```python
import pandas as pd
df = pd.read_csv(https://final-project-bucket-group-5.s3.us-east-1.amazonaws.com/dpd_crime_data.csv)
print(df.head())
```
```
         id Case Number                 Block  Offense Code  \
0  29000000    DPD749039     1221 Northwest Hwy         230.0
1  29000001    DPD637037       8355 Lancaster Rd         110.0
2  29000002    DPD050351     9488 Fort Worth Ave         230.0
3  29000003    DPD696109        7911 Sylvan Ave         570.0
4  29000004    DPD206113   1369 Harry Hines Blvd         900.0

        Primary Type            Description Location Description  Arrest  \
0              Theft      Theft of Property              School   False
1            Robbery  Robbery of Individual         Parking Lot   False
2              Theft      Theft of Property         Retail Store   False
3        Trespassing      Criminal Trespass         Gas Station   False
4  Disorderly Conduct    Disorderly Conduct               Hotel   False

   Domestic  Beat  ... Suspect Sex Suspect Race          Case Status  \
0     False  B473  ...           X        White  Under Investigation
1     False  B993  ...           X        White                 Open
2     False  B570  ...           X          NaN               Closed
3      True  B119  ...           M        White  Under Investigation
4     False  B727  ...           X        Black               Closed

   Crime Category  Secondary Description  Census Tract  Zip Code  \
0        Property            Shoplifting       37804.0   75201.0
```

```python
df.info()
```
```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 1000000 entries, 0 to 999999
Data columns (total 45 columns):
 #   Column                 Non-Null Count    Dtype
---  ------                 --------------    -----
 0   id                     1000000 non-null  int64
 1   Case Number            1000000 non-null  object
 2   Block                  1000000 non-null  object
 3   Offense Code           949916 non-null   float64
 4   Primary Type           1000000 non-null  object
 5   Description            1000000 non-null  object
 6   Location Description   949991 non-null   object
 7   Arrest                 1000000 non-null  bool
 8   Domestic               1000000 non-null  bool
 9   Beat                   1000000 non-null  object
 10  Area                   1000000 non-null  object
 11  Ward                   900146 non-null   object
 12  Community Area         899811 non-null   object
 13  FBI Code               1000000 non-null  object
 14  X Coordinate           950137 non-null   float64
 15  Y Coordinate           950137 non-null   float64
 16  Year                   1000000 non-null  int64
 17  Latitude               950137 non-null   float64
 18  Longitude              950137 non-null   float64
 19  Location               950137 non-null   object
 20  weapon description     1000000 non-null  object
 21  vict Age               900173 non-null   float64
```

```
 18  Longitude            950137 non-null  float64
 19  Location             950137 non-null  object
 20  weapon description   1000000 non-null object
 21  vict Age             900173 non-null  float64
 22  Vict Sex             900352 non-null  object
 23  Victim Race          850032 non-null  object
 24  Date OCC             1000000 non-null datetime64[ns]
 25  Time OCC             950090 non-null  float64
 26  Date Rptd            1000000 non-null object
 27  Time Rptd            950295 non-null  float64
 28  Date Arrested        89523 non-null   object
 29  Time Arrested        89733 non-null   float64
 30  Premises desc        949932 non-null  object
 31  district             1000000 non-null object
 32  Suspect Age          849956 non-null  float64
 33  Suspect Sex          850174 non-null  object
 34  Suspect Race         850057 non-null  object
 35  Case Status          949752 non-null  object
 36  Crime Category       949700 non-null  object
 37  Secondary Description 900086 non-null object
 38  Census Tract         949944 non-null  float64
 39  Zip Code             950222 non-null  float64
 40  Incident Narrative   799760 non-null  object
 41  Priority Level       950046 non-null  object
 42  Repeat Offense Flag  949594 non-null  object
 43  Hour                 1000000 non-null int32
 44  DayOfWeek            1000000 non-null object
dtypes: bool(2), datetime64[ns](1), float64(12), int32(1), int64(2), object(27)
memory usage: 326.2+ MB
```

[6]: `df.nunique()`

[6]:
```
id                   1000000
Case Number           632137
Block                 243068
Offense Code              15
Primary Type              15
Description               15
Location Description      10
Arrest                     2
Domestic                   2
Beat                     899
Area                       5
Ward                      14
Community Area             5
FBI Code                  15
X Coordinate             201
Y Coordinate             201
Year                      24
Latitude                 201
Longitude                201
Location               40401
weapon description         6
vict Age                  63
Vict Sex                   3
Victim Race                5
Date OCC                8765
Time OCC                1440
```
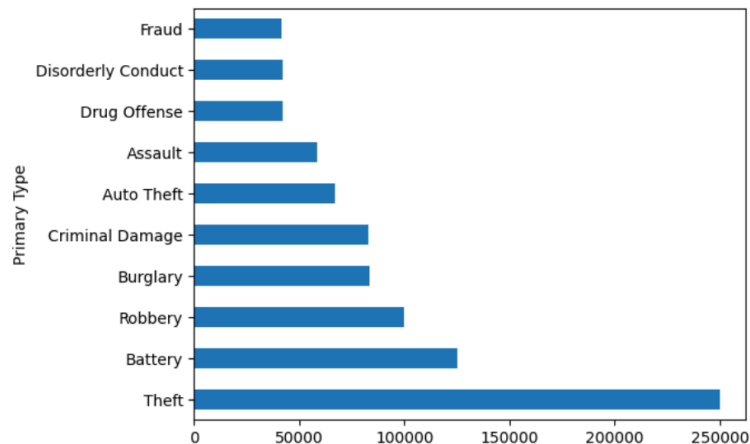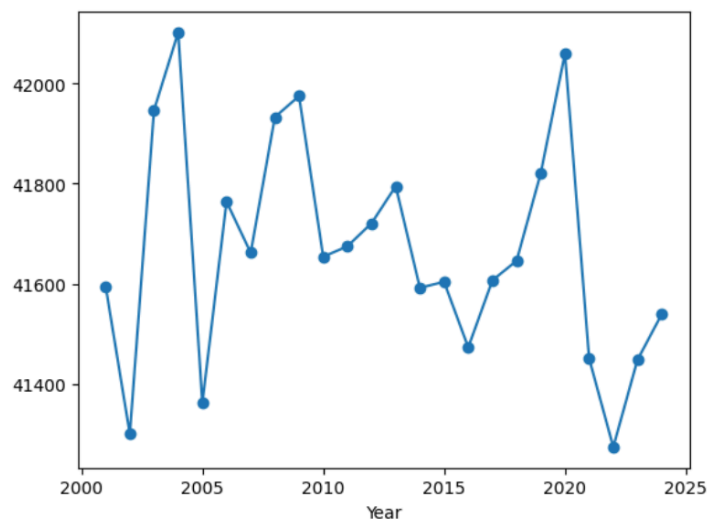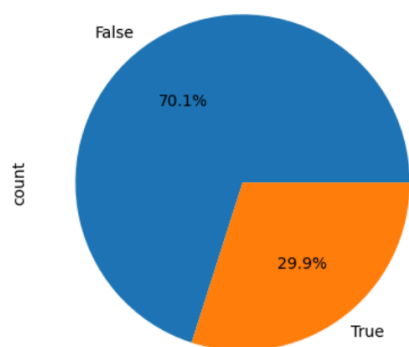
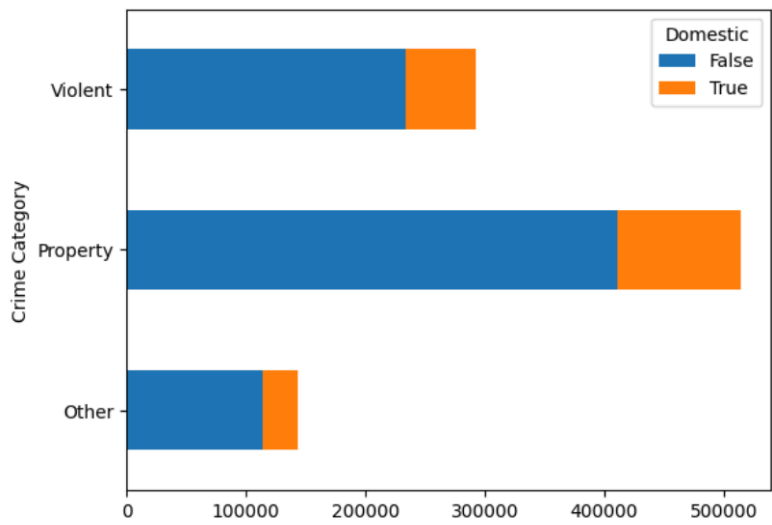# catagory wise number of victims

[7]: `<Axes: ylabel='Primary Type'>`

[8]: <Axes: xlabel='Year'>
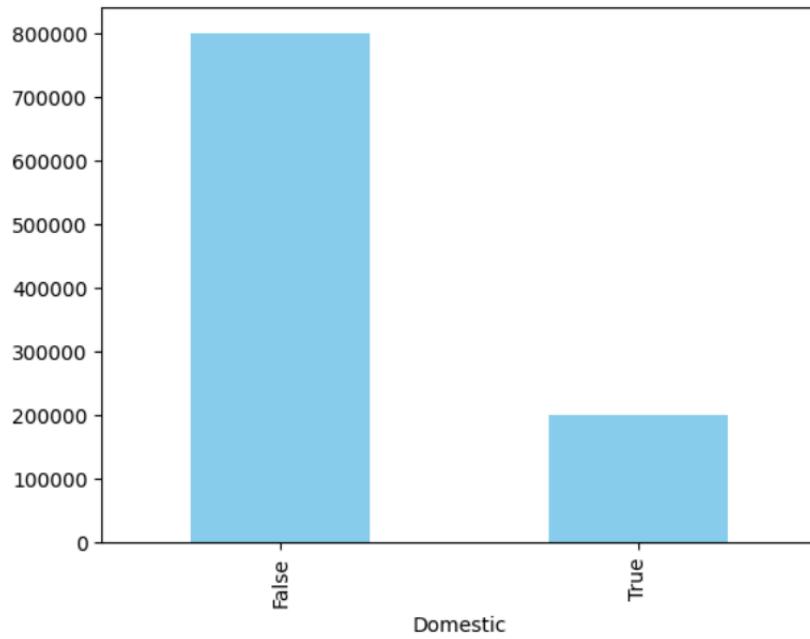

[9]: <Axes: ylabel='count'>
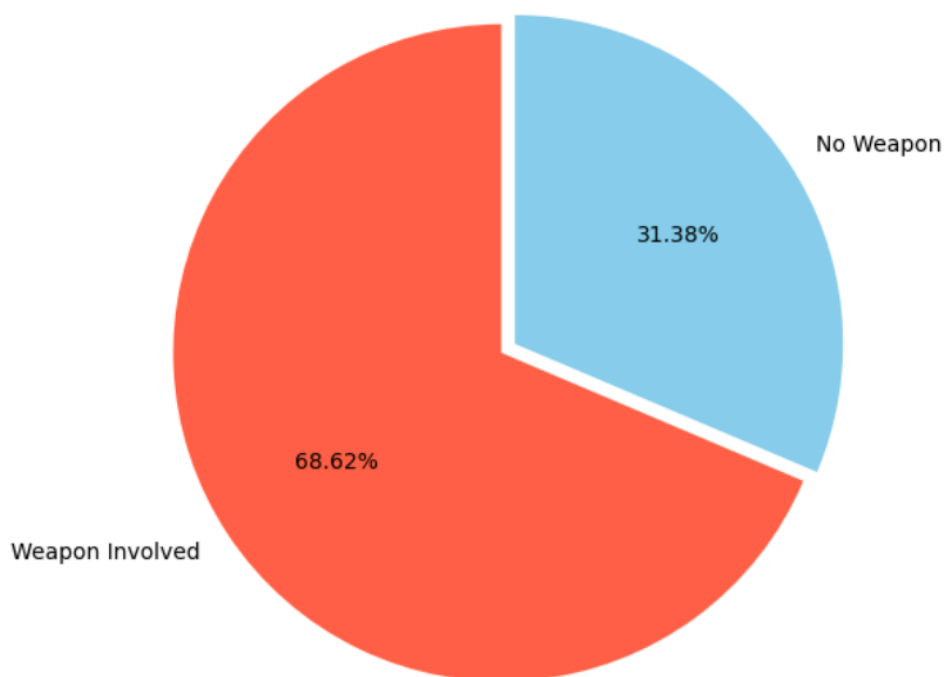
```
# domestic voilence from whole data
```

10]: `<Axes: xlabel='Domestic'>`

Weapon Involvement in Crimes

Weapon Involvement vs Arrests

Weapon Usage by Crime Type

Crime Count by NIBRS Category

Top 10 NIBRS Group A Offenses

Theft Trend Over Years

Theft Trend Over the Years