

## Abhishek Gupta

### Project:- Exploratory Data Analysis on Dataset - Terrorism

```
In [570]: import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

```
In [328]: df = pd.read_csv('globalterrorismdb_0718dist.csv', encoding='latin-1')
df
```

3	197001000002	1970	1	0	NaN	0	NaN	78	Greece	8	...	NaN	NaN	N
4	197001000003	1970	1	0	NaN	0	NaN	101	Japan	4	...	NaN	NaN	N
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
181686	201712310022	2017	12	31	NaN	0	NaN	182	Somalia	11	...	NaN	"Somalia: Al-Shabaab Militants Attack Army Che...	"Highlighting Somali Disarmament Me...
181687	201712310029	2017	12	31	NaN	0	NaN	200	Syria	10	...	NaN	"Putin's 'victory' in Syria has turned into a ...	"The Russian soldiers killed Hmeyri base
181688	201712310030	2017	12	31	NaN	0	NaN	160	Philippines	5	...	NaN	"Maguindanao clashes trap tribe	N

```
In [330]: df.drop(['region', 'approxdate', 'resolution', 'extended', 'country', 'location', 'vicinity', 'crit1', 'crit2', 'crit3',  
                  'doubtterr', 'summary', 'alternative', 'alternative_txt', 'attacktype1', 'attacktype2', 'attacktype2_txt',  
                  'attacktype3_txt', 'targtype1', 'targsubtype1_txt', 'targtype2', 'targtype2_txt', 'targsubtype2', 'targsubtype2_txt',  
                  'corp2', 'target2', 'natlty2', 'natlty2_txt', 'targtype3', 'targtype3_txt', 'targsubtype3', 'targsubtype3_txt', 'corp',  
                  'target3', 'natlty3', 'natlty3_txt', 'gsubname', 'gname2', 'gsubname2', 'gname3', 'gsubname3', 'motive', 'guncertain2',  
                  'guncertain3', 'nperps', 'nperpcap', 'claimed', 'claimmode', 'claimmode_txt', 'claim2', 'claimmode2', 'claimmode2_txt',  
                  'claim3', 'claimmode3', 'claimmode3_txt', 'compclaim', 'weaptype1', 'weapsubtype1', 'weapsubtype1_txt', 'weaptype2',  
                  'weaptype2_txt', 'weapsubtype2', 'weapsubtype2_txt', 'weaptype3', 'weaptype3_txt', 'weapsubtype3', 'weapsubtype3_tx',  
                  'weaptype4', 'weaptype4_txt', 'weapsubtype4', 'weapsubtype4_txt', 'weapondetail', 'nkillus', 'nkillter', 'nwoundus',  
                  'nwoundte', 'property', 'propextent', 'propextent_txt', 'propvalue', 'propcomment', 'ishostkid', 'nhostkid', 'nhostki',  
                  'nhours', 'ndays', 'divert', 'kidhijcountry', 'ransom', 'ransomamtus', 'ransompaid', 'ransompaidus', 'ransomnote',  
                  'hostkidoutcome', 'hostkidoutcome_txt', 'nreleased', 'addnotes', 'scite1', 'scite2', 'scite3', 'dbsource', 'INT_LOG',  
                  'INT_IDEO', 'INT_MISC', 'INT_ANY', 'related', 'attacktype3', 'weapsubtype1', 'targsubtype1', 'corp1', 'natlty1', 'natl',  
                  'guncertain1', 'individual', 'eventid', 'ransomamt'], axis=1, inplace=True)
```

In [331]: df.info()

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 181691 entries, 0 to 181690
Data columns (total 20 columns):
#   Column                Non-Null Count  Dtype
---  ---
0   iyear                  181691 non-null int64
1   imonth                 181691 non-null int64
2   iday                  181691 non-null int64
3   country_txt           181691 non-null object
4   region_txt            181691 non-null object
5   provstate             181270 non-null object
6   city                  181257 non-null object
7   latitude              177135 non-null float64
8   longitude             177134 non-null float64
9   specificity           181685 non-null float64
10  multiple              181690 non-null float64
11  success               181691 non-null int64
12  suicide               181691 non-null int64
13  attacktype1_txt       181691 non-null object
14  targtype1_txt        181691 non-null object
15  target1               181055 non-null object
16  gname                 181691 non-null object
17  weaptype1_txt         181691 non-null object
18  nkill                 171378 non-null float64
19  nwound                165380 non-null float64
dtypes: float64(6), int64(5), object(9)
memory usage: 27.7+ MB
```

In [292]: df.drop('region',axis=1,inplace=True)

In [335]: df.rename(columns={'iyear':'Year','imonth':'Month','iday':'Day','country\_txt':'Country','region\_txt':'Region','provsta  
'city':'City','latitude':'Latitude','longitude':'Longitude','specificity':'Specificity','multiple':'Multiple'  
'success':'Success','suicide':'Suicide','attacktype1\_txt':'Attacktype','targtype1\_txt':'Target\_type',  
'target1':'Target','gname':'GroupName','weaptype1\_txt':'Weapon\_type','nkill':'Kills','nwound':'Wound'},inplac

```
In [333]: df.shape
```

```
Out[333]: (181691, 20)
```

```
In [336]: df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 181691 entries, 0 to 181690
Data columns (total 20 columns):
#   Column                Non-Null Count  Dtype  
---  -
0   Year                  181691 non-null  int64  
1   Month                 181691 non-null  int64  
2   Day                   181691 non-null  int64  
3   Country               181691 non-null  object  
4   Region                181691 non-null  object  
5   State                 181270 non-null  object  
6   City                  181257 non-null  object  
7   Latitude              177135 non-null  float64 
8   Longitude             177134 non-null  float64 
9   Specificity           181685 non-null  float64 
10  Multiple              181690 non-null  float64 
11  Success               181691 non-null  int64  
12  Suicide               181691 non-null  int64  
13  Attacktype            181691 non-null  object  
14  Target_type           181691 non-null  object  
15  Target                181055 non-null  object  
16  GroupName             181691 non-null  object  
17  Weapon_type           181691 non-null  object  
18  Kills                 171378 non-null  float64 
19  Wound                 165380 non-null  float64 
dtypes: float64(6), int64(5), object(9)
memory usage: 27.7+ MB
```

```
In [337]: df.dtypes
```

```
Out[337]: Year          int64
Month          int64
Day            int64
Country        object
Region         object
State          object
City           object
Latitude       float64
Longitude      float64
Specificity    float64
Multiple       float64
Success        int64
Suicide        int64
Attacktype     object
Target_type    object
Target         object
GroupName      object
Weapon_type    object
Kills          float64
Wound          float64
dtype: object
```

```
In [338]: df.isna().sum()
```

```
Out[338]: Year          0
          Month         0
          Day           0
          Country       0
          Region        0
          State        421
          City         434
          Latitude     4556
          Longitude    4557
          Specificity    6
          Multiple      1
          Success       0
          Suicide       0
          Attacktype    0
          Target_type   0
          Target       636
          GroupName     0
          Weapon_type   0
          Kills        10313
          Wound        16311
          dtype: int64
```

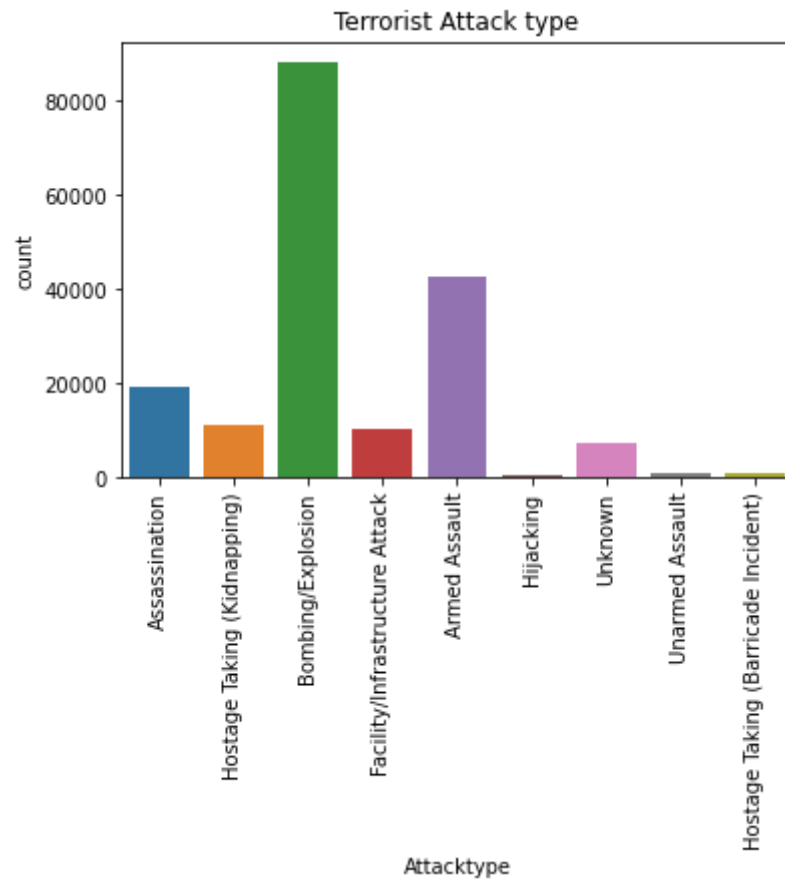
```
In [340]: df['Attacktype'].value_counts()
```

```
Out[340]: Bombing/Explosion      88255
          Armed Assault         42669
          Assassination         19312
          Hostage Taking (Kidnapping) 11158
          Facility/Infrastructure Attack 10356
          Unknown               7276
          Unarmed Assault       1015
          Hostage Taking (Barricade Incident) 991
          Hijacking             659
          Name: Attacktype, dtype: int64
```

```
In [344]: plt.title('Terrorist Attack type')
sns.countplot(df['Attacktype'])
plt.xticks(rotation=90)
plt.show()
```

C:\Users\Dell\anaconda3\lib\site-packages\seaborn\\_decorators.py:36: FutureWarning: Pass the following variable as a keyword arg: x. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.

warnings.warn(



```
In [375]: df.groupby(['Year'])['GroupName'].count().head()
```

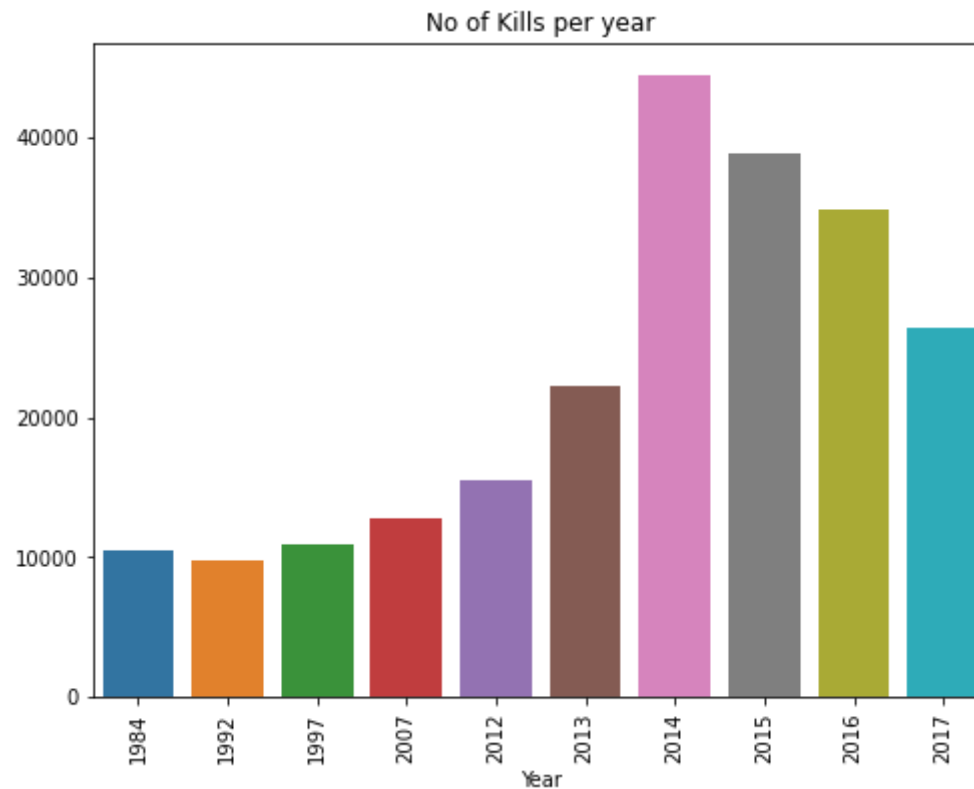
```
Out[375]: Year
1970      651
1971      471
1972      568
1973      473
1974      581
Name: GroupName, dtype: int64
```



```
In [380]: x = df.groupby(['Year'])['Kills'].sum().sort_values(ascending=False).head(10).index
y = df.groupby(['Year'])['Kills'].sum().sort_values(ascending=False).head(10).values
plt.figure(figsize=(8,6))
plt.title('No of Kills per year')
sns.barplot(x,y)
plt.xticks(rotation=90)
plt.show()
```

C:\Users\Dell\anaconda3\lib\site-packages\seaborn\\_decorators.py:36: FutureWarning: Pass the following variables as keyword args: x, y. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.

warnings.warn(



```
In [370]: sns.lineplot(df.groupby(['Year'])['Kills'].sum().index, df.groupby(['Year'])['Kills'].sum().values, label='Total Kills')
sns.lineplot(df.groupby(['Year'])['GroupName'].count().index, df.groupby(['Year'])['GroupName'].count().values, label='Number of Groups')

plt.xlabel('Year')
plt.ylabel('Count')
plt.title('Terrorist Attacks Statistics')

plt.legend() # Add legend to differentiate the lines

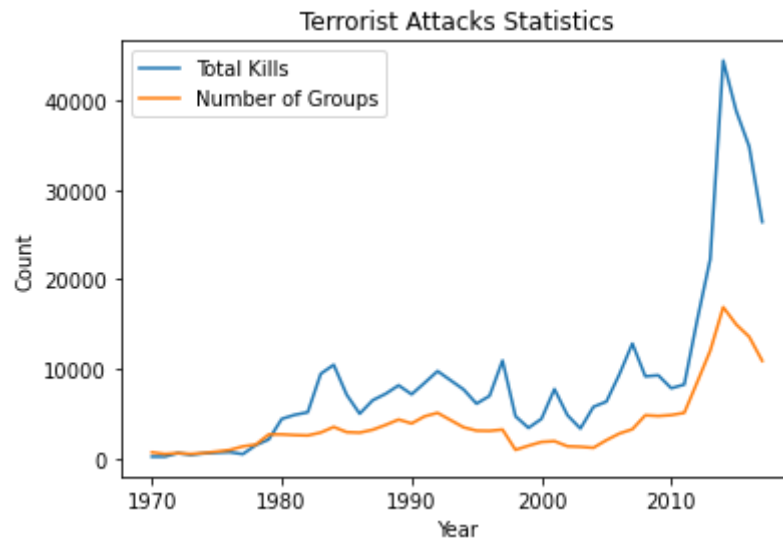
plt.show()
```

C:\Users\Dell\anaconda3\lib\site-packages\seaborn\\_decorators.py:36: FutureWarning: Pass the following variables as keyword args: x, y. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.

warnings.warn(

C:\Users\Dell\anaconda3\lib\site-packages\seaborn\\_decorators.py:36: FutureWarning: Pass the following variables as keyword args: x, y. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.

warnings.warn(



```
In [366]: plt.subplot(2, 1, 1) # Create the first subplot
sns.lineplot(df.groupby(['Year'])['Kills'].sum().index, df.groupby(['Year'])['Kills'].sum().values)
plt.xlabel('Year')
plt.ylabel('Total Kills')

plt.subplot(2, 1, 2) # Create the second subplot
sns.lineplot(df.groupby(['Year'])['GroupName'].count().index, df.groupby(['Year'])['GroupName'].count().values)
plt.xlabel('Year')
plt.ylabel('Number of Groups')

plt.tight_layout() # Adjust spacing between subplots

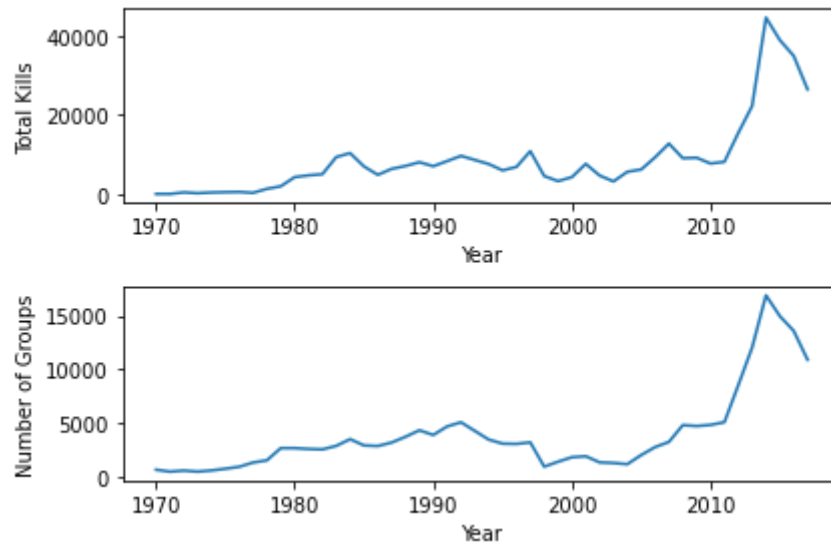
plt.show()
```

C:\Users\Dell\anaconda3\lib\site-packages\seaborn\\_decorators.py:36: FutureWarning: Pass the following variables as keyword args: x, y. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.

warnings.warn(

C:\Users\Dell\anaconda3\lib\site-packages\seaborn\\_decorators.py:36: FutureWarning: Pass the following variables as keyword args: x, y. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.

warnings.warn(



```
In [ ]: year_sum = pd.DataFrame(df.groupby('Year')['Kills'].sum()).reset_index()
year_sum['Percentage_growth'] = round(year_sum['Kills'].pct_change() * 100,2)
year_sum['Percentage_growth'] = year_sum['Percentage_growth'].fillna(0)
year_sum
```

```
In [168]: df.groupby(['GroupName'])['killed'].sum().sort_values(ascending=False)
```

```
Out[168]: GroupName
Unknown                112367.0
Islamic State of Iraq and the Levant (ISIL)    38923.0
Taliban                29410.0
Boko Haram            20328.0
Shining Path (SL)     11601.0
...
New Revolutionary Alternative (NRA)             0.0
Council for the Destruction of Order            0.0
Counterrevolutionary Solidarity (SC)            0.0
New Partisans Movement                        0.0
leftist guerrillas-Bolivarian militia          0.0
Name: killed, Length: 3537, dtype: float64
```

```
In [389]: df.groupby(['GroupName', 'Year'])['Kills'].sum().sort_values(ascending=False).head(10)
```

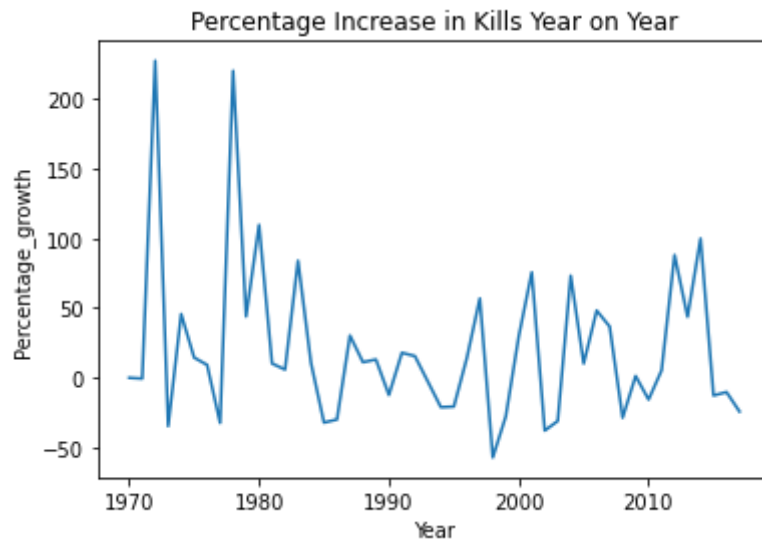
```
Out[389]: GroupName      Year      Kills
Islamic State of Iraq and the Levant (ISIL)  2016    11690.0
                                                2014    10261.0
Unknown                                     2013    10025.0
                                                2014     9843.0
Islamic State of Iraq and the Levant (ISIL)  2015     8461.0
Unknown                                     2007     8184.0
Boko Haram                                  2014     7118.0
Islamic State of Iraq and the Levant (ISIL)  2017     7053.0
Unknown                                     2015     6538.0
Boko Haram                                  2015     6510.0
Name: Kills, dtype: float64
```

```
In [414]: year_sum = pd.DataFrame(df.groupby('Year')['Kills'].sum()).reset_index()
year_sum['Percentage_growth'] = round(year_sum['Kills'].pct_change() * 100,2)
year_sum['Percentage_growth'] = year_sum['Percentage_growth'].fillna(0)
plt.title('Percentage Increase in Kills Year on Year')
sns.lineplot(year_sum['Year'],year_sum['Percentage_growth'])
plt.show
```

C:\Users\Dell\anaconda3\lib\site-packages\seaborn\\_decorators.py:36: FutureWarning: Pass the following variables as keyword args: x, y. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.

warnings.warn(

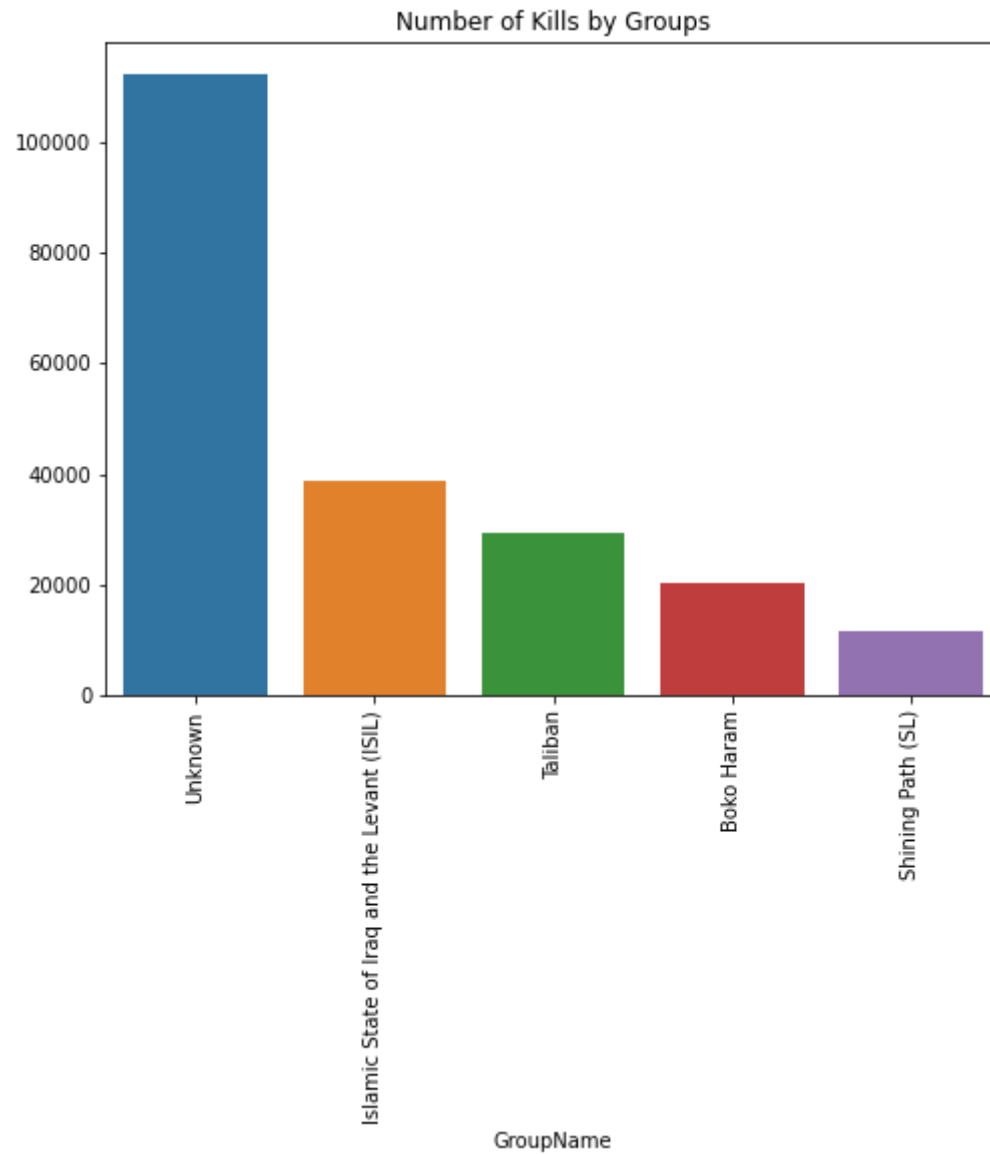
```
Out[414]: <function matplotlib.pyplot.show(close=None, block=None)>
```



```
In [412]: x = df.groupby(['GroupName'])['Kills'].sum().sort_values(ascending=False).head(5).index
y = df.groupby(['GroupName'])['Kills'].sum().sort_values(ascending=False).head(5).values
plt.figure(figsize=(8,6))
plt.title('Number of Kills by Groups')
sns.barplot(x,y)
plt.xticks(rotation=90)
plt.show()
```

C:\Users\Dell\anaconda3\lib\site-packages\seaborn\\_decorators.py:36: FutureWarning: Pass the following variables as keyword args: x, y. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.

warnings.warn(



```
In [185]: df['GroupName'].value_counts().head()
```

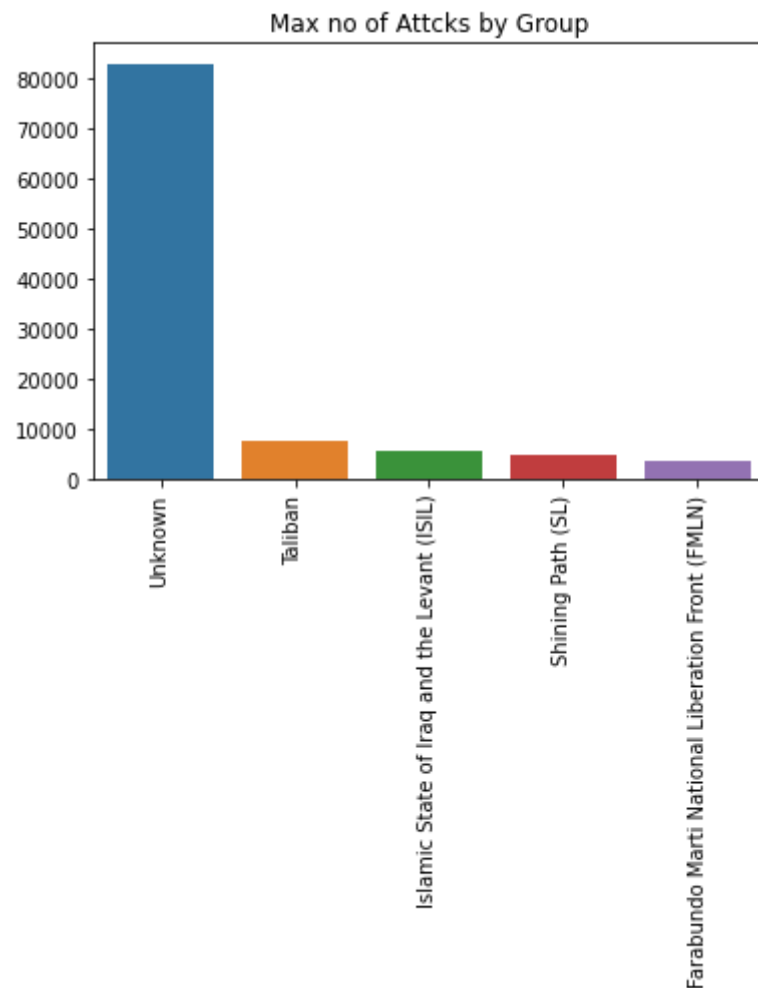
```
Out[185]: Unknown                82782  
Taliban                        7478  
Islamic State of Iraq and the Levant (ISIL)  5613  
Shining Path (SL)              4555  
Farabundo Marti National Liberation Front (FMLN)  3351  
Name: GroupName, dtype: int64
```



```
In [413]: plt.title('Max no of Attcks by Group')
sns.barplot(df['GroupName'].value_counts().head().index,df['GroupName'].value_counts().head().values)
plt.xticks(rotation=90)
plt.show()
```

C:\Users\Dell\anaconda3\lib\site-packages\seaborn\\_decorators.py:36: FutureWarning: Pass the following variables as keyword args: x, y. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.

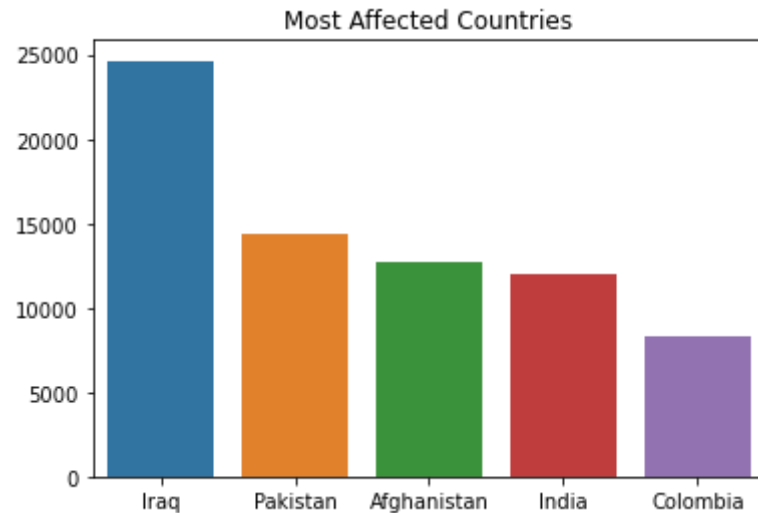
warnings.warn(



```
In [197]: plt.title('Most Affected Countries')
sns.barplot(df['Country'].value_counts().head(5).index,df['Country'].value_counts().head(5).values)
plt.show()
```

C:\Users\Dell\anaconda3\lib\site-packages\seaborn\\_decorators.py:36: FutureWarning: Pass the following variables as keyword args: x, y. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.

```
warnings.warn(
```



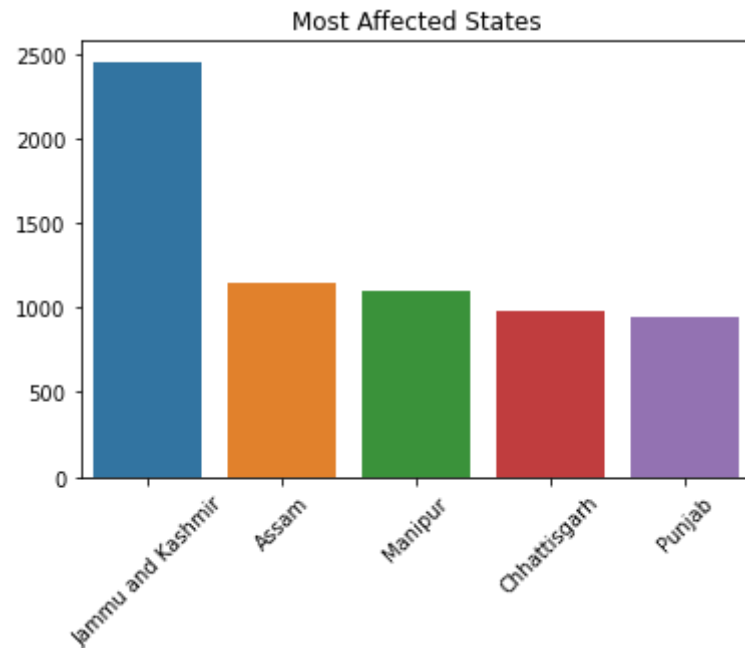
```
In [201]: df[df['Country']=="India"]['City'].value_counts().head(5)
```

```
Out[201]: Srinagar      658
Unknown      624
Imphal       426
New Delhi    157
Amritsar     138
Name: City, dtype: int64
```

```
In [241]: plt.title('Most Affected States')
sns.barplot(df[df['Country']=="India"]['State'].value_counts().head(5).index, df[df['Country']=="India"]['State'].valu
plt.xticks(rotation=45)
plt.show()
```

C:\Users\Dell\anaconda3\lib\site-packages\seaborn\\_decorators.py:36: FutureWarning: Pass the following variables as keyword args: x, y. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.

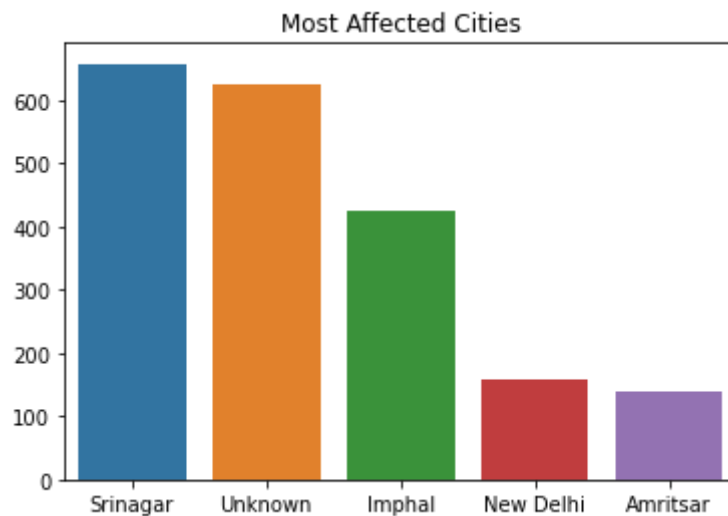
warnings.warn(



```
In [239]: plt.title('Most Affected Cities')
sns.barplot(df[df['Country']=="India"]['City'].value_counts().head(5).index, df[df['Country']=="India"]['City'].value_
plt.show()
```

C:\Users\Dell\anaconda3\lib\site-packages\seaborn\\_decorators.py:36: FutureWarning: Pass the following variables as keyword args: x, y. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.

warnings.warn(



```
In [424]: df['GroupName'].value_counts()
```

```
Out[424]: Unknown      82782
Taliban      7478
Islamic State of Iraq and the Levant (ISIL)  5613
Shining Path (SL)    4555
Farabundo Marti National Liberation Front (FMLN)  3351
...
Ansar Sarallah      1
Sword of Islam      1
Support of Ocalan-The Hawks of Thrace      1
Arab Revolutionary Front      1
MANO-D      1
Name: GroupName, Length: 3537, dtype: int64
```

## which Terrorist group has highest success rate

```
In [503]: un=df[df['GroupName']=='Unknown']['Success'].value_counts()
total_un = np.sum(df['GroupName']=='Unknown')
y_un = [round(un[1]/total_un*100,2),round(100-un[1]/total_un*100,2)]
print(un,total_un,y_un)
```

```
1    71748
0     11034
Name: Success, dtype: int64 82782 [86.67, 13.33]
```

```
In [504]: ta=df[df['GroupName']=='Taliban']['Success'].value_counts()
total_ta = np.sum(df['GroupName']=='Taliban')
y_ta = [round(ta[1]/total_ta*100,2),round(100-ta[1]/total_ta*100,2)]
print(ta,total_ta,y_ta)
```

```
1     6680
0       798
Name: Success, dtype: int64 7478 [89.33, 10.67]
```

```
In [513]: isil=df[df['GroupName']=='Islamic State of Iraq and the Levant (ISIL)']['Success'].value_counts()
total_isil = np.sum(df['GroupName']=='Islamic State of Iraq and the Levant (ISIL)')
y_isil = [round(isil[1]/total_isil*100,2),round(100-isil[1]/total_isil*100,2)]
print(isil,total_isil,y_isil)
```

```
1     4759
0       854
Name: Success, dtype: int64 5613 [84.79, 15.21]
```

```
In [514]: sl=df[df['GroupName']=='Shining Path (SL)']['Success'].value_counts()
total_sl = np.sum(df['GroupName']=='Shining Path (SL)')
y_sl = [round(sl[1]/total_sl*100,2),round(100-sl[1]/total_sl*100,2)]
print(sl,total_sl,y_sl)
```

```
1     4337
0       218
Name: Success, dtype: int64 4555 [95.21, 4.79]
```

```
In [517]: fmln=df[df['GroupName']=='Farabundo Marti National Liberation Front (FMLN)']['Success'].value_counts()
total_fmln = np.sum(df['GroupName']=='Farabundo Marti National Liberation Front (FMLN)')
y_fmln = [round(fmln[1]/total_fmln*100,2),round(100-fmln[1]/total_fmln*100,2)]
print(sl,total_fmln,y_fmln)
```

```
1    4337
```

```
0     218
```

```
Name: Success, dtype: int64 3351 [98.99, 1.01]
```

```
In [543]: plt.figure(figsize=(10,8))
plt.subplot(2,2,1)
x = ['S', 'F']
plt.title("Unknown Group Success Failure Rate")
sns.barplot(x,y_un)
plt.ylabel('Percentage')

plt.subplot(2,2,2)
x = ['S', 'F']
y = [ta[1]/total_ta*100,100-ta[1]/total_ta*100]
plt.title("Taliban's Group Success Failure Rate")
sns.barplot(x,y)
plt.ylabel('Percentage')

plt.subplot(2,2,3)
x = ['S', 'F']
y_sl = [round(sl[1]/total_sl*100,2),round(100-sl[1]/total_sl*100,2)]
plt.title("ShiningPath Group Success Failure Rate")
sns.barplot(x,y_sl)
plt.ylabel('Percentage')

plt.subplot(2,2,4)
x = ['S', 'F']
y_fmIn = [round(fmIn[1]/total_fmIn*100,2),round(100-fmIn[1]/total_fmIn*100,2)]
plt.title("(FMLN) Group Success Failure Rate")
sns.barplot(x,y_fmIn)
plt.ylabel('Percentage')

plt.tight_layout()
plt.show()
```

```
C:\Users\Dell\anaconda3\lib\site-packages\seaborn\_decorators.py:36: FutureWarning: Pass the following variables as keyword args: x, y. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.
```

```
warnings.warn(
```

```
C:\Users\Dell\anaconda3\lib\site-packages\seaborn\_decorators.py:36: FutureWarning: Pass the following variables as keyword args: x, y. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.
```

```
warnings.warn(
```

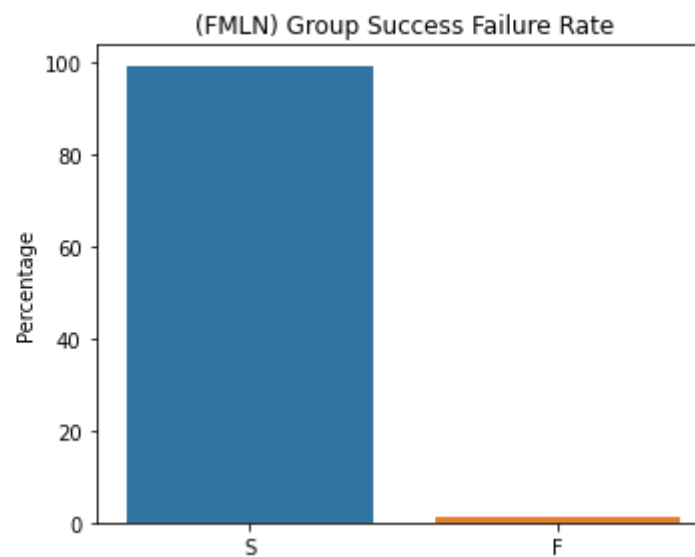
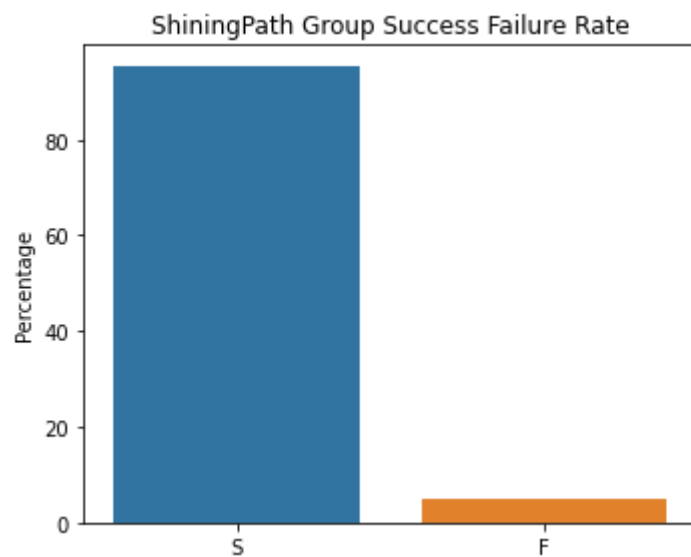
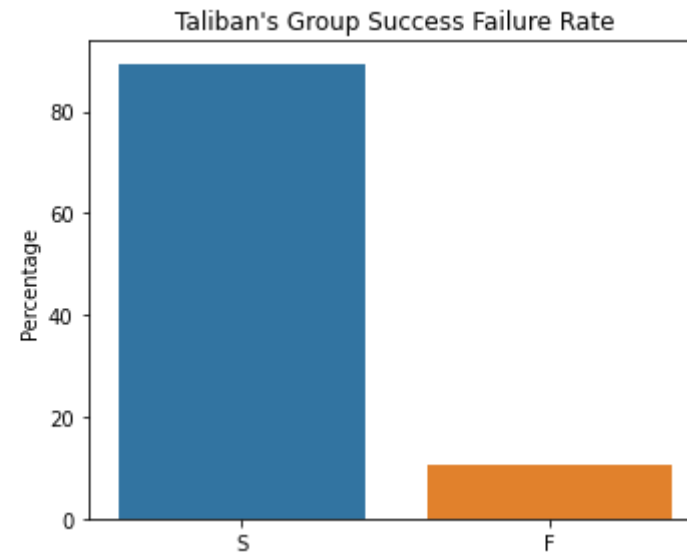
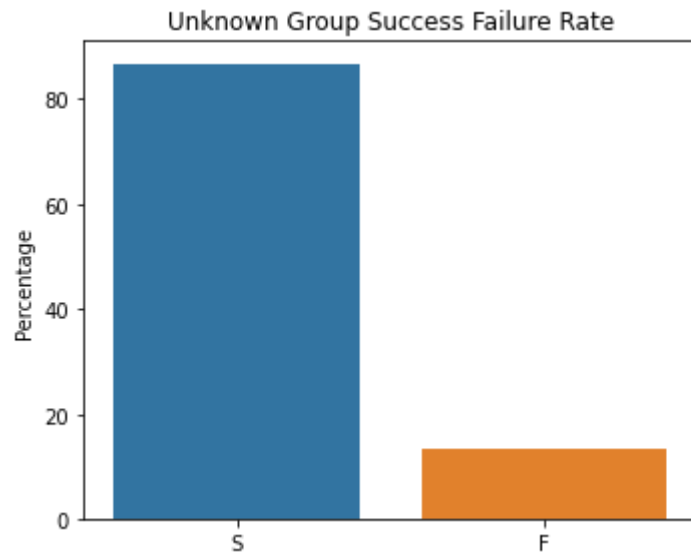
```
C:\Users\Dell\anaconda3\lib\site-packages\seaborn\_decorators.py:36: FutureWarning: Pass the following variables as keyword args: x, y. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.
```

```
warnings.warn(
```

```
C:\Users\Dell\anaconda3\lib\site-packages\seaborn\_decorators.py:36: FutureWarning: Pass the following variables as keyword args: x, y. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.
```

```
warnings.warn(
```





```
In [433]: df.groupby(df['GroupName']=='1 May')['Success'].count()
```

```
Out[433]: GroupName
False    181681
True       10
Name: Success, dtype: int64
```

```
In [442]: cross_tab = pd.crosstab(df['GroupName'], df['Success'])  
cross_tab.head(10)
```

Out[442]:

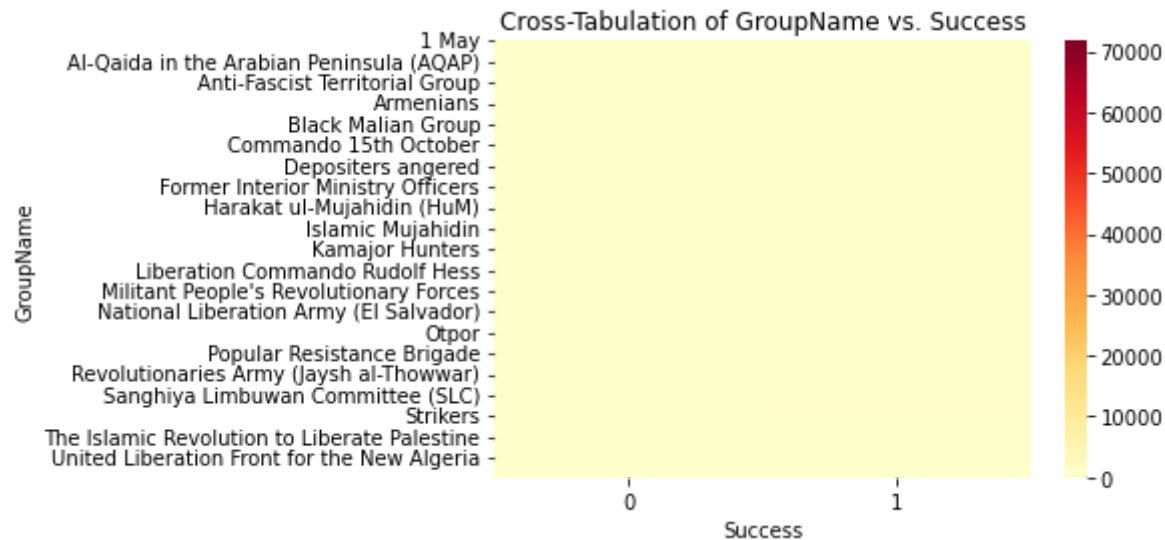
	Success	
	0	1
GroupName		
1 May	1	9
14 K Triad	0	4
14 March Coalition	0	1
14th of December Command	0	3
15th of September Liberation Legion	0	1
16 January Organization for the Liberation of Tripoli	0	24
1920 Revolution Brigades	0	2
19th of July Christian Resistance Brigade	0	1
1st of May Group	2	2
2 April Group	4	2

```
In [573]: cross_tab = pd.crosstab(df['GroupName'], df['Success'])

# Plot the cross-tabulation table as a heatmap
sns.heatmap(cross_tab, cmap='YlOrRd')

plt.xlabel('Success')
plt.ylabel('GroupName')
plt.title('Cross-Tabulation of GroupName vs. Success')

plt.show()
```



In [432]: `cross_tab`

Out[432]:

	Success	0	1
GroupName			
1 May	1	9	
14 K Triad	0	4	
14 March Coalition	0	1	
14th of December Command	0	3	
15th of September Liberation Legion	0	1	
...	...	...	
Zulu Miners	0	1	
Zuwar al-Imam Rida	0	1	
Zviadists	0	1	
Zwai Tribe	0	1	
leftist guerrillas-Bolivarian militia	0	1	

3537 rows × 2 columns

In [530]: `df['Specificity'].value_counts()`

Out[530]:

1.0	144996
3.0	14615
2.0	8990
4.0	8534
5.0	4550

Name: Specificity, dtype: int64

In [531]: `df['Multiple'].value_counts()`

Out[531]:

0.0	156658
1.0	25032

Name: Multiple, dtype: int64

```
In [528]: df['Target'].value_counts().head(10)
```

```
Out[528]: Civilians      6461
          Unknown       5918
          Soldiers     3157
          Patrol       2942
          Checkpoint   2905
          Vehicle      2785
          Officers     1787
          Village     1679
          Military Unit 1533
          Bus         1335
          Name: Target, dtype: int64
```

```
In [540]: df[df['Target']=='Civilians']['Success'].value_counts()
```

```
Out[540]: 1    6252
          0     209
          Name: Success, dtype: int64
```

```
In [544]: plt.figure(figsize=(10,8))
plt.subplot(2,2,1)
plt.title('The success rate of attacks targeting civilians')
sns.countplot(df[df['Target']=='Civilians']['Success'])

plt.subplot(2,2,2)
plt.title('The success rate of attacks targeting soldiers')
sns.countplot(df[df['Target']=='Soldiers']['Success'])

plt.subplot(2,2,3)
plt.title('The success rate of attacks targeting checkpoint')
sns.countplot(df[df['Target']=='Checkpoint']['Success'])

plt.subplot(2,2,4)
plt.title('The success rate of attacks targeting Officers')
sns.countplot(df[df['Target']=='Officers']['Success'])

plt.tight_layout()
plt.show()
```

C:\Users\Dell\anaconda3\lib\site-packages\seaborn\\_decorators.py:36: FutureWarning: Pass the following variable as a keyword arg: x. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.

warnings.warn(

C:\Users\Dell\anaconda3\lib\site-packages\seaborn\\_decorators.py:36: FutureWarning: Pass the following variable as a keyword arg: x. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.

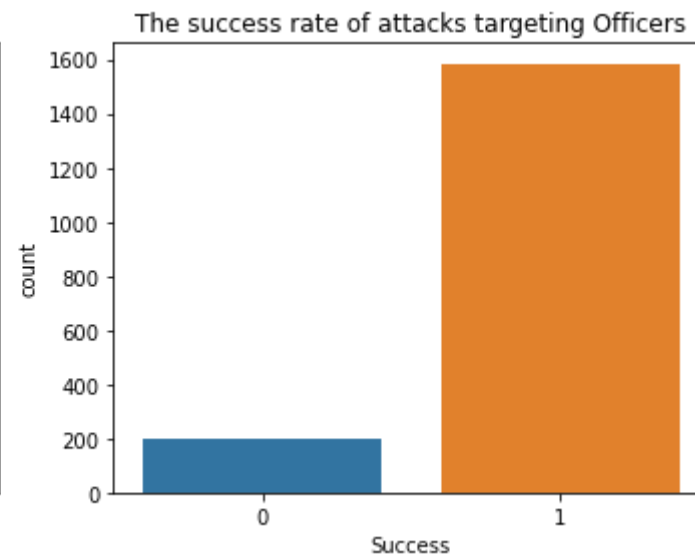
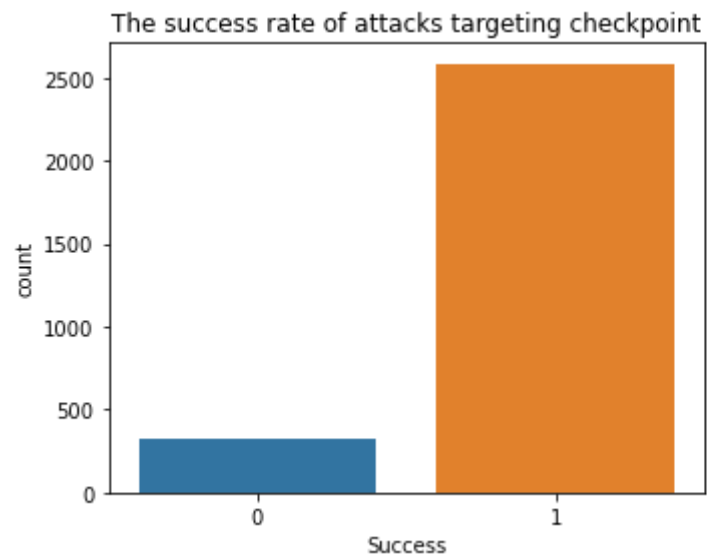
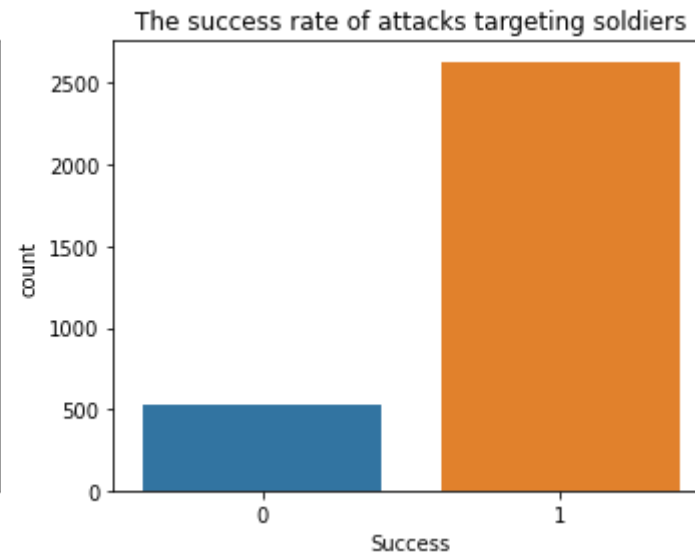
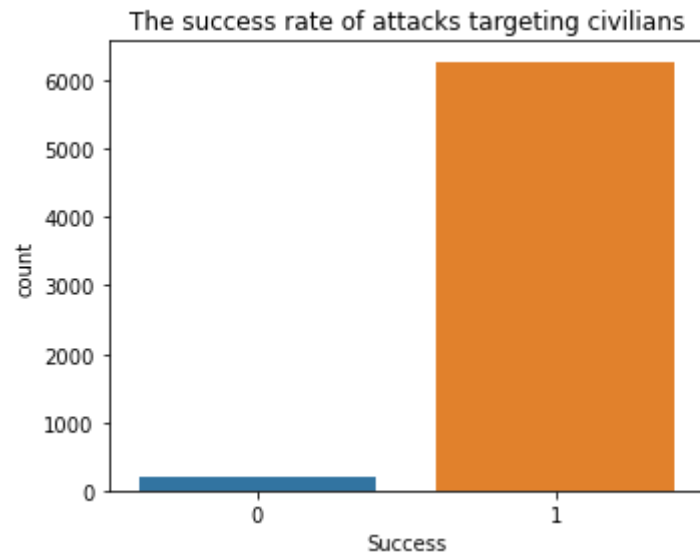
warnings.warn(

C:\Users\Dell\anaconda3\lib\site-packages\seaborn\\_decorators.py:36: FutureWarning: Pass the following variable as a keyword arg: x. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.

warnings.warn(

C:\Users\Dell\anaconda3\lib\site-packages\seaborn\\_decorators.py:36: FutureWarning: Pass the following variable as a keyword arg: x. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.

warnings.warn(



```
In [565]: df[df['Target'] == 'Civilians'].groupby('GroupName')['Kills'].sum().sort_values(ascending=False)
```

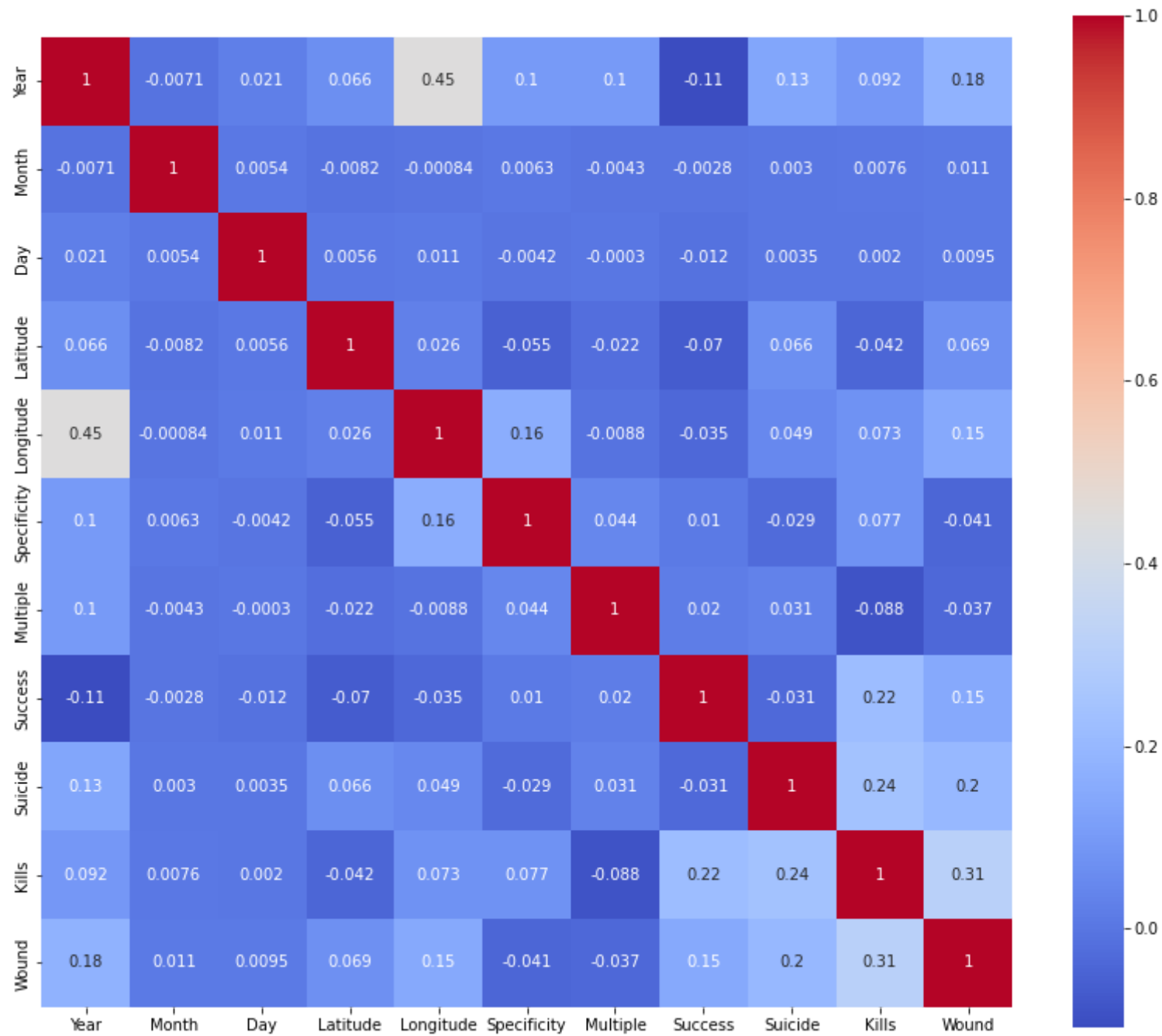
```
Out[565]: GroupName
Unknown                7431.0
Islamic State of Iraq and the Levant (ISIL)  4725.0
Boko Haram             1369.0
Taliban                1071.0
Allied Democratic Forces (ADF)    393.0
...
Coordination of Azawad Movements (CMA)      0.0
Democratic Front of the Central African People (FDPC)  0.0
Dissident Republicans                       0.0
Donetsk People's Republic                  0.0
313 Brigade (Syria)                        0.0
Name: Kills, Length: 217, dtype: float64
```

```
In [575]: df.shape
```

```
Out[575]: (181691, 20)
```



```
In [579]: plt.figure(figsize=(14,12))  
sns.heatmap(df.corr(method='spearman'), square=True, annot=True, cmap='coolwarm')  
plt.show()
```



**Conclusion:-**

1.Terrorism witnessed its peak in 2014, with the highest number of kills, while 1971 marked the lowest number of kills,

This highlights a concerning trend of increasing terrorism over the years.

2.Most wanted terrorist groups are unknown group follow by Islamic state of Iraq(ISIL), Taliban, Boko Haram and Shining. Path(ISL).

3.Most active terrorist groups are Unknown Groups followed by Talibans, ISIL,ISL and FMLIN Groups based on no of attacks.

4.Most sensitive Countries affected by terrorist groups are Iraq, Pakistan, Afghanistan, India, Colombia.

5.In India most affected states are Jammu and kashmir followed by Assam, Manipur, Chhattisgarh and Punjab and most affected cities are Srinagar followed by Imphal, NewDelhi, Amritsar.

6.The most common types of terrorist attacks,in descending order, are bombing/explosion, armed assault, assassination,

hostage taking (kidnapping),and facility/infrastructure attack.

7.FMLN and Shining Path exhibit the highest success rates among all groups, while Talibans and unknown groups, demonstrate comparable success rates, highlighting their effectiveness in achieving their objectives.

8.Civilians are often targeted by terrorists due to their high success rate as vulnerable victims.

9.Top civilian-targeting terrorist groups: Unknown groups, ISIS, Boko Haram, Taliban, ADF. High success rate, vulnerable victims.