

# Data Analysis and Visualization

## Final Project

### Crime Incidents in Boston

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**Data Set used:** Crime incident reports are provided by Boston Police Department (BPD) to document the initial details surrounding an incident to which BPD officers respond. This is a dataset containing records from the new crime incident report system, which includes a reduced set of fields focused on capturing the type of incident as well as when and where it occurred. Records in the new system begin in June of 2015.

[Link to data source](#)

I have used two data sets for this analysis, one has all the crime reports that has occurred from June 2015 till date.

Other has offense codes and offences they infer,

Internal BPD report number
Numerical code of offense description
Internal categorization of [offense description]
Primary descriptor of incident
What district the crime was reported in
RA number associated with the where the crime was reported from.
Indicated a shooting took place.
Earliest date and time the incident could have taken place
Universal Crime Reporting Part number (1,2, 3)
Street name the incident took place

Data

Dictionary for the data set used is as below for each column used in first data set is below

Visualisation-1

The total number of shootings that has occurred based on month

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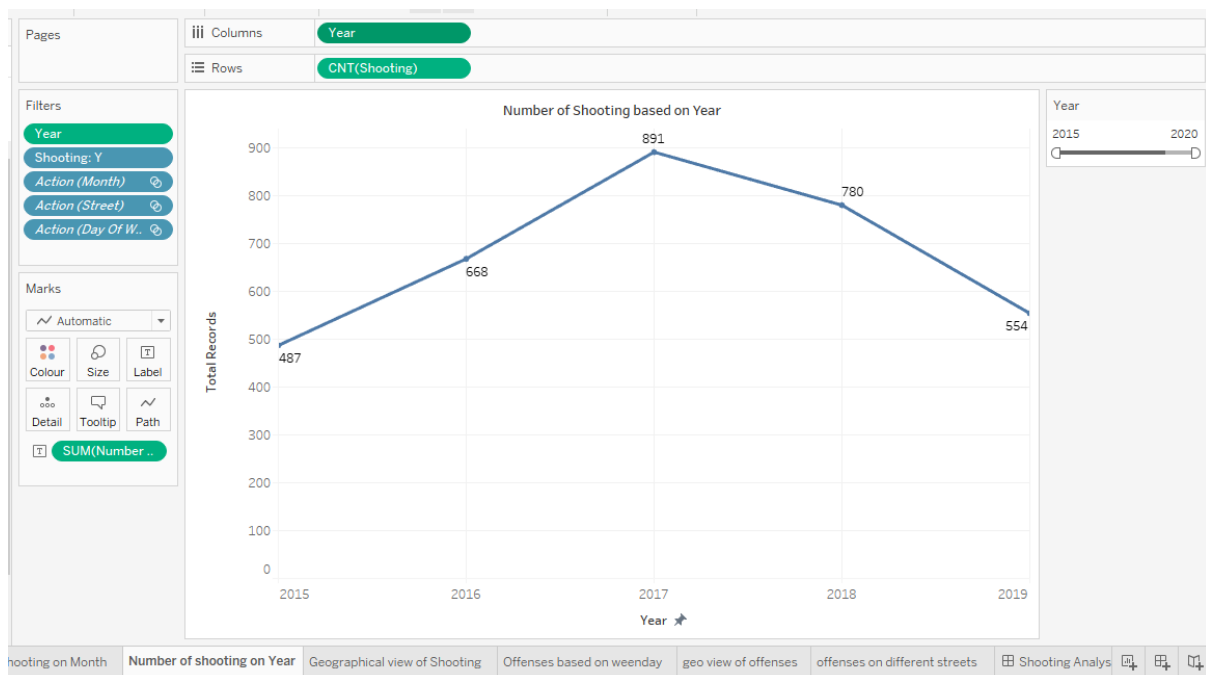
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We can see that July recorded highest shootings and March being the lowest

Visualisation2 – It shows that the shootings has increased till 2017 and has gradually reduced due to initiative of data driven case solving by Boston police.



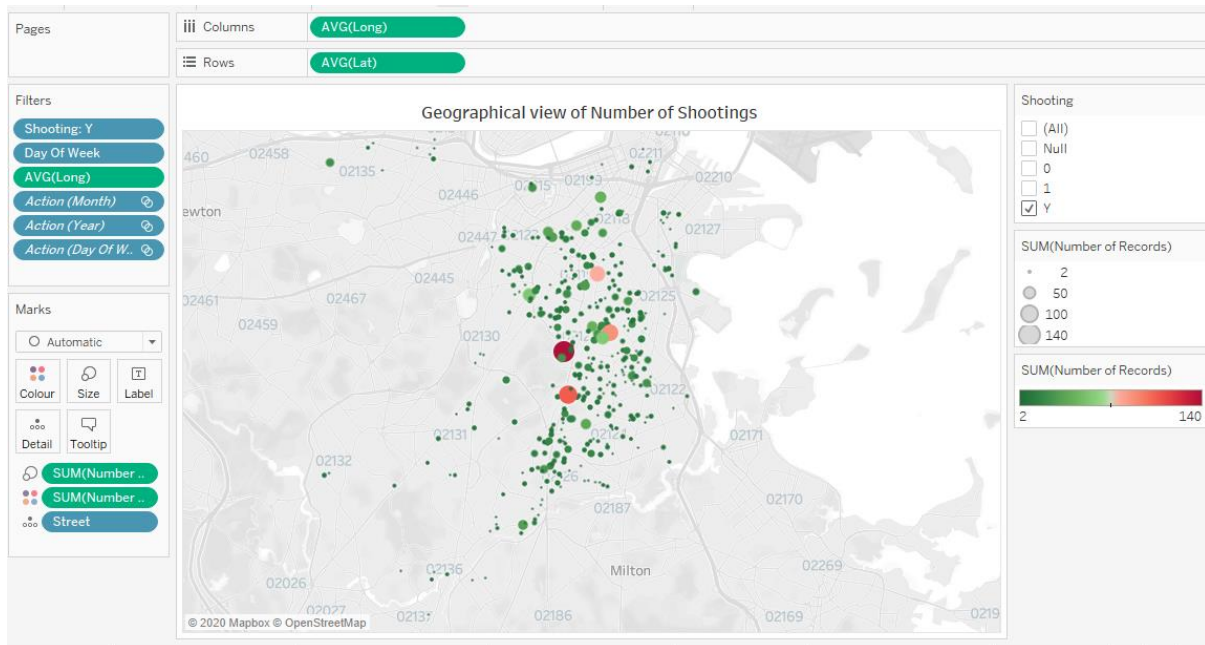
### Visualisation – 3

The Police started analysing location-based case solving which led to fall in number of shootings  
Washington street has the highest number of recorded shootings.

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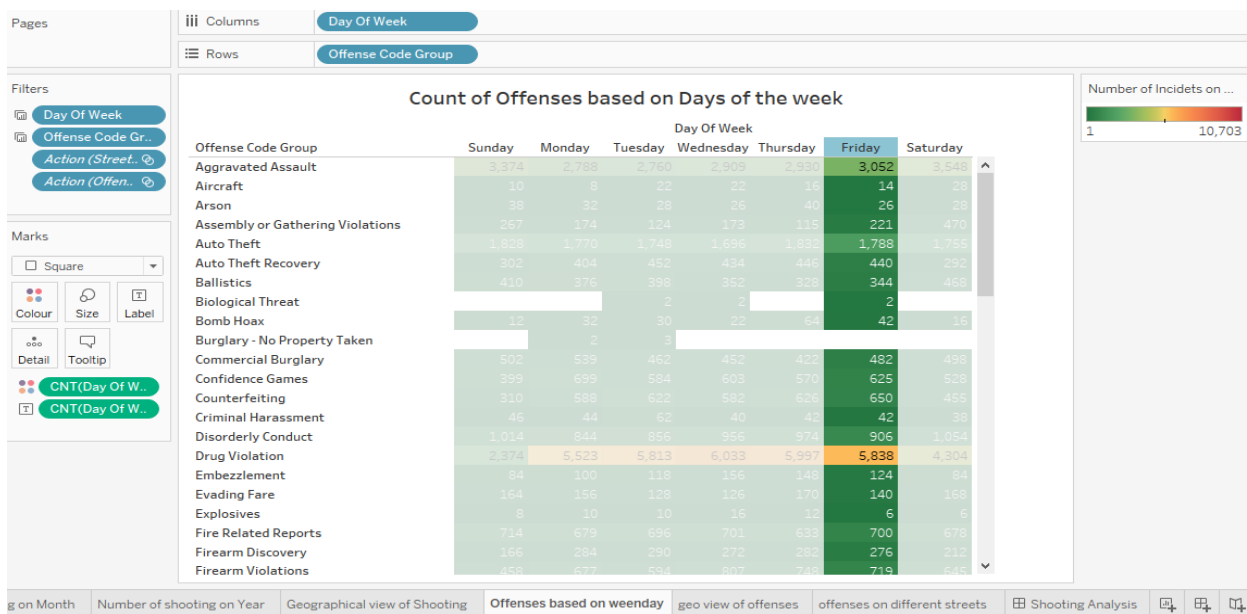
### Crime Incidents in Boston



#### Visualisation-4

count of offenses based on the day of the week

We observed the highest recorded number of cases on Friday and lowest on Sunday.



#### Visualisation – 5

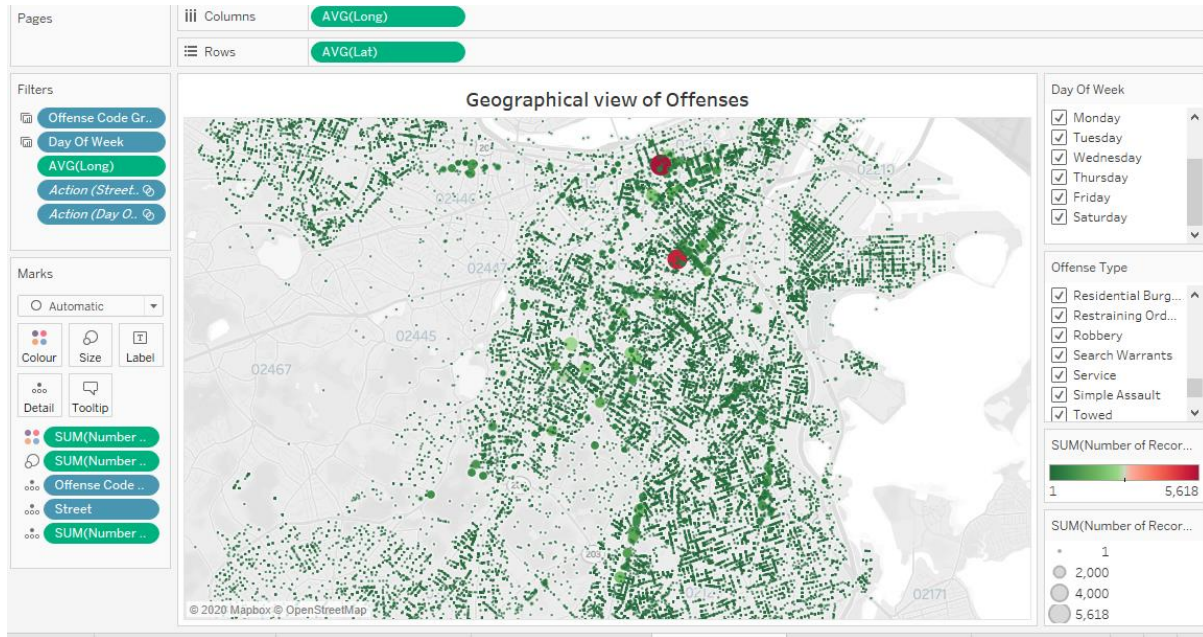
Geographical view of crimes

Created this interactive visualisation to show the type of offence on each different street and on a particular day to analyse the crime pattern between days and types of offences.

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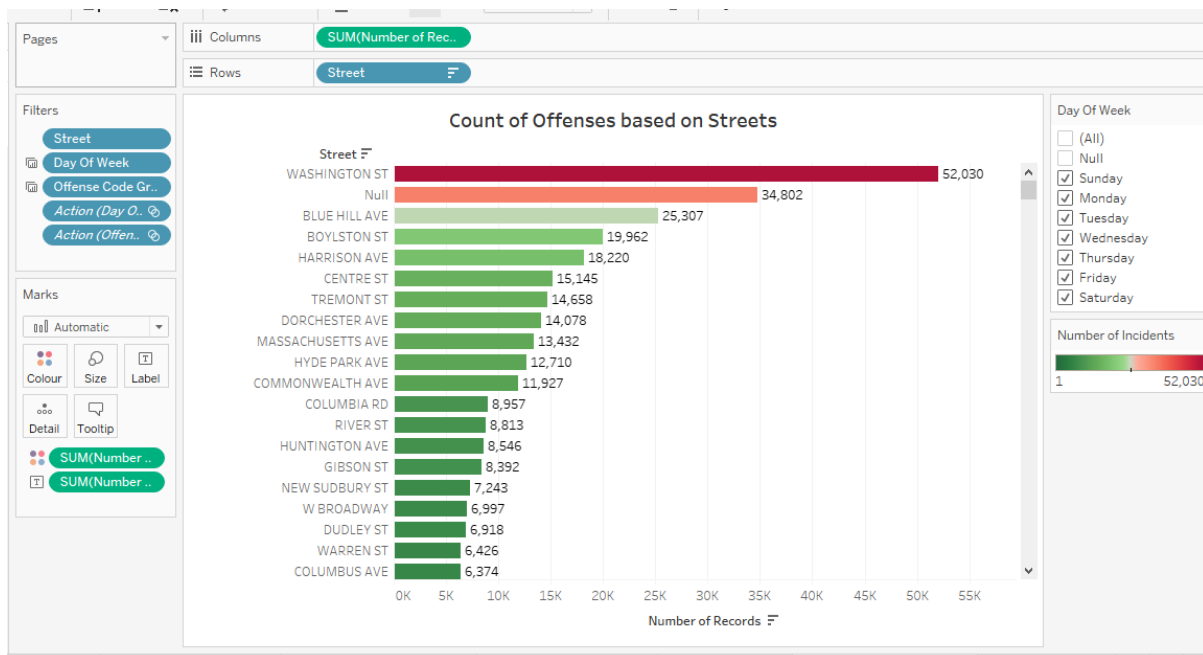
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#### Visualisation – 6

Created this to show the Count of offenses based on streets on particular days to see the pattern of all offences occurring on each day on different street.



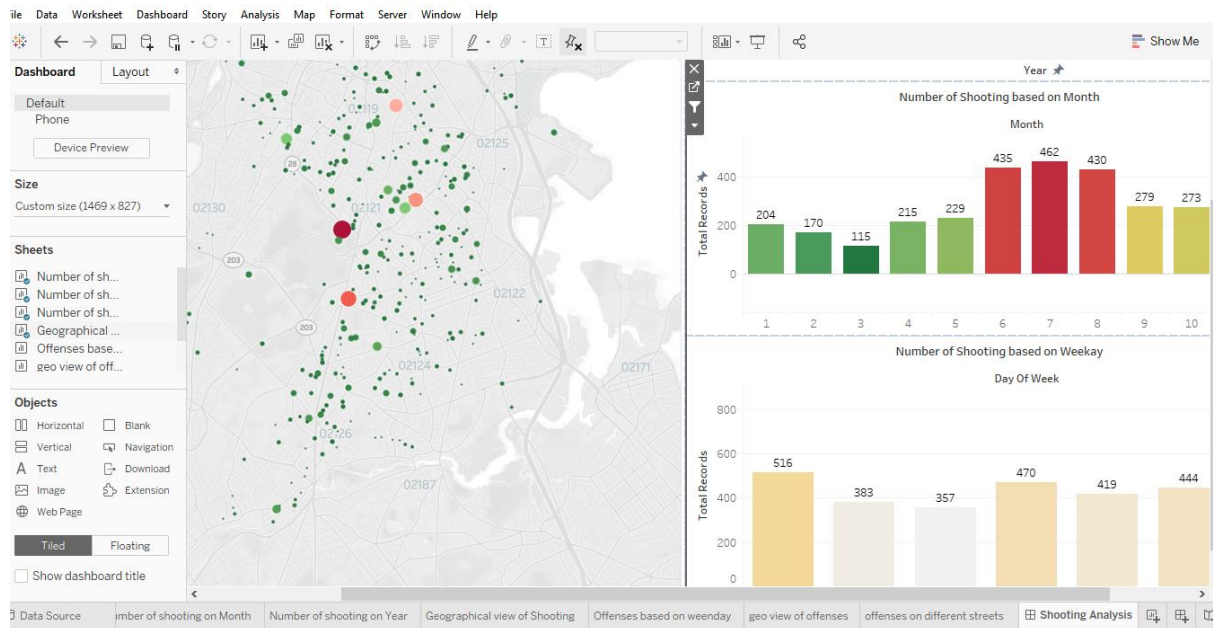
#### Visualisation – 7

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Created this interactive dashboard to check how the shootings are occurring on map on particular days of week, Month and year



Results from this Analysis by example

If I want to see which locations are more vulnerable to shootings on Thursdays, I can just select Thursday and it our dashboard shows that the Blue hill Ave, Weisbeck street are recording highest shootings in these locations and that too only in the month of January.

So the police can take prior actions next time which will help in reduction of the crimes.

