**NYPD Complaint Data Historic Power Bi Dashboard Documentation**

**Info**

Data from 2006 to present (June 17, 2023) of every valid felony, misdemeanour, and violation crimes reported to the New York City Police Department (NYPD).

Large dataset 2.9GB

Data collected from NYC open data

**Step 1 – select columns to keep**

**Columns selected**

ADDR\_PCT\_CD

BORO

CMPLNT\_FR\_DT

CMPLNT\_FR\_TM

CMPLNT\_TO\_DT

CMPLNT\_TO\_TM

CRM\_ATPT\_CPTD\_CD

JURIS\_DESC

LAW\_CAT\_CD

LOC\_OF\_OCCUR\_DESC

OFNS\_DESC

PATROL\_BORO

PD\_CD

PD\_DESC

PREM\_TYP\_DESC

RPT\_DT

SUSP\_AGE\_GROUP

SUSP\_RACE

SUSP\_SEX

TRANSIT\_DISTRICT

VIC\_AGE\_GROUP

VIC\_RACE

VIC\_SEX

Latitude

Longitude

**Columns removed**

CMPLNT\_NUM

HADEVELOPT

HOUSING\_PSA

JURISDICTION\_CODE

KY\_CD

PARKS\_NM

PD\_CD

STATION\_NAME

TRANSIT\_DISTRICT

X\_COORD\_CD

Y\_COORD\_CD

= Table.RemoveColumns(#"Changed Type",{"CMPLNT\_NUM", "HADEVELOPT", "HOUSING\_PSA", "JURISDICTION\_CODE", "KY\_CD", "PARKS\_NM", "PD\_CD", "STATION\_NAME", "TRANSIT\_DISTRICT", "X\_COORD\_CD", "Y\_COORD\_CD", "Lat\_Lon"})

**Step 2 – rename columns**

= Table.RenameColumns(#"Removed Columns",{{"CMPLNT\_FR\_DT", "Date"}, {"CMPLNT\_FR\_TM", "Time"}, {"CMPLNT\_TO\_DT", "End Date"}, {"CMPLNT\_TO\_TM", "End Time"}, {"ADDR\_PCT\_CD", "Precinct"}, {"RPT\_DT", "Date Reported"}, {"OFNS\_DESC", "Offence Description"}, {"PD\_DESC", "Code Description"}, {"CRM\_ATPT\_CPTD\_CD", "Status"}, {"LAW\_CAT\_CD", "Level of Offence"}, {"BORO\_NM", "Borough Name"}, {"LOC\_OF\_OCCUR\_DESC", "Location"}, {"PREM\_TYP\_DESC", "Premise Description"}, {"JURIS\_DESC", "Juristiction Description"}, {"SUSP\_AGE\_GROUP", "Suspect Age"}, {"SUSP\_RACE", "Suspect Race"}, {"SUSP\_SEX", "Susepect Sex"}, {"PATROL\_BORO", "Patrol Borough"}, {"VIC\_AGE\_GROUP", "Victim Age"}, {"VIC\_RACE", "Victim Race"}, {"VIC\_SEX", "Victim Sex"}})

Step 3 – clean data

3 data columns were formatted M/D/Y, had to rearrange to D/M/Y.

This was done by splitting columns by delimiter “/” then rearranging columns in order and grouping them back together then changing to date data type.

Get rid of earlier date by select ‘is greater than or equal to’ filter on date for 01/01/2006. Had some wrong dates from earlier years

Error while filtering data date in power query (outliers). Resolved by applying date filter to page 01/01/2006 onwards.

OLE DB or ODBC error: [DataFormat.Error] We couldn't parse the input provided as a Date value..

**Step 4 – Manipulate Data / DAX quereis**

Time

Create new column for the time column which groups it to each hour, not every minute.

Hour = Table.AddColumn(#"Added Custom", "Hour", each Time.Hour(

[Time]))

Gender

Filter victim gender to just male and female for the purpose of analysis. Although there was a large amount of data without victims either male or female (2.3M). This would be a large amount of data to lose so we will split it evenly to male and female, so we can keep the data but not affect the male/female split.

A lot of suspect gender was null but there was also an unidentified option, so null was converted to U (unidentified).

= Table.ReplaceValue(#"Changed Type7","(null)","U",Replacer.ReplaceText,{"Susepect Sex"})

Age

Age had a lot of incorrect values for filtered just the correct age brackets.

Race

For race visuals unknown and null was filtered off for a better visual understanding.

**Measures**

Yearly Average = sum(NYPD\_Complaint\_Data\_Historic[Count]) / 17

2022 count = CALCULATE(SUM('NYPD\_Complaint\_Data\_Historic'[Count]), YEAR('NYPD\_Complaint\_Data\_Historic'[Date]) = 2022)

KPI for 2022 vs average

**Step 5 – Make visuals/format dashboard**

**Dashboard visuals**

* Crime per year line chart
* Crime by hour area chart
* Level of offence column chart
* Crime by borough bar chart
* Premise description table
* Offence description table

2 bookmarks, one for victim and on for suspect information bringing up their own visuals to allow fit/better insight on dashboard.

**Vic/suspect visuals**

* Age bar chart
* Sex pie chart
* Race bar chart

**Filters**

* Vic gender
* Suspect gender
* Offence description
* Premise description
* date

**further improvements**

group type of crime (assault, sex crimes, burglary ect.)

create map (need admin Power Bi)