LaReport

December 11, 2022

[38]:
```
import pandas as pd
import math
import numpy as np
import pickle
import matplotlib.pyplot as plt
```

[39]:
```
LaCrimeDF = pd.read_csv("LaCrime2.csv")
LaWeatherDF = pd.read_csv("LaWeather.csv")
```

[40]:
```
LaCrimeDF.head()
# Raw Crime table
```

[40]:

	DR_NO	Date Rptd	DATE OCC	TIME OCC	AREA	AREA NAME	Rpt Dist No	Part 1-2	Crm Cd	Crm Cd Desc	…	Status	Status Desc	Crm Cd 1	Crm Cd 2	Crm Cd 3	Crm Cd 4
0	1307355	02/20/2010 12:00:00 AM	02/20/2010 12:00:00 AM	1350	13	Newton	1385	2	900	VIOLATION OF COURT ORDER	…	AA	Adult Arrest	900.0	NaN	NaN	NaN
1	11401303	09/13/2010 12:00:00 AM	09/12/2010 12:00:00 AM	45	14	Pacific	1485	2	740	VANDALISM - FELONY ($400 & OVER, ALL CHURCH VA…	…	IC	Invest Cont	740.0	NaN	NaN	NaN
2	70309629	08/09/2010 12:00:00 AM	08/09/2010 12:00:00 AM	1515	13	Newton	1324	2	946	OTHER MISCELLANEOUS CRIME	…	IC	Invest Cont	946.0	NaN	NaN	NaN
3	90631215	01/05/2010 12:00:00 AM	01/05/2010 12:00:00 AM	150	6	Hollywood	646	2	900	VIOLATION OF COURT ORDER	…	IC					
4	100100501	01/03/2010 12:00:00 AM	01/02/2010 12:00:00 AM	2100	1	Central	176	1	122	RAPE, ATTEMPTED	…	IC					

```
3   Invest Cont    900.0    998.0       NaN      NaN
4   Invest Cont    122.0      NaN       NaN      NaN

                                  LOCATION                    Cross Street  \
0   300 E  GAGE                         AV                             NaN
1          SEPULVEDA                    BL  MANCHESTER                AV
2  1300 E  21ST                         ST                             NaN
3          CAHUENGA                     BL  HOLLYWOOD                 BL
4          8TH                          ST  SAN PEDRO                 ST

       LAT       LON
0  33.9825 -118.2695
1  33.9599 -118.3962
2  34.0224 -118.2524
3  34.1016 -118.3295
4  34.0387 -118.2488

[5 rows x 28 columns]
```

[41]:
```
LaWeatherDF.head()
# Raw Weather Table
```

[41]:
```
     Station  Date  Time Interval Air max Air max time Air min Air min time  \
0  20140101  2400  1440       67   14:50           27   05:14           42
1  20140102  2400  1440       66   14:07           29   06:01           44
2  20140103  2400  1440       63   14:23           29   05:37           43
3  20140104  2400  1440       66   15:04           29   05:17           44
4  20140105  2400  1440       68   15:17           28   07:01           44

  Air avg RH avg Precip Chill hrs Hrs 32F Hrs 85F  Hrs 95F
0      76   0.00   15.2       6.9     0.0    0.00      NaN
1      75   0.00   14.3       3.3     0.0    0.00      NaN
2      79   0.00   15.4       3.2     0.0    0.00      NaN
3      76   0.00   14.0       3.4     0.0    0.00      NaN
4      78   0.00   14.1       3.3     0.0    0.00      NaN
```

[42]:
```
# Clean crime columns
# del LaCrimeDF["AREA"]
del LaCrimeDF["AREA NAME"]
del LaCrimeDF["Rpt Dist No"]
del LaCrimeDF["Crm Cd 2"]
del LaCrimeDF["Crm Cd 3"]
del LaCrimeDF["Crm Cd 4"]
del LaCrimeDF["LOCATION"]
del LaCrimeDF["Cross Street"]
del LaCrimeDF["LAT"]
del LaCrimeDF["Status"]
```

```
del LaCrimeDF["Status Desc"]
del LaCrimeDF["LON"]
del LaCrimeDF["Weapon Desc"]
del LaCrimeDF["Weapon Used Cd"]
del LaCrimeDF["Premis Desc"]
del LaCrimeDF["Vict Descent"]
del LaCrimeDF["Vict Sex"]
del LaCrimeDF["Vict Age"]
del LaCrimeDF["Date Rptd"]
del LaCrimeDF["Part 1-2"]
del LaCrimeDF["DR_NO"]
LaCrimeDF.head()
```

[42]:

```
                 DATE OCC  TIME OCC  AREA   Crm Cd  \
0  02/20/2010 12:00:00 AM      1350     13     900
1  09/12/2010 12:00:00 AM        45     14     740
2  08/09/2010 12:00:00 AM      1515     13     946
3  01/05/2010 12:00:00 AM       150      6     900
4  01/02/2010 12:00:00 AM      2100      1     122

                                      Crm Cd Desc         Mocodes  \
0                          VIOLATION OF COURT ORDER  0913 1814 2000
1  VANDALISM - FELONY ($400 & OVER, ALL CHURCH VA…            0329
2                         OTHER MISCELLANEOUS CRIME            0344
3                          VIOLATION OF COURT ORDER  1100 0400 1402
4                                   RAPE, ATTEMPTED            0400

   Premis Cd  Crm Cd 1
0      501.0      900.0
1      101.0      740.0
2      103.0      946.0
3      101.0      900.0
4      103.0      122.0
```

[43]:

```
# Clean Weather columns
# del LaWeatherDF["Station"]
del LaWeatherDF["Time"]
del LaWeatherDF["Date"]
del LaWeatherDF["Air max"]
del LaWeatherDF["Air min"]
del LaWeatherDF["RH avg"]
del LaWeatherDF["Precip"]
del LaWeatherDF["Chill hrs"]
del LaWeatherDF["Hrs 32F"]
del LaWeatherDF["Hrs 85F"]
del LaWeatherDF["Hrs 95F"]
del LaWeatherDF["Air avg"]
```

[44]:
```
LaWeatherDF.rename(columns={'Station': 'Date', 'Interval': 'Temp Max','Air max time': 'Temp Min', 'Air min time':'Temp Avg'}, inplace=True)
LaWeatherDF.head()
```

[44]:

	Date	Temp Max	Temp Min	Temp Avg
0	20140101	67	27	42
1	20140102	66	29	44
2	20140103	63	29	43
3	20140104	66	29	44
4	20140105	68	28	44

[45]:
```
LaCrimeDF["Date"] = pd.to_datetime(LaCrimeDF["DATE OCC"]).dt.date
del LaCrimeDF["DATE OCC"]
```

Manipulating the date for the weather data set to convert it to datetime format

[46]:
```
year = []
month = []
day = []
for ind in LaWeatherDF.index:
    take = LaWeatherDF.loc[ ind,'Date']
    year.append(int(str(take)[:4]))
    month.append(int(str(take)[4:-2]))
    day.append(int(str(take)[6:]))
LaWeatherDF['Year'] = year
LaWeatherDF['Month'] = month
LaWeatherDF['Day'] = day
LaWeatherDF.head()
```

[46]:

	Date	Temp Max	Temp Min	Temp Avg	Year	Month	Day
0	20140101	67	27	42	2014	1	1
1	20140102	66	29	44	2014	1	2
2	20140103	63	29	43	2014	1	3
3	20140104	66	29	44	2014	1	4
4	20140105	68	28	44	2014	1	5

[47]:
```
LaWeatherDF['DATE'] = LaWeatherDF['Year'].map(str) + '-' + LaWeatherDF['Month'].map(str) + '-' +  LaWeatherDF['Day'].map(str)
del LaWeatherDF['Date']
del LaWeatherDF['Year']
del LaWeatherDF['Month']
del LaWeatherDF['Day']
LaWeatherDF.head()
```

[47]:

	Temp Max	Temp Min	Temp Avg	DATE
0	67	27	42	2014-1-1
1	66	29	44	2014-1-2

```
2       63       29       43  2014-1-3
3       66       29       44  2014-1-4
4       68       28       44  2014-1-5
```

[48]:
```
LaWeatherDF["Date"] = pd.to_datetime(LaWeatherDF["DATE"]).dt.date
```

[49]:
```
del LaWeatherDF['DATE']
```

[50]:
```
LaCrimeDF["Report Month"] = pd.DatetimeIndex(LaCrimeDF["Date"]).month
LaCrimeDF["Report Year"] = pd.DatetimeIndex(LaCrimeDF["Date"]).year
LaCrimeDF["Report Day"] = pd.DatetimeIndex(LaCrimeDF["Date"]).day
LaWeatherDF["Report Month"] = pd.DatetimeIndex(LaWeatherDF["Date"]).month
LaWeatherDF["Report Year"] = pd.DatetimeIndex(LaWeatherDF["Date"]).year
LaWeatherDF["Report Day"] = pd.DatetimeIndex(LaWeatherDF["Date"]).day
```

Filtering out the years that dont overlap so I can merge

[51]:
```
LaWeatherDF= LaWeatherDF[~(LaWeatherDF['Report Year'] > 2017)]
```

[52]:
```
LaCrimeDF = LaCrimeDF[~(LaCrimeDF['Report Year'] < 2014)]
```

[53]:
```
LaWeatherDF.rename(columns={'DATE': 'Date'}, inplace=True)
```

[54]:
```
LaCrimeDF.dropna(inplace=True)
LaWeatherDF.dropna(inplace=True)
```

[55]:
```
LaCrimeDF.head()
```

[55]:
```
        TIME OCC  AREA   Crm Cd              Crm Cd Desc  \
614215      1030     1      330     BURGLARY FROM VEHICLE
614216      1200    20      354         THEFT OF IDENTITY
614217      2100     3      624  BATTERY - SIMPLE ASSAULT
614218      1300     2      354         THEFT OF IDENTITY
614219      2345    13      624  BATTERY - SIMPLE ASSAULT

                    Mocodes  Premis Cd  Crm Cd 1        Date  Report Month  \
614215                 0344      123.0     330.0  2014-06-02             6
614216  0928 0930 1822 0100      501.0     354.0  2014-03-01             3
614217  0913 0416 0446 0429      501.0     624.0  2014-08-25             8
614218       0100 0930 1822      218.0     354.0  2014-03-05             3
614219            0400 0416      502.0     624.0  2014-01-03             1

        Report Year  Report Day
614215         2014           2
614216         2014           1
614217         2014          25
614218         2014           5
```

```
614219         2014           3
```

[56]:
```
del LaWeatherDF["Report Month"]
del LaWeatherDF["Report Year"]
del LaWeatherDF["Report Day"]
LaCrimeDF.dropna(inplace=True)
LaWeatherDF.dropna(inplace=True)
```

[57]:
```
LaMerged = pd.merge(LaCrimeDF, LaWeatherDF, how='outer', on = 'Date')
```

[58]:
```
LaMerged["Temp Max"] = pd.to_numeric(LaMerged["Temp Max"], errors='coerce')
```

[59]:
```
LaMerged.dropna(inplace=True)
```

[60]:
```
CrimeCategory = LaMerged["Crm Cd Desc"].value_counts()
print(CrimeCategory)
LaMerged.head()
```

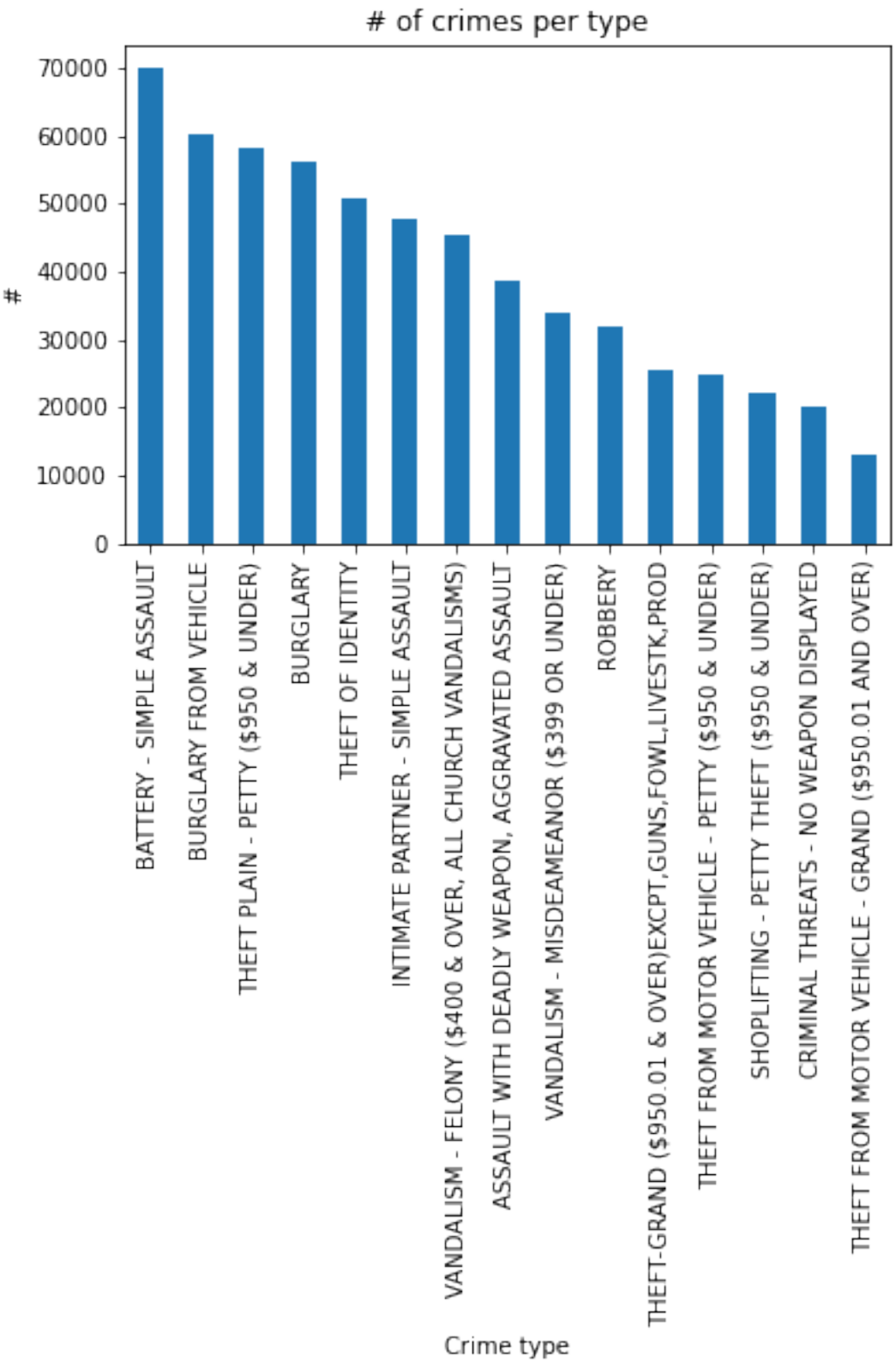
```
BATTERY - SIMPLE ASSAULT                      69833
BURGLARY FROM VEHICLE                         60153
THEFT PLAIN - PETTY ($950 & UNDER)            58340
BURGLARY                                      56093
THEFT OF IDENTITY                             50746
                                              …
TRAIN WRECKING                                    2
FIREARMS RESTRAINING ORDER (FIREARMS RO)          1
BOAT - STOLEN                                     1
ABORTION/ILLEGAL                                  1
TILL TAP - ATTEMPT                                1
Name: Crm Cd Desc, Length: 139, dtype: int64
```

[60]:

	TIME OCC	AREA	Crm Cd	Crm Cd Desc	Mocodes	Premis Cd	Crm Cd 1	Date	Report Month	Report Year	Report Day	Temp Max	Temp Min	Temp Avg
0	1030	1	330	BURGLARY FROM VEHICLE	0344	123.0	330.0	2014-06-02	6	2014	2	95.0	50	74
1	2000	7	664	BUNCO, PETTY THEFT	0701 0344	502.0	664.0	2014-06-02	6	2014				
2	2050	2	624	BATTERY - SIMPLE ASSAULT	2004 1266 0416	701.0	624.0	2014-06-02	6	2014				
3	1200	12	440	THEFT PLAIN - PETTY ($950 & UNDER)	0701 1820 0344	501.0	440.0	2014-06-02	6	2014				
4	100	12	440	THEFT PLAIN - PETTY ($950 & UNDER)	0344 1202	502.0	440.0	2014-06-02	6	2014				

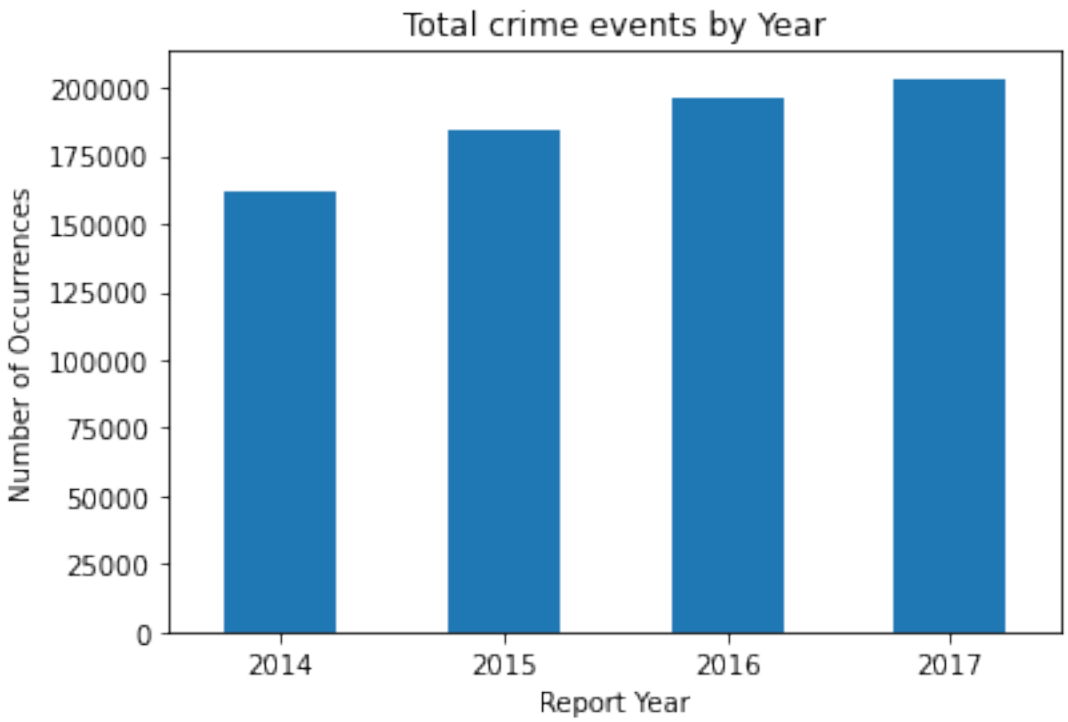
```
1           2       95.0        50        74
2           2       95.0        50        74
3           2       95.0        50        74
4           2       95.0        50        74
```

[61]:
```
shw = LaMerged[-LaMerged['Crm Cd Desc'].isin(CrimeCategory[CrimeCategory <␣
↪13000].index)]
ax = (shw["Crm Cd Desc"].value_counts()).plot(title="# of crimes per type",␣
↪kind = "bar")
ax.set_xlabel("Crime type")
ax.set_ylabel("#")
plt.xticks(rotation=90)
plt.show()
```

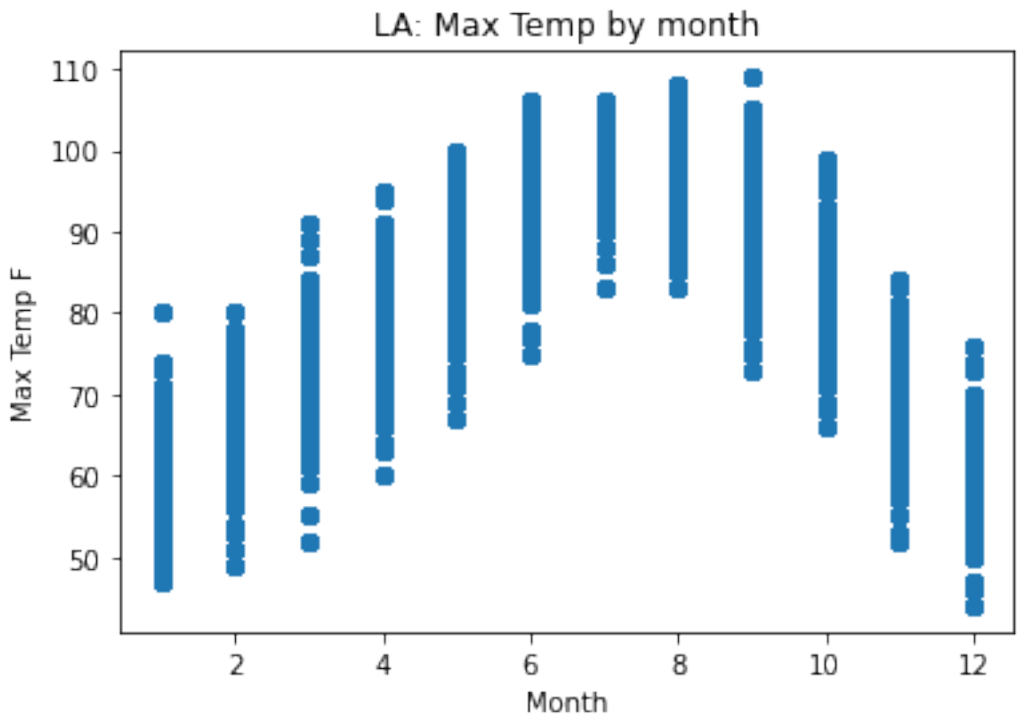

# of crimes per type
70000
60000
50000
40000
30000
20000
10000
0
#
BATTERY - SIMPLE ASSAULT
BURGLARY FROM VEHICLE
THEFT PLAIN - PETTY ($950 & UNDER)
BURGLARY
THEFT OF IDENTITY
INTIMATE PARTNER - SIMPLE ASSAULT
VANDALISM - FELONY ($400 & OVER, ALL CHURCH VANDALISMS)
ASSAULT WITH DEADLY WEAPON, AGGRAVATED ASSAULT
VANDALISM - MISDEAMEANOR ($399 OR UNDER)
ROBBERY
THEFT-GRAND ($950.01 & OVER)EXCPT,GUNS,FOWL,LIVESTK,PROD
THEFT FROM MOTOR VEHICLE - PETTY ($950 & UNDER)
SHOPLIFTING - PETTY THEFT ($950 & UNDER)
CRIMINAL THREATS - NO WEAPON DISPLAYED
THEFT FROM MOTOR VEHICLE - GRAND ($950.01 AND OVER)
Crime type

[62]:
```
ax = LaMerged.groupby("Report Month").size().plot(kind = "bar", title= "Total␣
 ↪crime events by month")
ax.set_ylabel("Number of Occurrences")
plt.xticks(rotation=0)
plt.show()
```

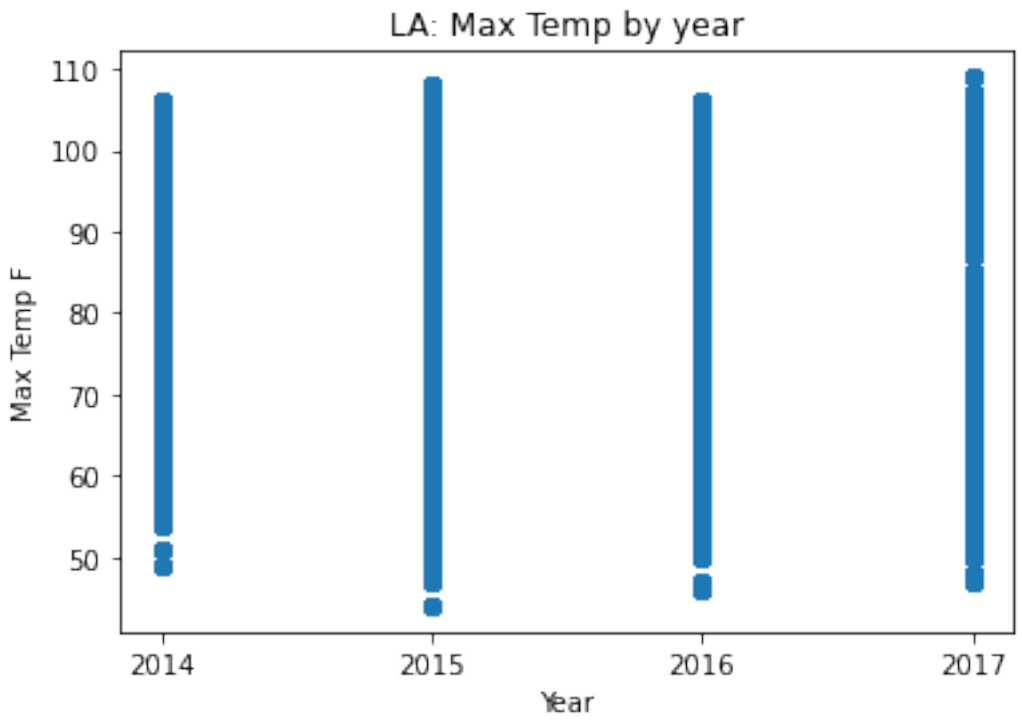
[63]:
```
ax = LaMerged.groupby("Report Year").size().plot(kind = "bar", title= "Total␣
 ↪crime events by Year")
ax.set_ylabel("Number of Occurrences")
plt.xticks(rotation=0)
plt.show()
```



[64]:
```
plt.scatter(LaMerged["Report Month"], LaMerged["Temp Max"])
plt.title("LA: Max Temp by month")
plt.xlabel('Month')
plt.ylabel('Max Temp F')
plt.show()
```



[65]:
```
plt.scatter(LaMerged["Report Year"], LaMerged["Temp Max"])
plt.title("LA: Max Temp by year")
plt.xticks(np.arange(min(LaMerged["Report Year"]), max(LaMerged["Report␣
  ↪Year"])+1, 1.0))
plt.xlabel('Year')
plt.ylabel('Max Temp F')
plt.show()
```



[66]:
```
LaWeatherDF.rename(columns={'DATE': 'Date'}, inplace=True)
```

[67]:
```
LaCrimeDF.dropna(inplace=True)
LaWeatherDF.dropna(inplace=True)
```

[68]:
```
numofcrimes = len(LaCrimeDF.index)
print("Total Crimes:", numofcrimes)

numofweather = len(LaWeatherDF.index)
print("Weather Entries:", numofweather)
```

```
Total Crimes: 1176536
Weather Entries: 1461
```

Merging Crime & Weather dataset

[69]:
```
LaMerged.head()
```

[69]:

	TIME OCC	AREA	Crm Cd	Crm Cd Desc	\
0	1030	1	330	BURGLARY FROM VEHICLE	
1	2000	7	664	BUNCO, PETTY THEFT	
2	2050	2	624	BATTERY - SIMPLE ASSAULT	
3	1200	12	440	THEFT PLAIN - PETTY ($950 & UNDER)	
4	100	12	440	THEFT PLAIN - PETTY ($950 & UNDER)	

```
           Mocodes  Premis Cd  Crm Cd 1        Date  Report Month  Report Year  \
0             0344      123.0     330.0  2014-06-02             6          2014
1        0701 0344      502.0     664.0  2014-06-02             6          2014
2  2004 1266 0416       701.0     624.0  2014-06-02             6          2014
3  0701 1820 0344       501.0     440.0  2014-06-02             6          2014
4        0344 1202      502.0     440.0  2014-06-02             6          2014

   Report Day  Temp Max Temp Min Temp Avg
0           2      95.0       50       74
1           2      95.0       50       74
2           2      95.0       50       74
3           2      95.0       50       74
4           2      95.0       50       74
```

[70]:
```
LaMerged["Temp Avg"] = pd.to_numeric(LaMerged["Temp Avg"], errors='coerce')
```

[71]:
```
LaMerged["Temp Max"] = pd.to_numeric(LaMerged["Temp Max"], errors='coerce')
```

Temp scope

[72]:
```
LaMerged.dropna(inplace=True)
temp = LaMerged['Temp Max']
crimeType = LaMerged['Crm Cd'].unique()
Cold = LaMerged[LaMerged['Temp Max'] < 50.0]
Hot = LaMerged[LaMerged['Temp Max']  > 80.0]
Mild = LaMerged[(LaMerged['Temp Max'] >= 50.0) & (LaMerged['Temp Max']  <= 80.
↪0)]
numofweathercrimes = len(LaMerged.index)
```

Counting the crimes when its hot

[73]:
```
ldf = Hot



theft = ldf.loc[ldf['Crm Cd'] == 440].value_counts()
theft2 = ldf.loc[ldf['Crm Cd'] == 354].value_counts()
theft3 = ldf.loc[ldf['Crm Cd'] == 420].value_counts()
theft4 = ldf.loc[ldf['Crm Cd'] == 341].value_counts()
theft5 = ldf.loc[ldf['Crm Cd'] == 442].value_counts()
theft6 = ldf.loc[ldf['Crm Cd'] == 520].value_counts()
theft7 = ldf.loc[ldf['Crm Cd'] == 331].value_counts()
theft8 = ldf.loc[ldf['Crm Cd'] == 668].value_counts()
theft9 = ldf.loc[ldf['Crm Cd'] == 649].value_counts()
theft10 = ldf.loc[ldf['Crm Cd'] == 480].value_counts()
theft11 = ldf.loc[ldf['Crm Cd'] == 350].value_counts()
```

```
theft12 = ldf.loc[ldf['Crm Cd'] == 662].value_counts()

numoftheft = len(theft.index) +  len(theft2.index) + len(theft3.index) +␣
 ↪len(theft4.index) + len(theft5.index) + len(theft6.index) + len(theft7.
 ↪index) + len(theft8.index) + len(theft9.index) +  len(theft10.index)+ ␣
 ↪len(theft11.index)+  len(theft12.index)


vandalism = ldf.loc[ldf['Crm Cd'] == 740].value_counts()
vandalism2 = ldf.loc[ldf['Crm Cd'] == 745].value_counts()

numofvandalism = len(vandalism.index) + len(vandalism2.index)


robbery = ldf.loc[ldf['Crm Cd'] == 210].value_counts()
robbery2 = ldf.loc[ldf['Crm Cd'] == 220].value_counts()

numofrobbery = len(robbery.index) + len(robbery2.index)


burglary = ldf.loc[ldf['Crm Cd'] == 330].value_counts()
burglary2 = ldf.loc[ldf['Crm Cd'] == 510].value_counts()
burglary3 = ldf.loc[ldf['Crm Cd'] == 310].value_counts()
burglary4 = ldf.loc[ldf['Crm Cd'] == 320].value_counts()

numofburglary = len(burglary.index) + len(burglary2.index) + len(burglary3.
 ↪index) + len(burglary4.index)

arson = ldf.loc[ldf['Crm Cd'] == 648].value_counts()
numofarson = len(arson.index)

weap = ldf.loc[ldf['Crm Cd'] == 756].value_counts()
numofweap = len(weap.index)

trespassing = ldf.loc[ldf['Crm Cd'] == 888].value_counts()
numoftrespassing = len(trespassing.index)

fire = ldf.loc[ldf['Crm Cd Desc'].str.contains("fire", case=False)]
numoffire = len(fire.index)

numcrimeproph = numofburglary + numofrobbery + numoftheft + numofarson +␣
 ↪numofvandalism + numoffire + numoftrespassing + numofweap

proppercent = str(round(((numcrimeproph/numofweathercrimes)*100), 2))

print("Crimes Against Property on Hot Days:", numcrimeproph)
print("Percent of Crimes:", proppercent)
```

```
print("Theft Crimes:", numoftheft)
print("Vandalism Crimes:", numofvandalism)
print("Robbery Crimes:", numofrobbery)

print("trespassing:", numoftrespassing)
print("Burglary Crimes:", numofburglary)
print("arson Crimes:", numofarson)
print("Weapon Possesion Crimes:", numofweap)
print("Fire Related Crimes:", numoffire)
print()


assault = ldf.loc[ldf['Crm Cd'] == 624].value_counts()
assault2 = ldf.loc[ldf['Crm Cd'] == 626].value_counts()
assault3 = ldf.loc[ldf['Crm Cd'] == 230].value_counts()
assault4 = ldf.loc[ldf['Crm Cd'] == 860].value_counts()
assault5 = ldf.loc[ldf['Crm Cd'] == 236].value_counts()

numofassault = len(assault.index) + len(assault2.index) + len(assault3.index) +␣
 ↪ len(assault4.index) + len(assault5.index)

# homicide = ldf.loc[ldf['Crm Cd Desc'].str.contains("homicide", case=False)]
# numofhomicide = len(homicide.index)

# kidnap = ldf.loc[ldf['Crm Cd Desc'].str.contains("kidnap", case=False)]
# numofkidnap = len(kidnap.index)

# stalking = ldf.loc[ldf['Crm Cd Desc'].str.contains("stalking", case=False)]
stalk2 = ldf.loc[ldf['Crm Cd'] == 956].value_counts()
numofstalking =  len(stalk2.index)



medical = ldf.loc[ldf['Crm Cd'] == 627].value_counts()
numofmedical = len(medical.index)

# person = ldf.loc[ldf['Crm Cd Desc'].str.contains("person", case=False)]
# numofperson = len(person.index)

harassment = ldf.loc[ldf['Crm Cd'] == 121].value_counts()
numofharass = len(harassment.index)

numcrimepersonh = numofassault + numofmedical + numofharass + numofstalking

peoplepercent = str(round(((numcrimepersonh/numofweathercrimes)*100), 2))

print("Crimes Against People on Hot Days:", numcrimepersonh)
```

```
print("Percent of Crimes:", peoplepercent)
print("Assault Crimes:", numofassault)
# print("homicide Crimes:", numofhomicide)
# print("kidnap Crimes:", numofkidnap)

print("stalking:", numofstalking)
print("Child:", numofmedical)
# print("Person Crimes:", numofperson)
print("Rape Crimes:", numofharass)
print()

Violations =  ldf.loc[ldf['Crm Cd'] == 900].value_counts()
Violations2 =  ldf.loc[ldf['Crm Cd'] == 901].value_counts()
numofvio = len(Violations.index) + len(Violations2.index)

threat = ldf.loc[ldf['Crm Cd'] == 930].value_counts()
threat2 = ldf.loc[ldf['Crm Cd'] == 761].value_counts()

numofthreat = len(threat.index) + len(threat2.index)

# dsp = ldf.loc[ldf['Crm Cd Desc'].str.contains("DISTURBING THE PEACE",␣
 ↪case=False)]
# numofdsp = len(dsp.index)

other2 = ldf.loc[ldf['Crm Cd'] == 946].value_counts()
numofother =  len(other2.index)

numcrimesocietyh = numofvio + numofthreat + numofother

societypercent = str(round(((numcrimesocietyh/numofweathercrimes)*100), 2))

print("Crimes Against Society/Other on Hot Days:", numcrimesocietyh)
print("Percent of Crimes:", societypercent)
print("Violations:", numofvio)
# print("DISTURBING THE PEACE:", numofdsp)
print("Threats:", numofthreat)
print("Other:", numofother)
print()

hotdaycrimetot = numcrimeproph + numcrimepersonh + numcrimesocietyh

print("Total Hot Day Crimes:", hotdaycrimetot)



print("Percent of Weather Crimes:", (str(round((hotdaycrimetot/len(LaMerged.
 ↪index))*100,2))))
```

```
Crimes Against Property on Hot Days: 225475
Percent of Crimes: 30.26
Theft Crimes: 106425
Vandalism Crimes: 38823
Robbery Crimes: 17822
trespassing: 3673
Burglary Crimes: 56813
arson Crimes: 509
Weapon Possesion Crimes: 28
Fire Related Crimes: 1382

Crimes Against People on Hot Days: 90470
Percent of Crimes: 12.14
Assault Crimes: 83554
stalking: 3060
Child: 1555
Rape Crimes: 2301

Crimes Against Society/Other on Hot Days: 22811
Percent of Crimes: 3.06
Violations: 6739
Threats: 13035
Other: 3037

Total Hot Day Crimes: 338756
Percent of Weather Crimes: 45.46
```

Counting the crimes when its mild

[74]:
```
ldf = Mild



theft = ldf.loc[ldf['Crm Cd'] == 440].value_counts()
theft2 = ldf.loc[ldf['Crm Cd'] == 354].value_counts()
theft3 = ldf.loc[ldf['Crm Cd'] == 420].value_counts()
theft4 = ldf.loc[ldf['Crm Cd'] == 341].value_counts()
theft5 = ldf.loc[ldf['Crm Cd'] == 442].value_counts()
theft6 = ldf.loc[ldf['Crm Cd'] == 520].value_counts()
theft7 = ldf.loc[ldf['Crm Cd'] == 331].value_counts()
theft8 = ldf.loc[ldf['Crm Cd'] == 668].value_counts()
theft9 = ldf.loc[ldf['Crm Cd'] == 649].value_counts()
theft10 = ldf.loc[ldf['Crm Cd'] == 480].value_counts()
theft11 = ldf.loc[ldf['Crm Cd'] == 350].value_counts()
theft12 = ldf.loc[ldf['Crm Cd'] == 662].value_counts()
```

```
numoftheft = len(theft.index) +  len(theft2.index) + len(theft3.index) +␣
 ↪len(theft4.index) + len(theft5.index) + len(theft6.index) + len(theft7.
 ↪index) + len(theft8.index) + len(theft9.index) +  len(theft10.index)+ ␣
 ↪len(theft11.index)+  len(theft12.index)


vandalism = ldf.loc[ldf['Crm Cd'] == 740].value_counts()
vandalism2 = ldf.loc[ldf['Crm Cd'] == 745].value_counts()

numofvandalism = len(vandalism.index) + len(vandalism2.index)
robbery = ldf.loc[ldf['Crm Cd'] == 210].value_counts()
robbery2 = ldf.loc[ldf['Crm Cd'] == 220].value_counts()

numofrobbery = len(robbery.index) + len(robbery2.index)


burglary = ldf.loc[ldf['Crm Cd'] == 330].value_counts()
burglary2 = ldf.loc[ldf['Crm Cd'] == 510].value_counts()
burglary3 = ldf.loc[ldf['Crm Cd'] == 310].value_counts()
burglary4 = ldf.loc[ldf['Crm Cd'] == 320].value_counts()

numofburglary = len(burglary.index) + len(burglary2.index) + len(burglary3.
 ↪index) + len(burglary4.index)

arson = ldf.loc[ldf['Crm Cd'] == 648].value_counts()
numofarson = len(arson.index)

weap = ldf.loc[ldf['Crm Cd'] == 756].value_counts()
numofweap = len(weap.index)

trespassing = ldf.loc[ldf['Crm Cd'] == 888].value_counts()
numoftrespassing = len(trespassing.index)


fire = ldf.loc[ldf['Crm Cd Desc'].str.contains("fire", case=False)]
numoffire = len(fire.index)


numcrimepropm = numofburglary + numofrobbery + numoftheft + numofarson +␣
 ↪numofvandalism + numoffire + numoftrespassing + numofweap

proppercent = str(round(((numcrimepropm/numofweathercrimes)*100), 2))

print("Crimes Against Property on Mild Days:", numcrimepropm)
print("Percent of Crimes:", proppercent)
print("Theft Crimes:", numoftheft)
print("Vandalism Crimes:", numofvandalism)
```

```
print("Robbery Crimes:", numofrobbery)
print("trespassing:", numoftrespassing)

print("Burglary Crimes:", numofburglary)
print("arson Crimes:", numofarson)
print("Weapon Possesion Crimes:", numofweap)
print("Fire Related Crimes:", numoffire)
print()


assault = ldf.loc[ldf['Crm Cd'] == 624].value_counts()
assault2 = ldf.loc[ldf['Crm Cd'] == 626].value_counts()
assault3 = ldf.loc[ldf['Crm Cd'] == 230].value_counts()
assault4 = ldf.loc[ldf['Crm Cd'] == 860].value_counts()
assault5 = ldf.loc[ldf['Crm Cd'] == 236].value_counts()

numofassault = len(assault.index) + len(assault2.index) + len(assault3.index) +␣
 ↪ len(assault4.index) + len(assault5.index)

# homicide = ldf.loc[ldf['Crm Cd Desc'].str.contains("homicide", case=False)]
# numofhomicide = len(homicide.index)

# kidnap = ldf.loc[ldf['Crm Cd Desc'].str.contains("kidnap", case=False)]
# numofkidnap = len(kidnap.index)

# stalking = ldf.loc[ldf['Crm Cd Desc'].str.contains("stalking", case=False)]
stalk2 = ldf.loc[ldf['Crm Cd'] == 956].value_counts()
numofstalking = len(stalk2.index)



medical = ldf.loc[ldf['Crm Cd'] == 627].value_counts()
numofmedical = len(medical.index)

# person = ldf.loc[ldf['Crm Cd Desc'].str.contains("person", case=False)]
# numofperson = len(person.index)

harassment =  ldf.loc[ldf['Crm Cd'] == 121].value_counts()
numofharass = len(harassment.index)

numcrimepersonm = numofassault +  numofmedical  + numofharass + numofstalking

peoplepercent = str(round(((numcrimepersonm/numofweathercrimes)*100), 2))

print("Crimes Against People on Mild Days:", numcrimepersonm)
print("Percent of Crimes:", peoplepercent)
print("Assault Crimes:", numofassault)
```

```
# print("homicide Crimes:", numofhomicide)
# print("kidnap Crimes:", numofkidnap)
print("stalking:", numofstalking)
print("Child:", numofmedical)
# print("Person Crimes:", numofperson)
print("Rape Crimes:", numofharass)
print()


Violations =  ldf.loc[ldf['Crm Cd'] == 900].value_counts()
Violations2 =  ldf.loc[ldf['Crm Cd'] == 901].value_counts()
numofvio = len(Violations.index) + len(Violations2.index)

threat = ldf.loc[ldf['Crm Cd'] == 930].value_counts()
threat2 = ldf.loc[ldf['Crm Cd'] == 761].value_counts()

numofthreat = len(threat.index) + len(threat2.index)

# dsp = ldf.loc[ldf['Crm Cd Desc'].str.contains("DISTURBING THE PEACE",␣
 ↪case=False)]
# numofdsp = len(dsp.index)

other2 = ldf.loc[ldf['Crm Cd'] == 946].value_counts()
numofother =  len(other2.index)


numcrimesocietym = numofvio + numofthreat + numofother + numofthreat

societypercent = str(round(((numcrimesocietym/numofweathercrimes)*100), 2))

print("Crimes Against Society/Other on Mild Days:", numcrimesocietym)
print("Percent of Crimes:", societypercent)
print("Violations:", numofvio)
# print("DISTURBING THE PEACE:", numofdsp)
print("Threats:", numofthreat)
print("Other:", numofother)
print()

milddaycrimetot = numcrimepropm + numcrimepersonm + numcrimesocietym

print("Total Mild Day Crimes:", milddaycrimetot)
print("Percent of Weather Crimes:", (str(round((milddaycrimetot/
 ↪numofweathercrimes)*100,2))))
```

```
Crimes Against Property on Mild Days: 238276
Percent of Crimes: 31.97
Theft Crimes: 112378
```

```
Vandalism Crimes: 39221
Robbery Crimes: 18191
trespassing: 3744
Burglary Crimes: 62823
arson Crimes: 490
Weapon Possesion Crimes: 32
Fire Related Crimes: 1397

Crimes Against People on Mild Days: 86780
Percent of Crimes: 11.65
Assault Crimes: 79755
stalking: 3170
Child: 1634
Rape Crimes: 2221

Crimes Against Society/Other on Mild Days: 34829
Percent of Crimes: 4.67
Violations: 6650
Threats: 12554
Other: 3071

Total Mild Day Crimes: 359885
Percent of Weather Crimes: 48.29
```

Counting the crimes when its cold

[75]:
```
ldf = Cold



theft = ldf.loc[ldf['Crm Cd'] == 440].value_counts()
theft2 = ldf.loc[ldf['Crm Cd'] == 354].value_counts()
theft3 = ldf.loc[ldf['Crm Cd'] == 420].value_counts()
theft4 = ldf.loc[ldf['Crm Cd'] == 341].value_counts()
theft5 = ldf.loc[ldf['Crm Cd'] == 442].value_counts()
theft6 = ldf.loc[ldf['Crm Cd'] == 520].value_counts()
theft7 = ldf.loc[ldf['Crm Cd'] == 331].value_counts()
theft8 = ldf.loc[ldf['Crm Cd'] == 668].value_counts()
theft9 = ldf.loc[ldf['Crm Cd'] == 649].value_counts()
theft10 = ldf.loc[ldf['Crm Cd'] == 480].value_counts()
theft11 = ldf.loc[ldf['Crm Cd'] == 350].value_counts()
theft12 = ldf.loc[ldf['Crm Cd'] == 662].value_counts()

numoftheft = len(theft.index) +  len(theft2.index) + len(theft3.index) +␣
 ↪len(theft4.index) + len(theft5.index) + len(theft6.index) + len(theft7.
 ↪index) + len(theft8.index) + len(theft9.index) +  len(theft10.index)+ ␣
 ↪len(theft11.index)+  len(theft12.index)
```

```
vandalism = ldf.loc[ldf['Crm Cd'] == 740].value_counts()
vandalism2 = ldf.loc[ldf['Crm Cd'] == 745].value_counts()

numofvandalism = len(vandalism.index) + len(vandalism2.index)

trespassing = ldf.loc[ldf['Crm Cd'] == 888].value_counts()
numoftrespassing = len(trespassing.index)

robbery = ldf.loc[ldf['Crm Cd'] == 210].value_counts()
robbery2 = ldf.loc[ldf['Crm Cd'] == 220].value_counts()

numofrobbery = len(robbery.index) + len(robbery2.index)


burglary = ldf.loc[ldf['Crm Cd'] == 330].value_counts()
burglary2 = ldf.loc[ldf['Crm Cd'] == 510].value_counts()
burglary3 = ldf.loc[ldf['Crm Cd'] == 310].value_counts()
burglary4 = ldf.loc[ldf['Crm Cd'] == 320].value_counts()

numofburglary = len(burglary.index) + len(burglary2.index) + len(burglary3.
 ↪index) + len(burglary4.index)

arson = ldf.loc[ldf['Crm Cd'] == 648].value_counts()
numofarson = len(arson.index)

weap = ldf.loc[ldf['Crm Cd'] == 756].value_counts()
numofweap = len(weap.index)

fire = ldf.loc[ldf['Crm Cd Desc'].str.contains("fire", case=False)]
numoffire = len(fire.index)

numcrimepropc = numofburglary + numofrobbery + numoftheft + numofarson +␣
 ↪numofvandalism + numoffire + numoftrespassing + numofweap

proppercent = str(round(((numcrimepropc/numofweathercrimes)*100), 2))

print("Crimes Against Property on Cold Days:", numcrimepropc)
print("Percent of Crimes:", proppercent)
print("Theft Crimes:", numoftheft)
print("Vandalism Crimes:", numofvandalism)
print("Robbery Crimes:", numofrobbery)

print("trespassing:", numoftrespassing)
print("Burglary Crimes:", numofburglary)
print("arson Crimes:", numofarson)
print("Weapon Possesion Crimes:", numofweap)
```

```
print("Fire Related Crimes:", numoffire)
print()

assault = ldf.loc[ldf['Crm Cd'] == 624].value_counts()
assault2 = ldf.loc[ldf['Crm Cd'] == 626].value_counts()
assault3 = ldf.loc[ldf['Crm Cd'] == 230].value_counts()
assault4 = ldf.loc[ldf['Crm Cd'] == 860].value_counts()
assault5 = ldf.loc[ldf['Crm Cd'] == 236].value_counts()

numofassault = len(assault.index) + len(assault2.index) + len(assault3.index) +␣
 ↪ len(assault4.index) + len(assault5.index)

# homicide = ldf.loc[ldf['Crm Cd Desc'].str.contains("homicide", case=False)]
# numofhomicide = len(homicide.index)

# kidnap = ldf.loc[ldf['Crm Cd Desc'].str.contains("kidnap", case=False)]
# numofkidnap = len(kidnap.index)

# stalking = ldf.loc[ldf['Crm Cd Desc'].str.contains("stalking", case=False)]
stalk2 = ldf.loc[ldf['Crm Cd'] == 956].value_counts()
numofstalking = len(stalk2.index)

medical = ldf.loc[ldf['Crm Cd'] == 627].value_counts()
numofmedical = len(medical.index)

# person = ldf.loc[ldf['Crm Cd Desc'].str.contains("person", case=False)]
# numofperson = len(person.index)

harassment =  ldf.loc[ldf['Crm Cd'] == 121].value_counts()
numofharass = len(harassment.index)

numcrimepersonc = numofassault   + numofmedical  + numofharass + numofstalking

peoplepercent = str(round(((numcrimepersonc/numofweathercrimes)*100), 2))

print("Crimes Against People on Cold Days:", numcrimepersonc)
print("Percent of Crimes:", peoplepercent)
print("Assault Crimes:", numofassault)
# print("homicide Crimes:", numofhomicide)
# print("kidnap Crimes:", numofkidnap)
print("stalking:", numofstalking)

print("Child:", numofmedical)
# print("Person Crimes:", numofperson)
print("Rape Crimes:", numofharass)
print()
```

```
Violations =  ldf.loc[ldf['Crm Cd'] == 900].value_counts()
Violations2 =  ldf.loc[ldf['Crm Cd'] == 901].value_counts()
numofvio = len(Violations.index) + len(Violations2.index)

threat = ldf.loc[ldf['Crm Cd'] == 930].value_counts()
threat2 = ldf.loc[ldf['Crm Cd'] == 761].value_counts()

numofthreat = len(threat.index) + len(threat2.index)

# dsp = ldf.loc[ldf['Crm Cd Desc'].str.contains("DISTURBING THE PEACE",␣
 ↪case=False)]
# numofdsp = len(dsp.index)

# other = ldf.loc[ldf['Crm Cd Desc'].str.contains("other", case=False)]
other2 = ldf.loc[ldf['Crm Cd'] == 946].value_counts()
numofother =  len(other2.index)

numcrimesocietyc = numofvio + numofthreat + numofother

societypercent = str(round(((numcrimesocietyc/numofweathercrimes)*100), 2))

print("Crimes Against Society/Other on Cold Days:", numcrimesocietyc)
print("Percent of Crimes:", societypercent)
print("Violations:", numofvio)
# print("DISTURBING THE PEACE:", numofdsp)
print("Threats:", numofthreat)
print("Other:", numofother)
print()


colddaycrimetot = numcrimepropc + numcrimepersonc + numcrimesocietyc

print("Total Cold Day Crimes:", colddaycrimetot)

print("Percent of Weather Crimes:", (str(round((colddaycrimetot/
 ↪numofweathercrimes)*100,2))))
print(numofweathercrimes)
```

```
Crimes Against Property on Cold Days: 4202
Percent of Crimes: 0.56
Theft Crimes: 1865
Vandalism Crimes: 741
Robbery Crimes: 334
trespassing: 49
Burglary Crimes: 1171
arson Crimes: 10
```

```
Weapon Possesion Crimes: 0
Fire Related Crimes: 32

Crimes Against People on Cold Days: 1488
Percent of Crimes: 0.2
Assault Crimes: 1364
stalking: 68
Child: 22
Rape Crimes: 34

Crimes Against Society/Other on Cold Days: 364
Percent of Crimes: 0.05
Violations: 133
Threats: 203
Other: 28

Total Cold Day Crimes: 6054
Percent of Weather Crimes: 0.81
745211
```

Counting the total crimes against property

[76]:
```
fire1 = LaMerged.loc[LaMerged['Crm Cd Desc'].str.contains("fire", case=False)]
numoffire1 = len(fire1.index)
theft1 = LaMerged.loc[LaMerged['Crm Cd'] == 440].value_counts()
theft2 = LaMerged.loc[LaMerged['Crm Cd'] == 354].value_counts()
theft3 = LaMerged.loc[LaMerged['Crm Cd'] == 420].value_counts()
theft4 = LaMerged.loc[LaMerged['Crm Cd'] == 341].value_counts()
theft5 = LaMerged.loc[LaMerged['Crm Cd'] == 442].value_counts()
theft6 = LaMerged.loc[LaMerged['Crm Cd'] == 520].value_counts()
theft7 = LaMerged.loc[LaMerged['Crm Cd'] == 331].value_counts()
theft8 = LaMerged.loc[LaMerged['Crm Cd'] == 668].value_counts()
theft9 = LaMerged.loc[LaMerged['Crm Cd'] == 649].value_counts()
theft10 = LaMerged.loc[LaMerged['Crm Cd'] == 480].value_counts()
theft11 = LaMerged.loc[LaMerged['Crm Cd'] == 350].value_counts()
theft12 = LaMerged.loc[LaMerged['Crm Cd'] == 662].value_counts()

numoftheft1 = len(theft1.index) +  len(theft2.index) + len(theft3.index) +␣
 ↪len(theft4.index) + len(theft5.index) + len(theft6.index) + len(theft7.
 ↪index) + len(theft8.index) + len(theft9.index) +  len(theft10.index)+ ␣
 ↪len(theft11.index)+  len(theft12.index)

vandalism1 = LaMerged.loc[LaMerged['Crm Cd'] == 740].value_counts()
vandalism2 = LaMerged.loc[LaMerged['Crm Cd'] == 745].value_counts()

numofvandalism1 = len(vandalism1.index) + len(vandalism2.index)

trespassing1 = LaMerged.loc[LaMerged['Crm Cd'] == 888].value_counts()
```

```
numoftrespassing1 = len(trespassing1.index)

robbery1 = LaMerged.loc[LaMerged['Crm Cd'] == 210].value_counts()
robbery2 = LaMerged.loc[LaMerged['Crm Cd'] == 220].value_counts()

numofrobbery1 = len(robbery1.index) + len(robbery2.index)


burglaryz = LaMerged.loc[LaMerged['Crm Cd'] == 330].value_counts()
burglary2 = LaMerged.loc[LaMerged['Crm Cd'] == 510].value_counts()
burglary3 = LaMerged.loc[LaMerged['Crm Cd'] == 310].value_counts()
burglary4 = LaMerged.loc[LaMerged['Crm Cd'] == 320].value_counts()

numofburglary1 = len(burglaryz.index) + len(burglary2.index) + len(burglary3.
 ↪index) + len(burglary4.index)

arson = LaMerged.loc[LaMerged['Crm Cd'] == 648].value_counts()
numofarson1 = len(arson.index)

weap = LaMerged.loc[LaMerged['Crm Cd'] == 756].value_counts()
numofweap = len(weap.index)

numcrimeprop = numofburglary1 + numofrobbery1 + numoftheft1 + numofarson1 +␣
 ↪numofvandalism1 + numoffire1 + numoftrespassing1

proppercent1 = (numcrimeprop/numofweathercrimes)


print("Percent of Crimes:", proppercent1 * 100)
print("Theft Crimes:", numoftheft1)
print("Vandalism Crimes:", numofvandalism1)
print("Robbery Crimes:", numofrobbery1)
print("trespassing:", numoftrespassing1)
print("Burglary Crimes:", numofburglary1)
print("arson Crimes:", numofarson1)

print("Fire Related Crimes:", numoffire1)
print("Total",numcrimeprop)
```

```
Percent of Crimes: 62.78664700333194
Theft Crimes: 220668
Vandalism Crimes: 78785
Robbery Crimes: 36347
trespassing: 7466
Burglary Crimes: 120807
arson Crimes: 1009
Fire Related Crimes: 2811
```

```
Total 467893
```

Counting the total crimes against people

[77]:
```
assaultz = LaMerged.loc[LaMerged['Crm Cd'] == 624].value_counts()
assault2 = LaMerged.loc[LaMerged['Crm Cd'] == 626].value_counts()
assault3 = LaMerged.loc[LaMerged['Crm Cd'] == 230].value_counts()
assault4 = LaMerged.loc[LaMerged['Crm Cd'] == 860].value_counts()
assault5 = LaMerged.loc[LaMerged['Crm Cd'] == 236].value_counts()

numofassault1 = len(assaultz.index) + len(assault2.index) + len(assault3.index)␣
 ↪+  len(assault4.index) + len(assault5.index)
# homicide1 = LaCrimeDF.loc[LaCrimeDF['Crm Cd Desc'].str.contains("homicide",␣
 ↪case=False)]
# numofhomicide1 = len(homicide1.index)

# kidnap1 = LaCrimeDF.loc[LaCrimeDF['Crm Cd Desc'].str.contains("kidnap",␣
 ↪case=False)]
# numofkidnap1 = len(kidnap1.index)

# stalking1 = LaCrimeDF.loc[LaCrimeDF['Crm Cd Desc'].str.contains("stalking",␣
 ↪case=False)]
stalk2 = LaMerged.loc[LaMerged['Crm Cd'] == 956].value_counts()
numofstalking1 = len(stalk2.index)


medical1 = LaMerged.loc[LaMerged['Crm Cd'] == 627].value_counts()
numofmedical1 = len(medical1.index)

# person1 = LaCrimeDF.loc[LaCrimeDF['Crm Cd Desc'].str.contains("person",␣
 ↪case=False)]
# numofperson1 = len(person1.index)

harassment1 =  LaMerged.loc[LaMerged['Crm Cd'] == 121].value_counts()
numofharass1 = len(harassment1.index)


numcrimeperson = numofassault1 + numofmedical1  + numofharass1 + numofstalking1

peoplepercent1 = (numcrimeperson/numofweathercrimes)

print("Percent of Crimes:", peoplepercent1*100)
print("Assault Crimes:", numofassault1)
# print("homicide Crimes:", numofhomicide1)
# print("kidnap Crimes:", numofkidnap1)
print("stalking:", numofstalking1)

print("Child:", numofmedical1)
```

```
# print("Person Crimes:", numofperson1)
print("Rape Crimes:", numofharass1)
print("Total", numcrimeperson)
```

```
Percent of Crimes: 23.984884817856955
Assault Crimes: 164673
stalking: 6298
Child: 3211
Rape Crimes: 4556
Total 178738
```

Counting the total crimes against society

[78]:
```
Violations1 = LaMerged.loc[LaMerged['Crm Cd'] == 900].value_counts()
Violations2 =  LaMerged.loc[LaMerged['Crm Cd'] == 901].value_counts()
numofvio1 = len(Violations1.index) + len(Violations2.index)

threat1 = LaMerged.loc[LaMerged['Crm Cd'] == 930].value_counts()
threat2 = LaMerged.loc[LaMerged['Crm Cd'] == 761].value_counts()

numofthreat1 = len(threat1.index) + len(threat2.index)

# dsp1 = LaCrimeDF.loc[LaCrimeDF['Crm Cd Desc'].str.contains("DISTURBING THE␣
 ↪PEACE", case=False)]
# numofdsp1 = len(dsp1.index)

# other1 = LaCrimeDF.loc[LaCrimeDF['Crm Cd Desc'].str.contains("other",␣
 ↪case=False)]
other2 = LaMerged.loc[LaMerged['Crm Cd'] == 946].value_counts()
numofother1 =  len(other2.index)

numcrimesociety = numofvio1 + numofother1 + numofthreat1

societypercent1 = (numcrimesociety/numofweathercrimes)


print("Percent of Crimes:", societypercent1*100)
print("Violations:", numofvio1)
# print("DISTURBING THE PEACE:", numofdsp1)
print("Threats:", numofthreat1)
print("Other:", numofother1)
print("Total", numcrimesociety)
```

```
Percent of Crimes: 6.098943789074504
Violations: 13522
Threats: 25792
Other: 6136
Total 45450
```

[79]:
```
numofmissing1 = numofweathercrimes - (numcrimeprop + numcrimeperson +␣
↪numcrimesociety)

print("Number of crime on property:", numcrimeprop)
print("Number of crime on people:", numcrimeperson)
print("Number of crime on society:", numcrimesociety)
print("Number Missing:", numofmissing1)
missingpercent = (numofmissing1/len(LaMerged.index))
print("Percent of Crimes Missing:", missingpercent*100)
```

```
Number of crime on property: 467893
Number of crime on people: 178738
Number of crime on society: 45450
Number Missing: 53130
Percent of Crimes Missing: 7.1295243897365985
```

[80]:
```
totweatherprop = numcrimeproph + numcrimepropm + numcrimepropc
totweatherperson = numcrimepersonh + numcrimepersonm + numcrimepersonc
totweathersociety = numcrimesocietyh + numcrimesocietym + numcrimesocietyc

hotProb = hotdaycrimetot/numofweathercrimes
mildProb = milddaycrimetot/numofweathercrimes
coldProb = colddaycrimetot/numofweathercrimes

propProb = numcrimeprop/numofweathercrimes
peopleProb = numcrimeperson/numofweathercrimes
societyProb = numcrimesociety/numofweathercrimes


bayhprop = (numcrimeproph)/(hotdaycrimetot)
bayhpeople = (numcrimepersonh)/(hotdaycrimetot)
bayhsociety = (numcrimesocietyh)/(hotdaycrimetot)

baymprop = (numcrimepropm)/(milddaycrimetot)
baympeople = (numcrimepersonm)/(milddaycrimetot)
baymsociety = (numcrimesocietym)/(milddaycrimetot)

baycprop = (numcrimepropc)/(colddaycrimetot)
baycpeople = (numcrimepersonc)/(colddaycrimetot)
baycsociety = (numcrimesocietyc)/(colddaycrimetot)

#probhotprop = (()/())

print("Property Crimes: ", (str(round((totweatherprop/
↪numofweathercrimes)*100,2))))
print("People Crimes: ", (str(round((totweatherperson/
↪numofweathercrimes)*100,2))))
```

```
print("Society Crimes: ", (str(round((totweathersociety/
 ↪numofweathercrimes)*100,2))))
print("Bayes' Theroem:")
print("Given a Hot Day, Probability of Property Crime Occurring: ",␣
 ↪(str(round(bayhprop*100,2))))
print("Given a Hot Day, Probability of People Crime Occurring: ",␣
 ↪(str(round(bayhpeople*100,2))))
print("Given a Hot Day, Probability of Society Crime Occurring: ",␣
 ↪(str(round(bayhsociety*100,2))))
print("Given a Mild Day, Probability of Property Crime Occurring: ",␣
 ↪(str(round(baymprop*100,2))))
print("Given a Mild Day, Probability of People Crime Occurring: ",␣
 ↪(str(round(baympeople*100,2))))
print("Given a Mild Day, Probability of Society Crime Occurring: ",␣
 ↪(str(round(baymsociety*100,2))))
print("Given a Cold Day, Probability of Property Crime Occurring: ",␣
 ↪(str(round(baycprop*100,2))))
print("Given a Cold Day, Probability of People Crime Occurring: ",␣
 ↪(str(round(baycpeople*100,2))))
print("Given a Cold Day, Probability of Society Crime Occurring: ",␣
 ↪(str(round(baycsociety*100,2))))
```

```
Property Crimes:  62.79
People Crimes:  23.98
Society Crimes:  7.78
Bayes' Theroem:
Given a Hot Day, Probability of Property Crime Occurring:  66.56
Given a Hot Day, Probability of People Crime Occurring:  26.71
Given a Hot Day, Probability of Society Crime Occurring:  6.73
Given a Mild Day, Probability of Property Crime Occurring:  66.21
Given a Mild Day, Probability of People Crime Occurring:  24.11
Given a Mild Day, Probability of Society Crime Occurring:  9.68
Given a Cold Day, Probability of Property Crime Occurring:  69.41
Given a Cold Day, Probability of People Crime Occurring:  24.58
Given a Cold Day, Probability of Society Crime Occurring:  6.01
```