miamiRedo

February 4, 2020

```
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")

In [3]: df.drop("Unnamed: 0",axis=1,inplace=True)

In [4]: df["Date"] = pd.to_datetime(df["Date"])

In [7]: us = df.loc[df["Country"]=="United States"]

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

Out[10]:

	Date	City	Country	Perpetrator	Weapon	Injuries	Fatalities	Description	Closing Value	index	mean5DayChange	max5DayChange	min5DayChange	mean30DayChange
4	1968-02-21	Washington, D.C.	United States	Unknown	Explosives	0	0	UNITED STATES. The Soviet embassy was bombed ...	91.24	4	0.232	0.71	-0.35	-0.074333
19	1968-03-19	Miami	United States	Anti-Castro Cubans	Explosives	0	0	UNITED STATES - Unidentified anti-Castro Cuban...	88.99	19	0.252	0.65	-0.09	-0.279333
23	1968-04-22	New York City	United States	Anti-Castro Cubans	Explosives	0	0	UNITED STATES. The Mexican mission to the Uni...	95.32	23				
24	1968-04-22	New York City	United States	Anti-Castro Cubans	Explosives	0	0	UNITED STATES. The Spanish National Tourist O...	95.32	24				
30	1968-05-24	Key West	United States	Anti-Castro Cubans	Explosives	0	0	UNITED STATES. The British cargo ship Granwoo...	97.15	30				

```
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
```

In [13]:
```
cities = []
for city in us["City"]:
    if city == "Washington, DC":
        cities.append("Washington, D.C.")
    else:
        cities.append(city)
us["City"] = cities
```

```
C:\Users\cywon\newAnaconda3\lib\site-packages\ipykernel_launcher.py:7: 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 [14]:
```
injuriesAndFatalities = us.groupby("City").mean()[["Injuries","Fatalities"]].sort_value
```

In [15]:
```
usCityStats = pd.merge(cityValueCounts,injuriesAndFatalities,on="City")
```

In [17]:
```
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 [18]:
```
fig = go.Figure()
fig.add_trace(go.Bar(
    x=usCityStats[:10]["City"],
    y=usCityStats[:10]["Number of Attacks"],
    marker_color = px.colors.colorbrewer.Paired,
    hovertext= usCityStats["Fatalities"]
))
fig.update_layout(
    title=go.layout.Title(
        text="Number of Attacks by City",
```

```
                font=dict(
                        family="Roboto, monospace",
                        size=25,
                        color="Black"
                ),
                xref="paper",
                x=0
            ),
            xaxis=go.layout.XAxis(
                title=go.layout.xaxis.Title(
                    text="City",
                    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('attacksByCity.html', auto_open=False)
        fig.show()
```

```
In [8]: miami = df.loc[df["City"]=="Miami"]
```

```
In [9]: miami.head()
```

```
Out[9]:          Date   City        Country         Perpetrator      Weapon  Injuries  \
        19 1968-03-19  Miami  United States  Anti-Castro Cubans  Explosives         0
        31 1968-05-26  Miami  United States  Anti-Castro Cubans  Explosives         0
        60 1968-08-08  Miami  United States  Anti-Castro Cubans  Explosives         0
        62 1968-08-17  Miami  United States  Anti-Castro Cubans  Explosives         0
        71 1968-09-16  Miami  United States  Anti-Castro Cubans    Firearms         0

            Fatalities                                        Description  \
        19           0  UNITED STATES - Unidentified anti-Castro Cuban...
        31           0  UNITED STATES.  The Mexican consul general's r...
        60           0  UNITED STATES.  A 311-foot British freighter C...
        62           0  UNITED STATES.  A Mexican airline office in Mi...
```

```
71           0  UNITED STATES.  El Poder Cubano terrorists fir...

    Closing Value  index  mean5DayChange  max5DayChange  min5DayChange  \
19          88.99     19           0.252           0.65          -0.09
31            NaN     31          -0.342           0.16          -0.76
60          97.04     60          -0.164           0.46          -1.00
62            NaN     62          -0.124           0.26          -0.61
71         101.24     71          -0.276          -0.07          -0.58

    mean30DayChange  max30DayChange  min30DayChange
19        -0.279333            1.23           -2.28
31        -0.176333            1.00           -1.52
60        -0.168667            0.50           -1.00
62        -0.187667            0.50           -0.72
71        -0.080333            0.73           -0.81
```

In [19]:
```
miamiPerps = pd.DataFrame(miami["Perpetrator"].value_counts()).reset_index()
miamiPerps.columns = ["Perpetrator","Number of Attacks"]
```

In [20]:
```
fig = px.bar(miamiPerps, x='Perpetrator', y='Number of Attacks',color_discrete_sequence
fig.show()
```

In [21]:
```
fig = go.Figure()
fig.add_trace(go.Bar(
    x=miamiPerps["Perpetrator"],
    y=miamiPerps["Number of Attacks"],
    marker_color = px.colors.colorbrewer.Paired
))
fig.update_layout(
    title=go.layout.Title(
        text="Number of Attacks 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('attacksPerPerpetrator.html', auto_open=False)
        fig.show()
```

In [22]:
```
shortDescs = []
for desc in miami["Description"]:
    shortDesc = desc[:100] + "..."
    shortDescs.append(shortDesc)
```

In [23]:
```
miami["Short Description"] = shortDescs
```

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


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

In [24]:
```
df2 = pd.DataFrame(miami.groupby(miami.columns.tolist(),as_index=False).size()).reset_i
```

In [27]:
```
df2.head(1)
```

Out[27]:

	Date	City	Country	Perpetrator	Weapon	Injuries	Fatalities	Description	Closing Value	index	mean5DayChange	max5DayChange	min5DayChange	mean30DayChange	max30DayChange	min30DayChange	Short Description	0
0	1968-03-19	Miami	United States	Anti-Castro Cubans	Explosives	0	0	UNITED STATES - Unidentified anti-Castro Cuban...	88.99	19	0.252	0.65	-0.09	-0.279333	1.23	-2.28	UNITED STATES - Unidentified anti-Castro Cuban...	1

```
In [28]: df2.columns= ['Date', 'City', 'Country', 'Perpetrator', 'Weapon', 'Injuries','Fatalitie

In [31]: df2["mean5DayMarketChangeAbs"] = [abs(x) for x in df2["mean5DayMarketChange"]]

In [43]: fig = px.scatter(df2, x="Date", y="mean30DayMarketChange", size="mean5DayMarketChangeAb
                          hover_name="Short Description",size_max=60,title="Date vs. Mean 30 Day Futur
         fig.write_html('scatterTimeLineByPerpetratorandMarket.html', auto_open=False)
         fig.show()

In [ ]:
```