nyAnalysis

February 4, 2020

```python
In [1]: import pandas as pd
        import plotly.express as px
        import plotly.graph_objects as go

In [2]: df = pd.read_csv("terorrismWith30DayForward.csv")
```

0.1 Prep The Data

```python
In [3]: df.head()
```

```
Out[3]:    Unnamed: 0        Date              City            Country Perpetrator  \
        0           0  1968-02-09      Buenos Aires          Argentina     Unknown
        1           1  1968-02-12     Santo Domingo  Dominican Republic     Unknown
        2           2  1968-02-13        Montevideo            Uruguay     Unknown
        3           3  1968-02-20          Santiago              Chile     Unknown
        4           4  1968-02-21  Washington, D.C.      United States     Unknown

                    Weapon  Injuries  Fatalities  \
        0          Firearms         0           0
        1        Explosives         0           0
        2  Fire or Firebomb         0           0
        3        Explosives         0           0
        4        Explosives         0           0

                                           Description  Closing Value  index  \
        0  ARGENTINA.  The second floor of the U.S. embas...          89.86      0
        1  DOMINICAN REPUBLIC.  A homemade bomb was found...            NaN      1
        2  URUGUAY.  A Molotov cocktail was thrown outsid...          89.07      2
        3  CHILE.  An explosion from a single stick of dy...          91.24      3
        4  UNITED STATES.  The Soviet embassy was bombed ...          91.24      4

           mean5DayChange  max5DayChange  min5DayChange  mean30DayChange  \
        0           0.188           1.04          -1.07         0.085667
        1           0.188           1.04          -1.07         0.085667
        2          -0.090           0.79          -1.07         0.031000
        3          -0.044           0.71          -0.93        -0.077667
        4           0.232           0.71          -0.35        -0.074333
```

```
     max30DayChange  min30DayChange
0              1.71           -1.54
1              1.71           -1.54
2              1.71           -1.54
3              1.71           -2.28
4              1.71           -2.28
```

In [4]: df.drop("Unnamed: 0",axis=1,inplace=True)

In [5]: df["Date"] = pd.to_datetime(df["Date"])

In [6]: df.info()

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 40129 entries, 0 to 40128
Data columns (total 16 columns):
Date             40129 non-null datetime64[ns]
City             35155 non-null object
Country          40129 non-null object
Perpetrator      40125 non-null object
Weapon           40126 non-null object
Injuries         40129 non-null int64
Fatalities       40129 non-null int64
Description      40128 non-null object
Closing Value    28198 non-null float64
index            40129 non-null int64
mean5DayChange   40129 non-null float64
max5DayChange    40129 non-null float64
min5DayChange    40129 non-null float64
mean30DayChange  40129 non-null float64
max30DayChange   40129 non-null float64
min30DayChange   40129 non-null float64
dtypes: datetime64[ns](1), float64(7), int64(3), object(5)
memory usage: 4.9+ MB
```

0.2 Start Analysis

In [7]: country = df.groupby("Country").mean()

In [8]: country.head()

```
Out[8]:              Injuries  Fatalities  Closing Value        index  \
        Country
        Afghanistan  2.364938    2.074074    1170.102256  30296.977778
        Albania      0.370370    0.111111    1063.018000  12189.129630
        Algeria      5.924765    4.081505    1073.761624  17945.097179
        Angola       2.958904    4.904110     486.153846   6194.219178
        Argentina    1.932584    0.655431     203.450681   2953.808989
```

	mean5DayChange	max5DayChange	min5DayChange	mean30DayChange \
Country				
Afghanistan	0.004563	17.114681	-17.012099	0.012726
Albania	-0.995037	12.552963	-13.650185	-1.141901
Algeria	-0.281248	12.825987	-12.941254	-0.134844
Angola	-0.326384	5.283151	-6.615479	0.078155
Argentina	-0.164719	1.572659	-1.953296	-0.123870

	max30DayChange	min30DayChange
Country		
Afghanistan	29.793679	-29.232227
Albania	22.327222	-23.677778
Algeria	26.327241	-23.476050
Angola	11.569726	-11.297534
Argentina	3.116367	-3.505581

```
In [9]: us = df.loc[df["Country"] == "United States"]
```

```
In [10]: us.head()
```

Out[10]:

	Date	City	Country	Perpetrator \
4	1968-02-21	Washington, D.C.	United States	Unknown
19	1968-03-19	Miami	United States	Anti-Castro Cubans
23	1968-04-22	New York City	United States	Anti-Castro Cubans
24	1968-04-22	New York City	United States	Anti-Castro Cubans
30	1968-05-24	Key West	United States	Anti-Castro Cubans

	Weapon	Injuries	Fatalities \
4	Explosives	0	0
19	Explosives	0	0
23	Explosives	0	0
24	Explosives	0	0
30	Explosives	0	0

	Description	Closing Value	index \
4	UNITED STATES. The Soviet embassy was bombed ...	91.24	4
19	UNITED STATES - Unidentified anti-Castro Cuban...	88.99	19
23	UNITED STATES. The Mexican mission to the Uni...	95.32	23
24	UNITED STATES. The Spanish National Tourist O...	95.32	24
30	UNITED STATES. The British cargo ship Granwoo...	97.15	30

	mean5DayChange	max5DayChange	min5DayChange	mean30DayChange \
4	0.232	0.71	-0.35	-0.074333
19	0.252	0.65	-0.09	-0.279333
23	-0.272	0.53	-1.30	-0.138000
24	-0.272	0.53	-1.30	-0.138000
30	-0.342	0.16	-0.76	-0.176333

```
        max30DayChange   min30DayChange
     4             1.71            -2.28
     19            1.23            -2.28
     23            0.70            -1.31
     24            0.70            -1.31
     30            1.00            -1.52
```

```python
In [11]: cities = []
         for city in us["City"]:
             if city == "Washington, DC":
                 cities.append("Washington, D.C.")
             else:
                 cities.append(city)
```

```python
In [12]: us["City"] = cities
```

```
C:\Users\cywon\newAnaconda3\lib\site-packages\ipykernel_launcher.py:1: SettingWithCopyWarning:


A value is trying to be set on a copy of a slice from a DataFrame.
Try using .loc[row_indexer,col_indexer] = value instead

See the caveats in the documentation: http://pandas.pydata.org/pandas-docs/stable/indexing.html#
```

```python
In [13]: cityValueCounts = (pd.DataFrame(us["City"].value_counts())).reset_index()
         cityValueCounts.columns = ["City","Number of Attacks"]
```

```python
In [14]: cityValueCounts.head()
```

```
Out[14]:                   City   Number of Attacks
         0      New York City                 167
         1              Miami                  59
         2  Washington, D.C.                   44
         3        Los Angeles                  39
         4      San Francisco                   9
```

```python
In [15]: injuriesAndFatalities = us.groupby("City").mean()[["Injuries","Fatalities"]].sort_value
```

```python
In [16]: usCityStats = pd.merge(cityValueCounts,injuriesAndFatalities,on="City")
```

```python
In [17]: usCityStats.info()
```

```
<class 'pandas.core.frame.DataFrame'>
Int64Index: 123 entries, 0 to 122
Data columns (total 4 columns):
City                  123 non-null object
```

```
Number of Attacks    123 non-null int64
Injuries             123 non-null float64
Fatalities           123 non-null float64
dtypes: float64(2), int64(1), object(1)
memory usage: 4.8+ KB
```

```
In [18]: fig = px.bar(usCityStats[:10], x='City', y='Number of Attacks',
                    hover_data=['Fatalities', 'Injuries'], color='Number of Attacks')
         fig.write_html('attackAndFatalitiesAndInjuriesByCity.html', auto_open=False)

         fig.show()

In [19]: newYork = us.loc[us["City"] == "New York City"]

In [20]: newYork.head()

Out[20]:         Date         City           Country         Perpetrator        Weapon  \
         23 1968-04-22  New York City  United States  Anti-Castro Cubans  Explosives
         24 1968-04-22  New York City  United States  Anti-Castro Cubans  Explosives
         33 1968-05-30  New York City  United States  Anti-Castro Cubans  Explosives
         37 1968-06-21  New York City  United States  Anti-Castro Cubans  Explosives
         38 1968-07-04  New York City  United States  Anti-Castro Cubans  Explosives

             Injuries  Fatalities                                    Description  \
         23         0           0  UNITED STATES.  The Mexican mission to the Uni...
         24         0           0  UNITED STATES.  The Spanish National Tourist O...
         33         0           0  UNITED STATES - El Poder Cubano bombed the Spa...
         37         0           0  UNITED STATES.  The Spanish National Tourist O...
         38         0           0  UNITED STATES.  The Canadian consulate and tou...

             Closing Value  index  mean5DayChange  max5DayChange  min5DayChange  \
         23          95.32     23          -0.272           0.53          -1.30
         24          95.32     24          -0.272           0.53          -1.30
         33            NaN     33          -0.454           0.49          -1.31
         37         100.66     37           0.386           0.85           0.10
         38            NaN     38          -0.520           0.05          -1.17

             mean30DayChange  max30DayChange  min30DayChange
         23        -0.138000            0.70           -1.31
         24        -0.138000            0.70           -1.31
         33        -0.094667            1.00           -1.52
         37         0.099333            1.27           -1.17
         38         0.026667            1.27           -1.17

In [21]: fig = px.scatter(newYork, x="Date", y="Fatalities",color="Weapon",size="max30DayChange"
         fig.show()

In [22]: newYork = pd.DataFrame(newYork.groupby(newYork.columns.tolist(),as_index=False).size())
```

```
In [24]: newYork.columns

Out[24]: Index([              'Date',               'City',            'Country',
                     'Perpetrator',             'Weapon',           'Injuries',
                      'Fatalities',        'Description',      'Closing Value',
                           'index',     'mean5DayChange',      'max5DayChange',
                  'min5DayChange',   'mean30DayChange',    'max30DayChange',
                  'min30DayChange',                    0],
              dtype='object')

In [25]: newYork.columns= ['Date', 'City', 'Country', 'Perpetrator', 'Weapon', 'Injuries','Fatal

In [26]: newYork.head()

Out[26]:         Date            City       Country           Perpetrator        Weapon  \
         0 1968-04-22  New York City  United States  Anti-Castro Cubans  Explosives
         1 1968-04-22  New York City  United States  Anti-Castro Cubans  Explosives
         2 1968-06-21  New York City  United States  Anti-Castro Cubans  Explosives
         3 1968-07-09  New York City  United States  Anti-Castro Cubans  Explosives
         4 1968-07-09  New York City  United States  Anti-Castro Cubans  Explosives

            Injuries  Fatalities                                Description  \
         0         0           0  UNITED STATES.  The Mexican mission to the Uni...
         1         0           0  UNITED STATES.  The Spanish National Tourist O...
         2         0           0  UNITED STATES.  The Spanish National Tourist O...
         3         0           0  UNITED STATES.  The Cuban mission to the Unite...
         4         0           0  UNITED STATES.  The Yugoslav mission to the Un...

            Closing Value  Index  mean5DayMarketChange  max5DayMarketChange  \
         0          95.32     23                -0.272                 0.53
         1          95.32     24                -0.272                 0.53
         2         100.66     37                 0.386                 0.85
         3         102.23     42                 0.048                 0.56
         4         102.23     41                 0.048                 0.56

            min5DayMarketChange  mean30DayMarketChange  max30DayMarketChange  \
         0                -1.30              -0.138000                  0.70
         1                -1.30              -0.138000                  0.70
         2                 0.10               0.099333                  1.27
         3                -0.29               0.106667                  1.27
         4                -0.29               0.106667                  1.27

            min30DayMarketChange  Number of Attacks
         0                -1.31                  1
         1                -1.31                  1
         2                -1.17                  1
         3                -1.00                  1
         4                -1.00                  1
```

```
In [27]: shortDescs = []
         for desc in newYork["Description"]:
             shortDesc = desc[:80] + "..."
             shortDescs.append(shortDesc)

In [28]: newYork["Short Description"] = shortDescs

In [29]: newYork["mean5DayMarketChangeAbs"] = [abs(x) for x in newYork["mean5DayMarketChange"]]

In [30]: newYork.head()

Out[30]:          Date           City         Country        Perpetrator        Weapon  \
         0  1968-04-22  New York City  United States  Anti-Castro Cubans  Explosives
         1  1968-04-22  New York City  United States  Anti-Castro Cubans  Explosives
         2  1968-06-21  New York City  United States  Anti-Castro Cubans  Explosives
         3  1968-07-09  New York City  United States  Anti-Castro Cubans  Explosives
         4  1968-07-09  New York City  United States  Anti-Castro Cubans  Explosives

            Injuries  Fatalities                                 Description  \
         0         0           0  UNITED STATES.  The Mexican mission to the Uni...
         1         0           0  UNITED STATES.  The Spanish National Tourist O...
         2         0           0  UNITED STATES.  The Spanish National Tourist O...
         3         0           0  UNITED STATES.  The Cuban mission to the Unite...
         4         0           0  UNITED STATES.  The Yugoslav mission to the Un...

            Closing Value  Index  mean5DayMarketChange  max5DayMarketChange  \
         0          95.32     23                -0.272                 0.53
         1          95.32     24                -0.272                 0.53
         2         100.66     37                 0.386                 0.85
         3         102.23     42                 0.048                 0.56
         4         102.23     41                 0.048                 0.56

            min5DayMarketChange  mean30DayMarketChange  max30DayMarketChange  \
         0                -1.30              -0.138000                  0.70
         1                -1.30              -0.138000                  0.70
         2                 0.10               0.099333                  1.27
         3                -0.29               0.106667                  1.27
         4                -0.29               0.106667                  1.27

            min30DayMarketChange  Number of Attacks  \
         0                 -1.31                  1
         1                 -1.31                  1
         2                 -1.17                  1
         3                 -1.00                  1
         4                 -1.00                  1

                                          Short Description  mean5DayMarketChangeAbs
         0  UNITED STATES.  The Mexican mission to the Uni...                    0.272
         1  UNITED STATES.  The Spanish National Tourist O...                    0.272
```

```
         2  UNITED STATES.   The Spanish National Tourist O...                        0.386
         3  UNITED STATES.   The Cuban mission to the Unite...                         0.048
         4  UNITED STATES.   The Yugoslav mission to the Un...                         0.048

In [31]: fig = px.scatter(newYork, x="Date", y="min30DayMarketChange",color="Weapon",size="mean5
         fig.show()

In [32]: fig = px.scatter(newYork, x="Date", y="max30DayMarketChange",color="Weapon",size="mean5
         fig.show()

In [33]: newYork.head()

Out[33]:         Date          City        Country       Perpetrator      Weapon  \
         0 1968-04-22  New York City  United States  Anti-Castro Cubans  Explosives
         1 1968-04-22  New York City  United States  Anti-Castro Cubans  Explosives
         2 1968-06-21  New York City  United States  Anti-Castro Cubans  Explosives
         3 1968-07-09  New York City  United States  Anti-Castro Cubans  Explosives
         4 1968-07-09  New York City  United States  Anti-Castro Cubans  Explosives

            Injuries  Fatalities                                 Description  \
         0         0           0  UNITED STATES.   The Mexican mission to the Uni...
         1         0           0  UNITED STATES.   The Spanish National Tourist O...
         2         0           0  UNITED STATES.   The Spanish National Tourist O...
         3         0           0  UNITED STATES.   The Cuban mission to the Unite...
         4         0           0  UNITED STATES.   The Yugoslav mission to the Un...

            Closing Value  Index  mean5DayMarketChange  max5DayMarketChange  \
         0          95.32     23               -0.272                 0.53
         1          95.32     24               -0.272                 0.53
         2         100.66     37                0.386                 0.85
         3         102.23     42                0.048                 0.56
         4         102.23     41                0.048                 0.56

            min5DayMarketChange  mean30DayMarketChange  max30DayMarketChange  \
         0                -1.30              -0.138000                  0.70
         1                -1.30              -0.138000                  0.70
         2                 0.10               0.099333                  1.27
         3                -0.29               0.106667                  1.27
         4                -0.29               0.106667                  1.27

            min30DayMarketChange  Number of Attacks  \
         0                -1.31                  1
         1                -1.31                  1
         2                -1.17                  1
         3                -1.00                  1
         4                -1.00                  1

                                        Short Description  mean5DayMarketChangeAbs
         0  UNITED STATES.   The Mexican mission to the Uni...                 0.272
```

8

```
          1  UNITED STATES.   The Spanish National Tourist O...                                      0.272
          2  UNITED STATES.   The Spanish National Tourist O...                                      0.386
          3  UNITED STATES.   The Cuban mission to the Unite...                                       0.048
          4  UNITED STATES.   The Yugoslav mission to the Un...                                       0.048

In [34]: nyPerpGroupBy = newYork.groupby("Perpetrator")

In [35]: nyPerpGroupBy.sum()[["Fatalities"]]["Fatalities"]

Out[35]: Perpetrator
         Al Qaeda                                          2749
         Anti-Castro Cubans                                   2
         Armed Revolutionary Independence Movement (MIRA)     0
         Black Revolutionary Assault Team                     0
         Black September                                      0
         Croatian Freedom Fighters                            0
         Fuerzas Armadas de Liberacion Nacional (FALN)        0
         Jewish Defense League (JDL)                          1
         Liberation Army Fifth Battalion                      6
         Other                                                2
         Palestine Liberation Organization (PLO)             11
         Puerto Rican Resistance Movement                     0
         United Freedom Front (UFF)                           0
         Unknown                                              2
         World United Formosans for Independence              0
         Yanikian Commandos                                   0
         Name: Fatalities, dtype: int64

In [36]: fig = go.Figure()
         fig.add_trace(go.Bar(
             x=nyPerpGroupBy.sum().index,
             y=nyPerpGroupBy.sum()["Fatalities"],
             marker_color = px.colors.colorbrewer.Paired
         ))
         fig.update_layout(
             title=go.layout.Title(
                 text="Number of Fatalities by Perpetrator of Attack",
                 font=dict(
                         family="Roboto, monospace",
                         size=25,
                         color="Black"
                 ),
                 xref="paper",
                 x=0
             ),
             xaxis=go.layout.XAxis(
                 title=go.layout.xaxis.Title(
                     text="Perpetrator ",
                     font=dict(
```

```python
                    family="Roboto, monospace",
                    size=18,
                    color="#7f7f7f"
                )
            )
        ),
        yaxis=go.layout.YAxis(
            title=go.layout.yaxis.Title(
                text="Number of Attacks",
                font=dict(
                    family="Roboto, monospace",
                    size=18,
                    color="#7f7f7f"
                )
            )
        )
    )
)
fig.write_html('nyFatalitiesByPerppetrator.html', auto_open=False)
fig.show()
```

In [37]: `nyWithout911 = newYork[newYork.Date != "2001-09-11"]`

In [38]: `nyPerpGroupByWithout911 = nyWithout911.groupby("Perpetrator")`

In [48]:
```python
fig = go.Figure()
fig.add_trace(go.Bar(
    x=nyPerpGroupByWithout911.sum().index,
    y=nyPerpGroupByWithout911.sum()["Fatalities"].sort_values(ascending=False),
    marker_color = px.colors.colorbrewer.Paired
))
fig.update_layout(
    title=go.layout.Title(
        text="Number of Fatalities by Perpetrator of Attack",
        font=dict(
                family="Roboto, monospace",
                size=25,
                color="Black"
        ),
        xref="paper",
        x=0
    ),
    xaxis=go.layout.XAxis(
        title=go.layout.xaxis.Title(
            text="Perpetrator ",
            font=dict(
                family="Roboto, monospace",
                size=18,
                color="#7f7f7f"
```

```
                    )
                )
            ),
            yaxis=go.layout.YAxis(
                title=go.layout.yaxis.Title(
                    text="Number of Attacks",
                    font=dict(
                        family="Roboto, monospace",
                        size=18,
                        color="#7f7f7f"
                    )
                )
            )
        )
        fig.write_html('nyFatalitiesByPerppetrator.html', auto_open=False)
        fig.show()
```

In [ ]:

0.3 US

In [40]: us.head(1)

```
Out[40]:          Date              City        Country Perpetrator      Weapon  \
         4 1968-02-21  Washington, D.C.  United States      Unknown  Explosives

            Injuries  Fatalities                                   Description  \
         4         0           0  UNITED STATES.  The Soviet embassy was bombed ...

            Closing Value  index  mean5DayChange  max5DayChange  min5DayChange  \
         4          91.24      4           0.232           0.71          -0.35

            mean30DayChange  max30DayChange  min30DayChange
         4        -0.074333            1.71           -2.28
```

In [41]: us["mean5DayChangeAbs"] = [abs(x) for x in us["mean5DayChange"]]

```
C:\Users\cywon\newAnaconda3\lib\site-packages\ipykernel_launcher.py:1: SettingWithCopyWarning:


A value is trying to be set on a copy of a slice from a DataFrame.
Try using .loc[row_indexer,col_indexer] = value instead

See the caveats in the documentation: http://pandas.pydata.org/pandas-docs/stable/indexing.html#
```

In [42]: us["max30DayChangeAbs"] = [abs(x) for x in us["max30DayChange"]]

```
C:\Users\cywon\newAnaconda3\lib\site-packages\ipykernel_launcher.py:1: SettingWithCopyWarning:


A value is trying to be set on a copy of a slice from a DataFrame.
Try using .loc[row_indexer,col_indexer] = value instead

See the caveats in the documentation: http://pandas.pydata.org/pandas-docs/stable/indexing.html#



In [43]: shortDescs = []
         for desc in us["Description"]:
             shortDesc = desc[:80] + "..."
             shortDescs.append(shortDesc)
         us["shortDescription"] = shortDescs

C:\Users\cywon\newAnaconda3\lib\site-packages\ipykernel_launcher.py:5: SettingWithCopyWarning:


A value is trying to be set on a copy of a slice from a DataFrame.
Try using .loc[row_indexer,col_indexer] = value instead

See the caveats in the documentation: http://pandas.pydata.org/pandas-docs/stable/indexing.html#



In [44]: us.loc[us["City"] == "New York City"]

Out[44]:              Date          City        Country  \
         23    1968-04-22  New York City  United States
         24    1968-04-22  New York City  United States
         33    1968-05-30  New York City  United States
         37    1968-06-21  New York City  United States
         38    1968-07-04  New York City  United States
         39    1968-07-04  New York City  United States
         40    1968-07-07  New York City  United States
         41    1968-07-09  New York City  United States
         42    1968-07-09  New York City  United States
         44    1968-07-15  New York City  United States
         45    1968-07-15  New York City  United States
         58    1968-08-03  New York City  United States
         86    1968-10-23  New York City  United States
         117   1969-06-08  New York City  United States
         237   1970-04-24  New York City  United States
         269   1970-06-23  New York City  United States
         275   1970-07-04  New York City  United States
         277   1970-07-07  New York City  United States
         278   1970-07-07  New York City  United States
         279   1970-07-07  New York City  United States
```

```
289    1970-08-01  New York City  United States
291    1970-08-02  New York City  United States
333    1970-10-06  New York City  United States
360    1970-11-25  New York City  United States
373    1970-12-14  New York City  United States
382    1971-01-15  New York City  United States
384    1971-01-17  New York City  United States
410    1971-03-01  New York City  United States
411    1971-03-01  New York City  United States
425    1971-03-31  New York City  United States
...         ...              ...              ...
3082   1982-07-05  New York City  United States
3083   1982-07-05  New York City  United States
3237   1982-12-21  New York City  United States
3242   1982-12-24  New York City  United States
3452   1983-09-23  New York City  United States
3564   1984-02-24  New York City  United States
3612   1984-04-05  New York City  United States
3760   1984-09-26  New York City  United States
3898   1985-02-18  New York City  United States
4205   1985-09-27  New York City  United States
4558   1986-09-02  New York City  United States
4608   1986-10-20  New York City  United States
4837   1987-06-30  New York City  United States
5441   1989-02-28  New York City  United States
6002   1990-11-05  New York City  United States
6488   1992-02-26  New York City  United States
6783   1993-02-26  New York City  United States
7078   1994-03-01  New York City  United States
7841   1997-01-13  New York City  United States
7842   1997-01-13  New York City  United States
7843   1997-01-13  New York City  United States
7844   1997-01-13  New York City  United States
7877   1997-02-23  New York City  United States
12718  2001-09-11  New York City  United States
12869  2001-10-12  New York City  United States
12890  2001-10-15  New York City  United States
12915  2001-10-18  New York City  United States
12923  2001-10-19  New York City  United States
12984  2001-10-29  New York City  United States
22113  2005-05-05  New York City  United States

                              Perpetrator         Weapon  \
23                       Anti-Castro Cubans     Explosives
24                       Anti-Castro Cubans     Explosives
33                       Anti-Castro Cubans     Explosives
37                       Anti-Castro Cubans     Explosives
38                       Anti-Castro Cubans     Explosives
```

39	Anti-Castro Cubans	Explosives
40	Anti-Castro Cubans	Explosives
41	Anti-Castro Cubans	Explosives
42	Anti-Castro Cubans	Explosives
44	Anti-Castro Cubans	Explosives
45	Unknown	Explosives
58	Anti-Castro Cubans	Explosives
86	Anti-Castro Cubans	Unknown
117	Anti-Castro Cubans	Explosives
237	World United Formosans for Independence	Firearms
269	Jewish Defense League (JDL)	Unknown
275	Unknown	Explosives
277	Unknown	Explosives
278	Unknown	Explosives
279	Unknown	Explosives
289	Weather Underground, Weathermen	Explosives
291	Other	Explosives
333	Unknown	Explosives
360	Jewish Defense League (JDL)	Explosives
373	Armed Revolutionary Independence Movement (MIRA)	Explosives
382	Jewish Defense League (JDL)	Other
384	Unknown	Fire or Firebomb
410	Puerto Rican Resistance Movement	Explosives
411	Unknown	Fire or Firebomb
425	Anti-Castro Cubans	Explosives
...	...	...
3082	Other	Explosives
3083	Other	Explosives
3237	Unknown	Explosives
3242	Other	Explosives
3452	Unknown	Firearms
3564	Jewish Defense League (JDL)	Explosives
3612	Other	Explosives
3760	United Freedom Front (UFF)	Explosives
3898	Jewish Defense League (JDL)	Explosives
4205	Other	Explosives
4558	Jewish Defense League (JDL)	Chemical Agent
4608	Jewish Defense League (JDL)	Fire or Firebomb
4837	Jewish Defense League (JDL)	Explosives
5441	Other	Fire or Firebomb
6002	Other	Unknown
6488	Jewish Defense League (JDL)	Explosives
6783	Liberation Army Fifth Battalion	Explosives
7078	Other	Firearms
7841	Unknown	Explosives
7842	Unknown	Explosives
7843	Unknown	Explosives
7844	Unknown	Explosives

```
7877                                        Other          Firearms
12718                                     Al Qaeda             Other
12869                                      Unknown  Biological Agent
12890                                      Unknown  Biological Agent
12915                                      Unknown  Biological Agent
12923                                      Unknown  Biological Agent
12984                                      Unknown  Biological Agent
22113                                      Unknown        Explosives

       Injuries  Fatalities  \
23            0           0
24            0           0
33            0           0
37            0           0
38            0           0
39            0           0
40            0           0
41            0           0
42            0           0
44            0           0
45            0           0
58            0           0
86            0           0
117           0           0
237           1           0
269           0           0
275           0           0
277           0           0
278           3           0
279           0           0
289           0           0
291           0           0
333           0           0
360           0           0
373           0           0
382           0           0
384           0           0
410           0           0
411           0           0
425           0           0
...         ...         ...
3082          1           0
3083          0           0
3237          0           0
3242          0           0
3452          0           1
3564          0           0
3612          0           0
```

3760	0	0
3898	0	0
4205	0	0
4558	21	0
4608	0	0
4837	0	0
5441	0	0
6002	0	1
6488	0	0
6783	1042	6
7078	3	1
7841	0	0
7842	0	0
7843	0	0
7844	0	0
7877	4	2
12718	2261	2749
12869	6	0
12890	1	0
12915	1	0
12923	2	0
12984	0	1
22113	0	0

	Description	Closing Value \
23	UNITED STATES. The Mexican mission to the Uni...	95.32
24	UNITED STATES. The Spanish National Tourist O...	95.32
33	UNITED STATES - El Poder Cubano bombed the Spa...	NaN
37	UNITED STATES. The Spanish National Tourist O...	100.66
38	UNITED STATES. The Canadian consulate and tou...	NaN
39	UNITED STATES. The Australian National Touris...	NaN
40	UNITED STATES. The Japanese National Tourist ...	NaN
41	UNITED STATES. The Yugoslav mission to the Un...	102.23
42	UNITED STATES. The Cuban mission to the Unite...	102.23
44	UNITED STATES. A bomb placed by El Poder Cuba...	102.26
45	UNITED STATES. A hand grenade was thrown at t...	102.26
58	UNITED STATES. The Bank of Tokyo Trust Compan...	NaN
86	UNITED STATES. Police captured El Poder Cuban...	NaN
117	UNITED STATES. A bomb exploded at the Loew's ...	NaN
237	UNITED STATES. Nationalist Chinese Premier Ch...	82.77
269	UNITED STATES. Members of the Jewish Defense ...	74.76
275	UNITED STATES. The New York City office of BO...	NaN
277	UNITED STATES. A pipe bomb was found at the P...	71.23
278	UNITED STATES. A pipe bomb exploded at the Ha...	71.23
279	UNITED STATES. An explosive device was found ...	71.23
289	UNITED STATES. The Revolutionary Affinity Gro...	NaN
291	UNITED STATES. A Pan American World Airways 7...	NaN
333	UNITED STATES. A pipe bomb exploded in the Ne...	86.85

360	UNITED STATES.	A ten-inch pipe bomb exploded ...	85.09
373	UNITED STATES.	The New York City corporate he...	89.80
382	UNITED STATES.	Members of the JDL smashed win...	93.03
384	UNITED STATES.	A Molotov cocktail was thrown ...	NaN
410	UNITED STATES.	The New School for Social Rese...	97.00
411	UNITED STATES.	Two unidentified people threw ...	97.00
425	UNITED STATES.	The Secret Cuban Government, a...	100.31
...		...	...
3082	UNITED STATES.	Explosions within a few minute...	NaN
3083	UNITED STATES.	A ticking gasoline bomb was re...	NaN
3237	UNITED STATES.	A pipe bomb was discovered und...	138.61
3242	UNITED STATES.	An eight-inch pipe bomb was fo...	NaN
3452	UNITED STATES.	A Haitian community leader and...	169.51
3564	UNITED STATES.	Bombs were tossed over a fence...	157.51
3612	UNITED STATES.	Two bombs caused extensive dam...	155.04
3760	UNITED STATES.	A powerful blast caused damage...	166.28
3898	UNITED STATES.	A police officer on patrol nea...	NaN
4205	UNITED STATES.	A bomb was found aboard a Hait...	NaN
4558	UNITED STATES.	A tear-gas grenade was fired i...	248.52
4608	UNITED STATES.	A fire bomb exploded outside a...	235.97
4837	UNITED STATES.	The JDL's east coast faction, ...	304.00
5441	UNITED STATES.	Two Berkeley, California books...	288.86
6002	UNITED STATES.	The founder of the Jewish Defe...	314.59
6488	UNITED STATES.	The Syrian United Nations miss...	415.35
6783	UNITED STATES.	The World Trade Center in Manh...	443.38
7078	UNITED STATES.	A Lebanese immigrant, Rashid B...	464.44
7841	UNITED STATES.	Four letter bombs, addressed t...	759.51
7842	UNITED STATES.	Four letter bombs, addressed t...	759.51
7843	UNITED STATES.	Four letter bombs, addressed t...	759.51
7844	UNITED STATES.	Four letter bombs, addressed t...	759.51
7877	UNITED STATES.	A Palestinian opened fire on t...	NaN
12718	Hijacked American Airlines Flight 11 from Bost...		1092.54
12869	Erin O'Connor, the assistant to Tom Brokaw at ...		1091.65
12890	A seven-month-old boy, the son of an ABC news ...		1089.98
12915	Claire Fletcher, an employee of CBS was diagno...		1068.61
12923	Johanna Huden, an employee of the New York Pos...		1073.48
12984	Kathy Nguyen was diagnosed with inhalation ant...		1078.30
22113	Two unsophisticated grenades exploded outside ...		1172.63

	index	mean5DayChange	max5DayChange	min5DayChange	mean30DayChange \
23	23	-0.272	0.53	-1.30	-0.138000
24	24	-0.272	0.53	-1.30	-0.138000
33	33	-0.454	0.49	-1.31	-0.094667
37	37	0.386	0.85	0.10	0.099333
38	38	-0.520	0.05	-1.17	0.026667
39	39	-0.520	0.05	-1.17	0.026667
40	40	-0.520	0.05	-1.17	0.026667
41	41	0.048	0.56	-0.29	0.106667

42	42	0.048	0.56	-0.29	0.106667
44	44	0.602	1.13	0.08	0.077333
45	45	0.602	1.13	0.08	0.077333
58	58	0.054	0.65	-0.40	-0.165333
86	86	0.338	0.73	-0.36	-0.077667
117	117	0.900	1.37	0.64	0.260333
237	237	0.304	1.31	-1.54	0.189333
269	269	0.750	1.88	-0.05	-0.018333
275	275	-0.224	1.14	-1.77	-0.060667
277	277	-0.554	0.55	-1.77	-0.118333
278	278	-0.554	0.55	-1.77	-0.118333
279	279	-0.554	0.55	-1.77	-0.118333
289	289	0.198	1.03	-0.17	-0.148333
291	291	0.198	1.03	-0.17	-0.148333
333	333	0.460	0.94	-0.38	0.107667
360	360	-0.740	-0.27	-1.27	-0.247000
373	373	0.008	0.46	-0.32	-0.177667
382	382	-0.278	-0.02	-0.41	-0.131667
384	384	-0.278	-0.02	-0.41	-0.131667
410	410	-0.442	0.03	-1.04	-0.204333
411	411	-0.442	0.03	-1.04	-0.204333
425	425	-0.250	-0.05	-0.72	-0.088000
...	...	...	...	...	...
3082	3082	-0.024	1.06	-1.30	0.162000
3083	3083	-0.024	1.06	-1.30	0.162000
3237	3237	-0.904	1.40	-2.45	-0.223667
3242	3242	-0.300	1.40	-2.45	-0.181000
3452	3452	0.506	1.64	-0.56	0.210333
3564	3564	-0.780	2.48	-3.22	-0.025000
3612	3612	0.508	2.50	-0.44	0.032333
3760	3760	0.406	1.48	-0.68	-0.159667
3898	3898	0.610	0.99	0.15	0.058333
4205	4205	-0.740	1.01	-2.99	-0.398667
4558	4558	0.958	4.41	-3.75	0.567333
4608	4608	0.116	2.87	-3.02	-0.340333
4837	4837	0.100	3.90	-2.69	-0.847667
5441	5441	-1.398	1.75	-3.63	-0.355667
6002	6002	-0.378	5.61	-6.13	-0.472333
6488	6488	-0.480	1.49	-4.90	0.413000
6783	6783	-1.000	1.92	-5.89	0.016667
7078	7078	0.046	2.70	-2.17	0.652333
7841	7841	-3.334	1.66	-9.35	-1.692667
7842	7842	-3.334	1.66	-9.35	-1.692667
7843	7843	-3.334	1.66	-9.35	-1.692667
7844	7844	-3.334	1.66	-9.35	-1.692667
7877	7877	1.546	10.61	-8.51	1.496667
12718	12718	10.754	53.77	0.00	0.088000
12869	12869	5.764	20.45	-7.56	-1.763667

12890	12890	3.634	20.45	-7.56	-2.192333
12915	12915	-1.622	8.48	-16.42	-2.103667
12923	12923	-6.296	5.12	-16.42	-2.361333
12984	12984	3.482	26.31	-24.32	-1.177333
22113	22113	0.908	12.62	-7.49	-1.177000

	max30DayChange	min30DayChange	mean5DayChangeAbs	max30DayChangeAbs \
23	0.70	-1.31	0.272	0.70
24	0.70	-1.31	0.272	0.70
33	1.00	-1.52	0.454	1.00
37	1.27	-1.17	0.386	1.27
38	1.27	-1.17	0.520	1.27
39	1.27	-1.17	0.520	1.27
40	1.27	-1.17	0.520	1.27
41	1.27	-1.00	0.048	1.27
42	1.27	-1.00	0.048	1.27
44	1.27	-1.00	0.602	1.27
45	1.27	-1.00	0.602	1.27
58	0.65	-1.00	0.054	0.65
86	0.73	-0.78	0.338	0.73
117	1.50	-1.09	0.900	1.50
237	2.07	-3.48	0.304	2.07
269	1.88	-1.77	0.750	1.88
275	1.14	-1.77	0.224	1.14
277	1.08	-1.77	0.554	1.08
278	1.08	-1.77	0.554	1.08
279	1.08	-1.77	0.554	1.08
289	1.08	-1.75	0.198	1.08
291	1.08	-1.75	0.198	1.08
333	1.13	-0.71	0.460	1.13
360	1.00	-1.27	0.740	1.00
373	1.00	-0.99	0.008	1.00
382	1.02	-0.69	0.278	1.02
384	1.02	-0.69	0.278	1.02
410	0.66	-1.14	0.442	0.66
411	0.66	-1.14	0.442	0.66
425	0.68	-0.78	0.250	0.68
...	...	...	...	...
3082	1.69	-1.89	0.024	1.69
3083	1.69	-1.89	0.024	1.69
3237	3.88	-3.31	0.904	3.88
3242	3.88	-3.31	0.300	3.88
3452	2.62	-2.54	0.506	2.62
3564	2.50	-3.22	0.780	2.50
3612	2.50	-2.73	0.508	2.50
3760	1.48	-3.96	0.406	1.48
3898	1.58	-2.66	0.610	1.58
4205	1.35	-2.99	0.740	1.35

4558	11.88	-3.75	0.958	11.88
4608	6.43	-4.39	0.116	6.43
4837	3.90	-5.33	0.100	3.90
5441	6.75	-3.63	1.398	6.75
6002	5.61	-6.13	0.378	5.61
6488	7.53	-4.90	0.480	7.53
6783	8.91	-8.60	1.000	8.91
7078	7.52	-9.37	0.046	7.52
7841	10.98	-13.18	3.334	10.98
7842	10.98	-13.18	3.334	10.98
7843	10.98	-13.18	3.334	10.98
7844	10.98	-13.18	3.334	10.98
7877	16.76	-11.04	1.546	16.76
12718	53.77	-37.65	10.754	53.77
12869	26.31	-24.32	5.764	26.31
12890	26.31	-24.32	3.634	26.31
12915	26.31	-24.32	1.622	26.31
12923	26.31	-24.32	6.296	26.31
12984	26.31	-25.55	3.482	26.31
22113	12.62	-11.76	0.908	12.62

		shortDescription
23	UNITED STATES.	The Mexican mission to the Uni...
24	UNITED STATES.	The Spanish National Tourist O...
33	UNITED STATES -	El Poder Cubano bombed the Spa...
37	UNITED STATES.	The Spanish National Tourist O...
38	UNITED STATES.	The Canadian consulate and tou...
39	UNITED STATES.	The Australian National Touris...
40	UNITED STATES.	The Japanese National Tourist ...
41	UNITED STATES.	The Yugoslav mission to the Un...
42	UNITED STATES.	The Cuban mission to the Unite...
44	UNITED STATES.	A bomb placed by El Poder Cuba...
45	UNITED STATES.	A hand grenade was thrown at t...
58	UNITED STATES.	The Bank of Tokyo Trust Compan...
86	UNITED STATES.	Police captured El Poder Cuban...
117	UNITED STATES.	A bomb exploded at the Loew's ...
237	UNITED STATES.	Nationalist Chinese Premier Ch...
269	UNITED STATES.	Members of the Jewish Defense ...
275	UNITED STATES.	The New York City office of BO...
277	UNITED STATES.	A pipe bomb was found at the P...
278	UNITED STATES.	A pipe bomb exploded at the Ha...
279	UNITED STATES.	An explosive device was found ...
289	UNITED STATES.	The Revolutionary Affinity Gro...
291	UNITED STATES.	A Pan American World Airways 7...
333	UNITED STATES.	A pipe bomb exploded in the Ne...
360	UNITED STATES.	A ten-inch pipe bomb exploded ...
373	UNITED STATES.	The New York City corporate he...
382	UNITED STATES.	Members of the JDL smashed win...

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384    UNITED STATES.  A Molotov cocktail was thrown ...
410    UNITED STATES.  The New School for Social Rese...
411    UNITED STATES.  Two unidentified people threw ...
425    UNITED STATES.  The Secret Cuban Government, a...
...                                              ...
3082   UNITED STATES.  Explosions within a few minute...
3083   UNITED STATES.  A ticking gasoline bomb was re...
3237   UNITED STATES.  A pipe bomb was discovered und...
3242   UNITED STATES.  An eight-inch pipe bomb was fo...
3452   UNITED STATES.  A Haitian community leader and...
3564   UNITED STATES.  Bombs were tossed over a fence...
3612   UNITED STATES.  Two bombs caused extensive dam...
3760   UNITED STATES.  A powerful blast caused damage...
3898   UNITED STATES.  A police officer on patrol nea...
4205   UNITED STATES.  A bomb was found aboard a Hait...
4558   UNITED STATES.  A tear-gas grenade was fired i...
4608   UNITED STATES.  A fire bomb exploded outside a...
4837   UNITED STATES.  The JDL's east coast faction, ...
5441   UNITED STATES.  Two Berkeley, California books...
6002   UNITED STATES.  The founder of the Jewish Defe...
6488   UNITED STATES.  The Syrian United Nations miss...
6783   UNITED STATES.  The World Trade Center in Manh...
7078   UNITED STATES.  A Lebanese immigrant, Rashid B...
7841   UNITED STATES.  Four letter bombs, addressed t...
7842   UNITED STATES.  Four letter bombs, addressed t...
7843   UNITED STATES.  Four letter bombs, addressed t...
7844   UNITED STATES.  Four letter bombs, addressed t...
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12718  Hijacked American Airlines Flight 11 from Bost...
12869  Erin O'Connor, the assistant to Tom Brokaw at ...
12890  A seven-month-old boy, the son of an ABC news ...
12915  Claire Fletcher, an employee of CBS was diagno...
12923  Johanna Huden, an employee of the New York Pos...
12984  Kathy Nguyen was diagnosed with inhalation ant...
22113  Two unsophisticated grenades exploded outside ...

[167 rows x 19 columns]
```

```python
In [45]: fig = px.scatter(us, x="Date", y="mean30DayChange",color="Weapon",size="max30DayChangeA
         fig.show()

In [ ]:
```