefor604.read2
4  group by Location
5  order by count(CrimeID) desc
6
```

# Case Study 2 :

SQL  Ln 6, Col 1

Run again | Cancel | Save | Clear | Create

Completed  Time in queue: 0.101 sec  Run time: 0.981 sec  Data scanned: 21.1

**Results** (100+)

Copy | Download results

Search rows

1 ...

| # | Location | _col1 |
|---|---|---|
| 2 | 200 E PRATT ST | 654 |
| 3 | 300 LIGHT ST | 567 |
| 4 | 1500 RUSSELL ST | 556 |

Query 1 | Query 4 | Query 5 | Query 2 | Query 3

```
1  --3
2  select Weapon, count(CrimeID)
3  from databasefor604.read2
4  group by Weapon
5  order by count(CrimeID) desc
```

# Case study 3

SQL  Ln 1, Col 4

Run | Cancel | Save | Clear | Create

Completed  Time in queue: 0.285 sec  Run time: 1.138 sec  Data scanned: 21.11 MB

**Results** (5)

Copy | Download results

Search rows

1

| # | Weapon | _col1 |
|---|---|---|
| 1 | Unknown | 180952 |
| 2 | HANDS | 48995 |
| 3 | FIREARM | 22312 |
| 4 | OTHER | 14620 |

Query 1 | Query 4 | Query 5 | Query 6 | Query 2 | Query 3

```
1  --4
2  select Description, count(CrimeID)
3  from databasefor604.read2
4  group by Description
5  order by count(CrimeID) desc
```

# Case study 4

SQL  Ln 1, Col 1

Run | Cancel | Save | Clear | Create

Completed  Time in queue: 0.215 sec  Run time: 1.13 sec  Data scanned: 21.11 MB

**Results** (15)

Copy | Download results

Search rows

1

| # | Description | _col1 |
|---|---|---|
| 1 | LARCENY | 60528 |
| 2 | COMMON ASSAULT | 45518 |
| 3 | BURGLARY | 42538 |
| 4 | LARCENY FROM AUTO | 36295 |

Query 1 | Query 4 | Query 5 | Query 6 | Query 7 | Query 8 | Query 3

```
1
2  select CrimeDate, count(CrimeID)
3  from databasefor604.read2
4  group by CrimeDate
5  order by count(CrimeID) desc
6
```

# Case study 5

SQL  Ln 6, Col 1

Run | Cancel | Save | Clear | Create

Completed  Time in queue: 0.137 sec  Run time: 1.092 sec  Data scanned: 21.11 MB

**Results** (100+)

Copy | Download results

Search rows

1 ...

| # | CrimeDate | _col1 |
|---|---|---|
| 1 | 4/27/2015 | 419 |
| 2 | 6/5/2016 | 255 |
| 3 | 1/20/2017 | 194 |
| 4 | 9/24/2016 | 194 |

Query 1 | Query 4 | Query 5 | Query 6 | Query 7 | Query 8 | Query 3

```
1
2  select Avg(A.crimes) as Avergae_crime_in_a_day
3  from (select CrimeDate, count(CrimeID) as crimes
4  from "databasefor604"."read2"
5  group by CrimeDate) as A
6
```

# Case study 6

SQL  Ln 1, Col 1

Run | Cancel | Save | Clear | Create

Completed  Time in queue: 0.183 sec  Run time: 1.175 sec

**Results** (1)

Copy

Search rows

| # | Avergae_crime_in_a_day |
|---|---|
| 1 | 133.45994208494207 |

# Cost Estimation

$200,000/year for two data

$10,000/year for technology

# Conclusion

- It is important to engage in data analysis to understand how victims are affected by crime, and whether the response to their experience is adequate and effective.

# The End