EDA Global Terrorism Documentation

1- I have summarized the nulls and missing values .

2- Calculating the percentage of nulls and missings.

3- Choosing to drop columns which have > 20% of nulls.

4- Dropping some columns that didn't used in the analysis.

5- Choosing the columns that I used in my Exploration.

6- Handling "Unknown Values" except that in the 'gname' column.

7- Renaming some of the columns to make easier using them in my Analysis and Visualization.

8- Loaded the final cleaned data in New CSV file provided.

9- Loaded the final cleaned data CSV file using Pandas And Dask

10- Doing all the required notes in the project using pandas like:

- Grouping and Calculate Aggregate Statistics like Attacks per (year- region- country- target type- attacks type).

11- Loading the data to dask and repeating the calcs and grouping again.

12- Comparing between Pandas and Dask in the Time execution and Memory Usage: Finding that Dask takes time and memory usage less than pandas.

13- I used Numpy to calculate the mean, median and standard deviation for some columns:
For "nkill" = Mean nkills: 2.0382, Median nkills: 0.0, Std Dev nkills: 10.32917.
For "nwound" = Mean nwounds: 3.2587Median nwounds: 0.0, Std Dev nwounds: 41.6928.

14- Identifying the most frequent values in categorical columns like:
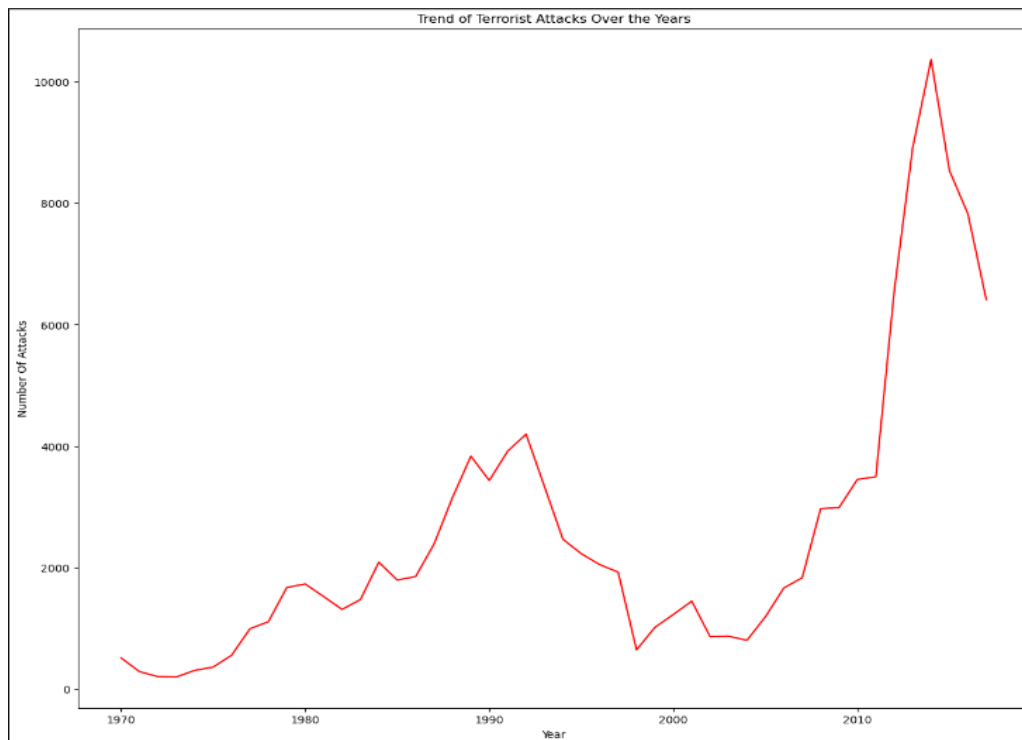
15- 1-most frequent country is: Iraq

16- 2-most frequent region is: South Asia

17- 3-most frequent city is: Baghdad

18- 4-most frequent attacktype is: Bombing/Explosion

19- 5-Most Frequent Values in Categorical (targtype) Columns:

20- targtype: targtype

21- Private Citizens & Property   27311

22- Police   17745

23- Military   17111

24- Government (General)   15786

25- Business   14938

26- Transportation   5202

27- Utilities   4179

28- Religious Figures/Institutions   3358

29- Educational Institution   3343

30- Government (Diplomatic)   2694

31- 6-Most Frequent Values in Categorical (weapontype) Columns:

32- weapontype: weapontype

33- Explosives   64901

34- Firearms   42593

35- Incendiary   9505

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36- Melee                                            2998
37- Chemical                                228
38- Vehicle (not to include vehicle-borne explosives, i.e., car or truck bombs)   121
39- Sabotage Equipment                                  117
40- Other                              99
41- Biological                        30
42- Fake Weapons                              29

43- 7-Most Gangs name make attacks: gname
44- Unknown                              57075
45- Taliban                      4455
46- Shining Path (SL)                  3484
47- Islamic State of Iraq and the Levant (ISIL)      2806
48- Farabundo Marti National Liberation Front (FMLN)    1953
49- New People's Army (NPA)                  1830
50- Basque Fatherland and Freedom (ETA)          1641
51- Al-Shabaab                    1634
52- Irish Republican Army (IRA)              1560
53- Kurdistan Workers' Party (PKK)            1511
54-
```
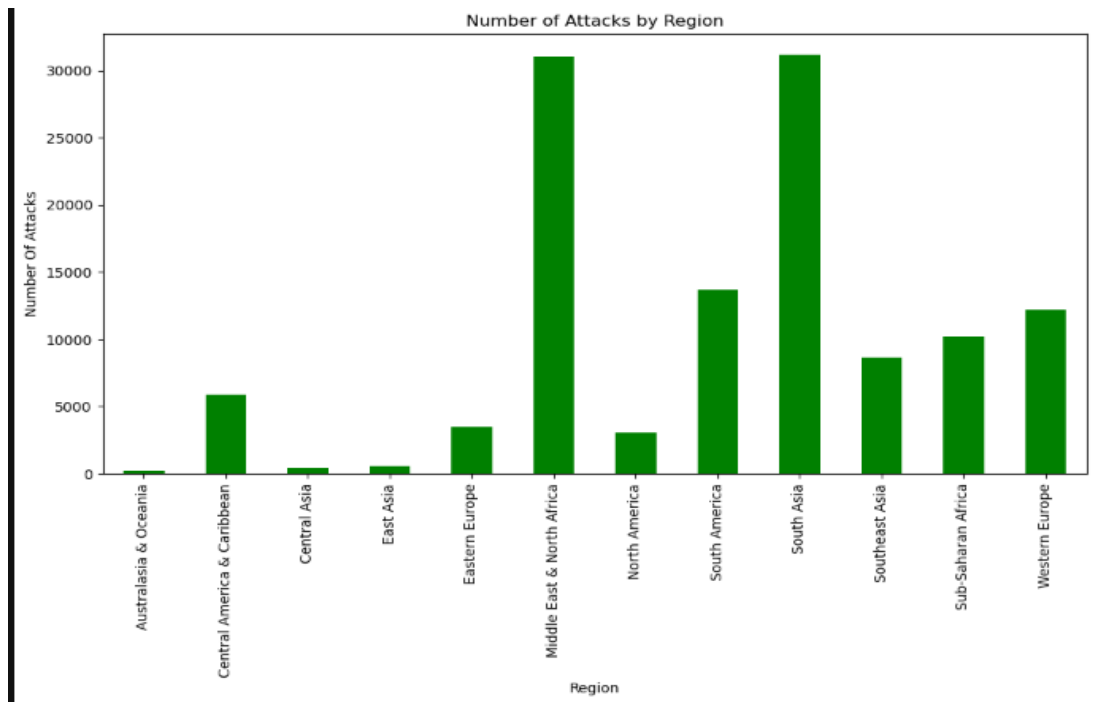
Visualization

1- Line plot showing the trend of terrorist attacks over the years:
2014 is the most.

Trend of Terrorist Attacks Over the Years

2- Bar plot of the number of attacks by region:
   Middle East & North Africa.
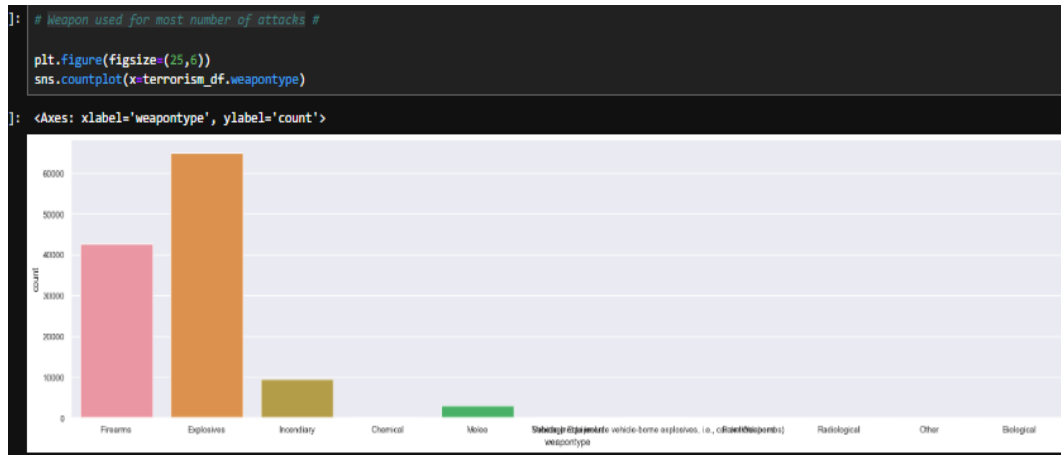

3- Heatmap to visualize the correlation between different features.
   Correlation Between 'nkill' & 'nwound'.

4- Scatter plot showing the relationship between the number of casualties and the type of attack.

5- Interactive map to show the geographic distribution of attacks.

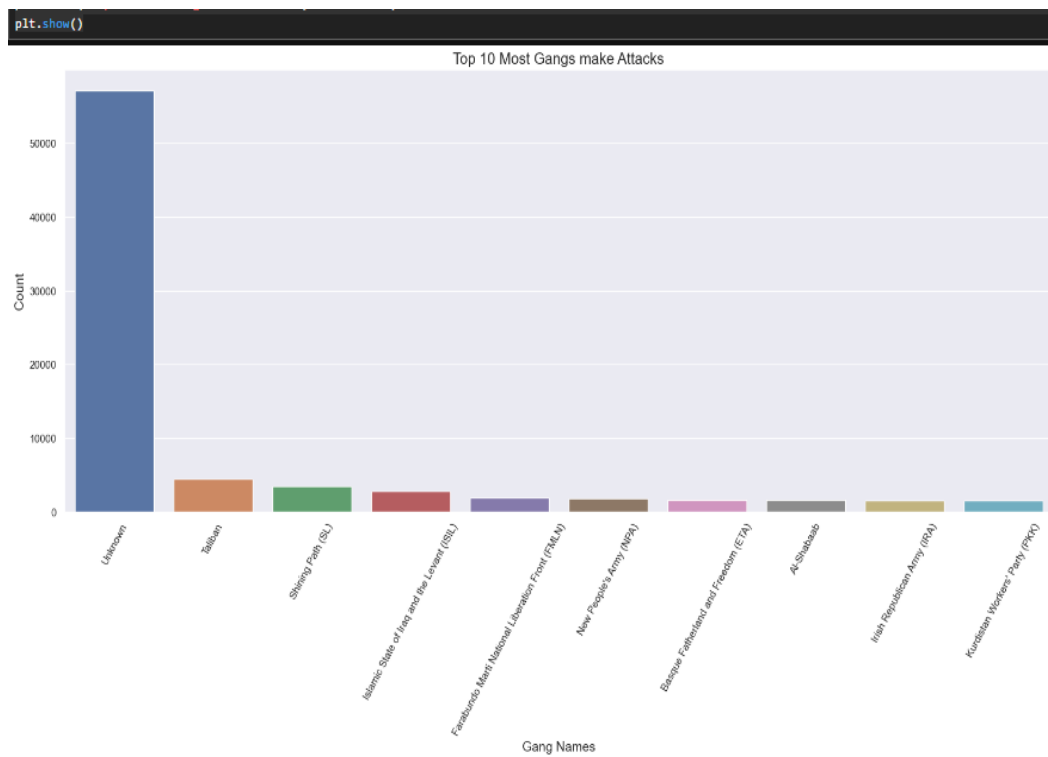6- Time series animation showing the spread of terrorism over the years.

Addition Visuals

7- Most Attcaked Target Types : Private citizens and Property.

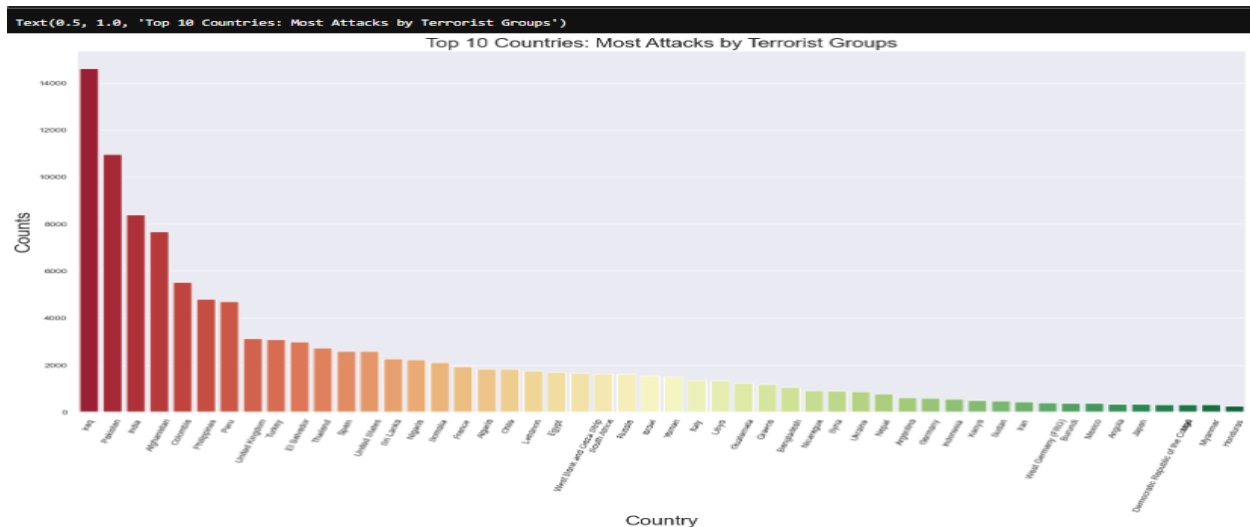8- Weapon used for most number of attacks : Explosives and Firearms.

```
]: # Weapon used for most number of attacks #

plt.figure(figsize=(25,6))
sns.countplot(x=terrorism_df.weapontype)

]: <Axes: xlabel='weapontype', ylabel='count'>
```


9- Most Gangs make Attacks : Unknown and Taliban.

10-   Contries with most number of Attacks by terror groups

Iraq and Pakistan.


```
Text(0.5, 1.0, 'Top 10 Countries: Most Attacks by Terrorist Groups')
```

11-   Most cities Attacked:
Baghdad & Lima


```
plt.xlabel('City', fontsize=14)
plt.ylabel('Count', fontsize=14)
plt.title('Most cities Attacked', fontsize=16)
plt.show()
```