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Let's find the Terrorist's insights -

Steps taken-

1. Defining the problem statement.
2. Data exploration and cleaning.
3. Finding some insights.
4. Solving the problem statement and visualizing the result for more clarification.
5. Conclusions.

The problem statement -

Terrorism is a global issue which is growing bigger and bigger each year. Every time we miss the right information or right prediction we have a global attack at the list.

So it's very important to analyse the global attack data and find some insights so that we can reach a bit closer to that right information and right prediction which can stop the attack.

The insights which we will be finding onwards will be-

1. Trend in global terrorism - year-wise and finding the possible reasons for the growth of terrorism.
2. Trend in terrorism by region
3. Top 5 most crime city.
4. Top 5 terrorist group worldwide.
5. The most dangerous weapon.
6. What is the most probable Target for terrorists.

Data Summary

The dataset contains the global terrorist attacks data from year 1970 to 2017.

The dataset has numerous properties which makes it a resource from which we can derive many conclusions which may be the key information to control the terrorist attacks around the world.

Some of the important properties available in the data are-

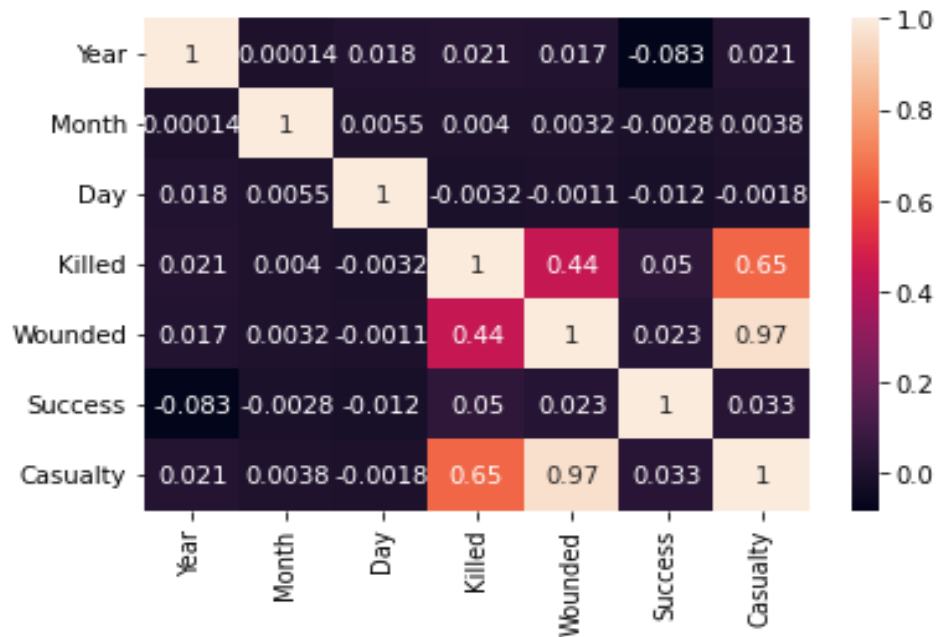
Year , Month, Day, Region , City , Attack_type , Target , Killed, Wounded, Summary, Group, Target_type, Weapon_type, Motive and Success .

The original data contains 181691 rows and 135 columns but we have reduced it to only 16 columns which is only required for our data analysis.

Some of the columns also contain NaN and Null values which we have reduced and replaced as per requirement.

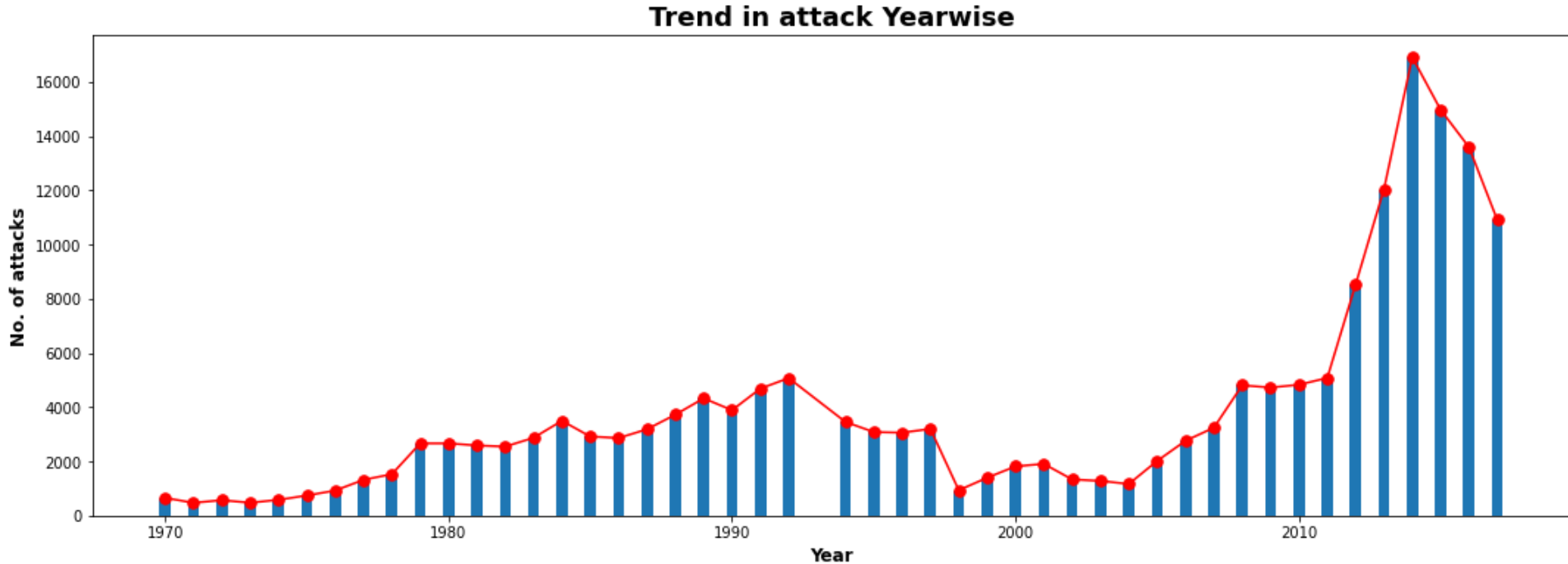
A new column 'Casualty' has been added which is the total no. of people killed plus wounded in a particular attack.

Correlation between features of Data



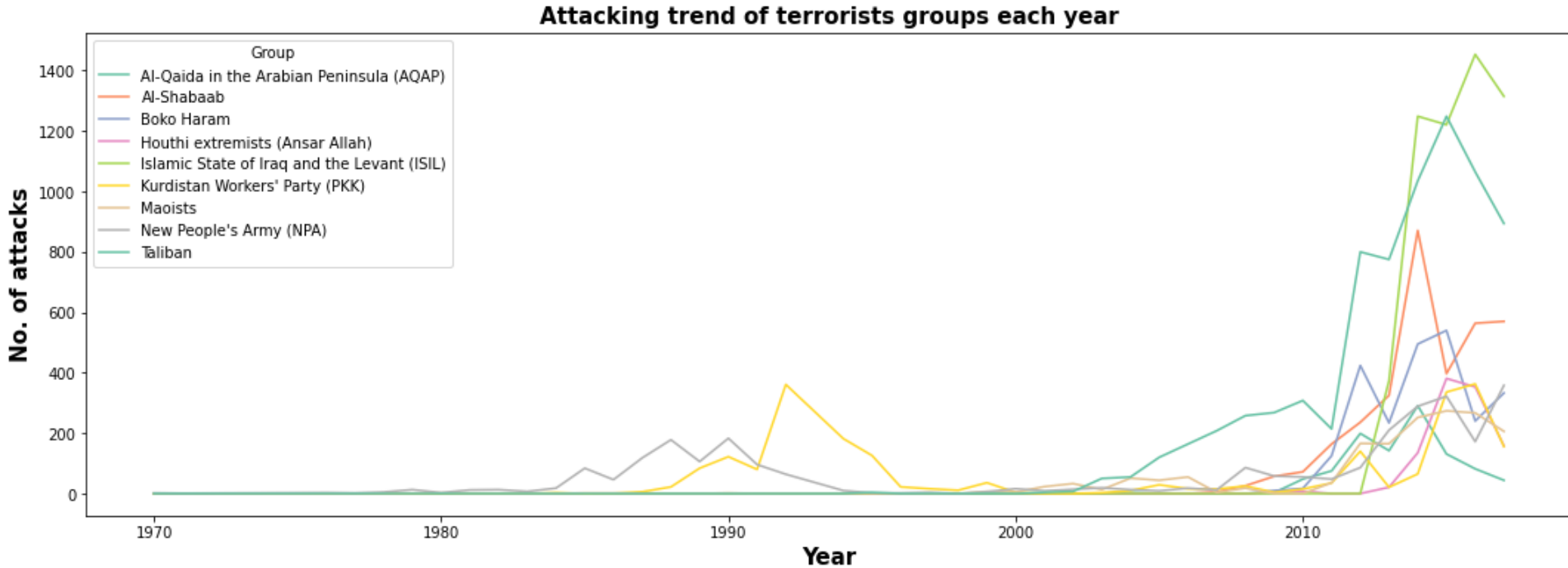
The above correlation matrix shows that almost all features are independent of each other except the 'Casualty' feature showing strong correlation with 'Killed' and 'Wounded' feature and it is quite natural as we have derived the 'Casualty' feature from the both columns itself. Also a medium correlation between 'Killed' and 'Wounded' feature can be ignored as we will be working with only 'Casualty' feature which has the feature of both the columns.

Trend in global terrorism - year-wise and finding the possible reasons for the growth of terrorism.



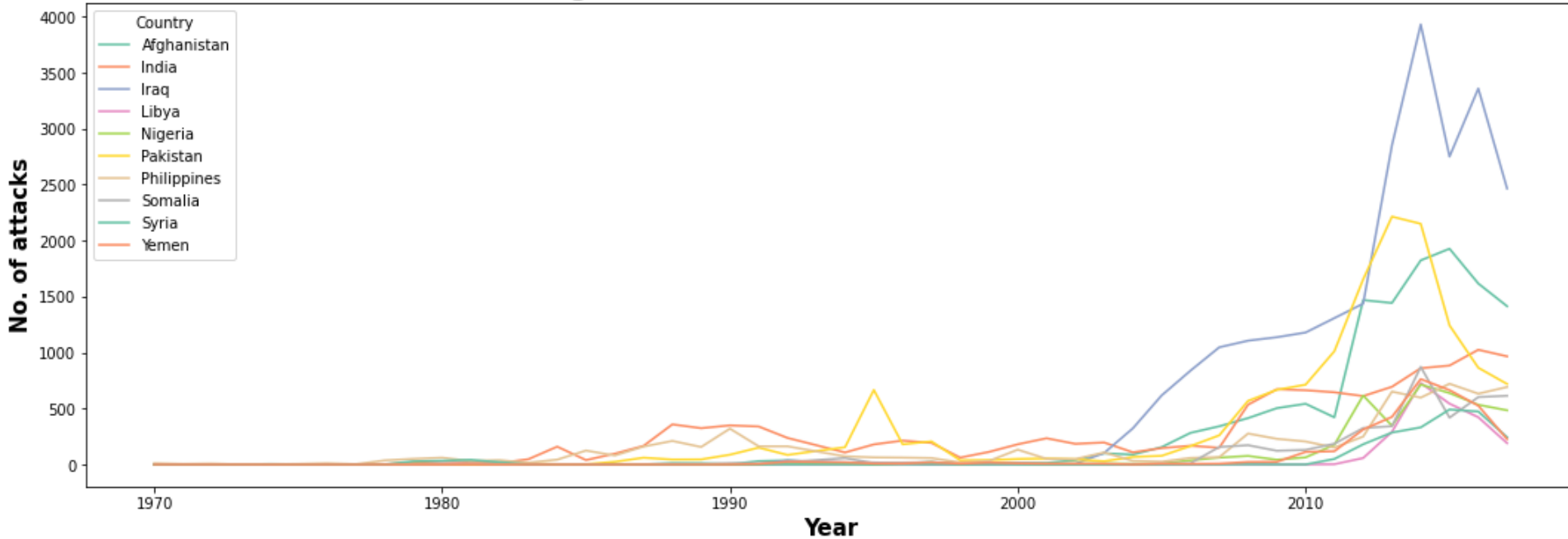
Observation – There is a rapid growth in terrorism from 2012 to 2017 with a peak in 2014

Finding reasons for the rapid growth in terrorism from 2012



The above data analysis shows that there are some new Terrorist Groups that comes into existence after 2012 or some existing Groups started more number of attacks due to which there is a rapid growth in global terrorists attack after 2012.

Attacking trend in countries with maximum attacks

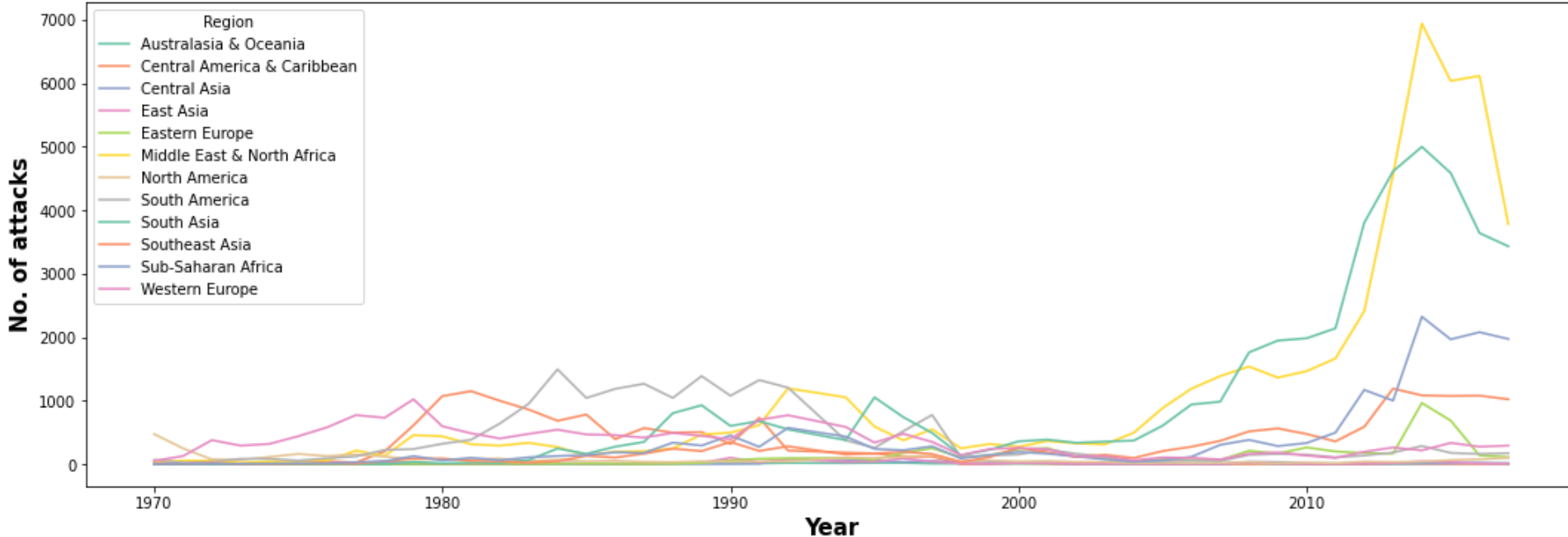


Other reason for the rapid growth in global terrorism after 2012 is the increase in Attacks/Crimes in countries like- Iraq , Afghanistan and Pakistan. While in Iraq- Baghdad and Mosul has most number of attacks.

Trend in terrorism by region -

This would help us to identify the regions where most of attacks are taking place so that we can concentrate on those regions first to control the terrorism.

Attacking trend by region



From above graph it can be easily observed that in the region of Middle East & North Africa and South Asia there is rapid growth in attacks after 2012. There might have any political issue or any other reasons for the growth of terrorism in these regions which we can derive from the motive column or from any external related data.

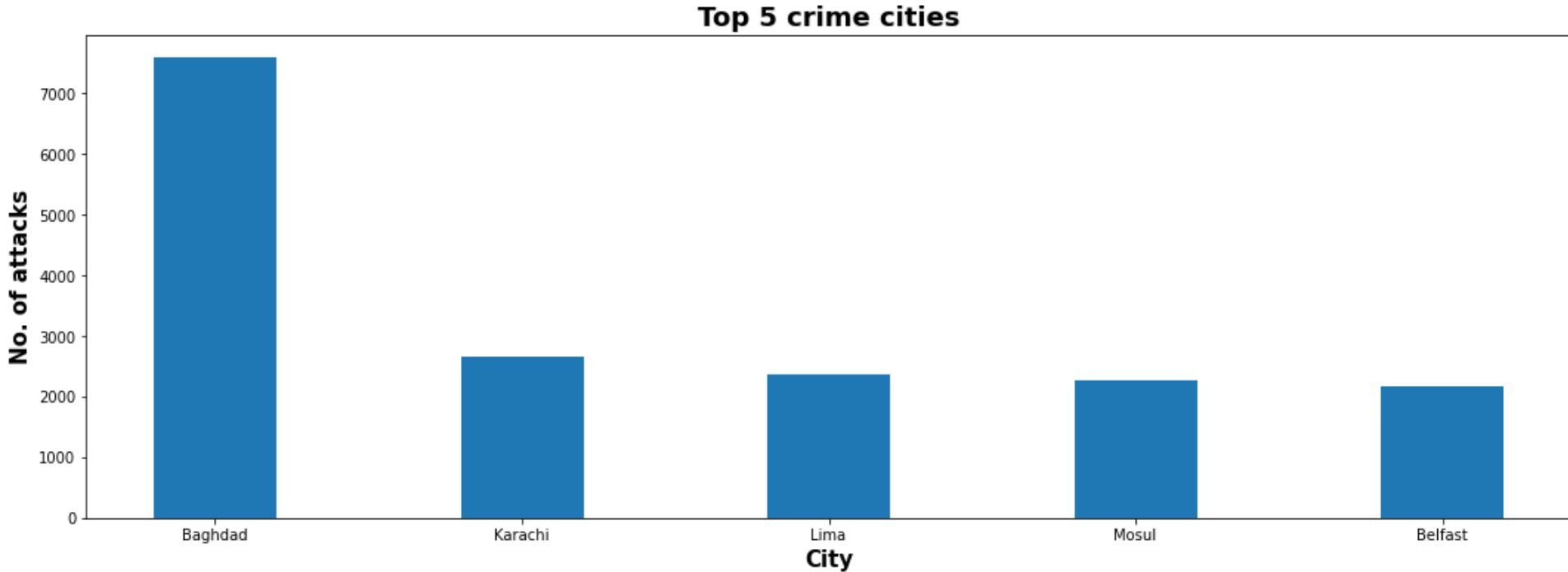
Most common motive for the attacks in Middle East & North Africa on and after 2012.

Index	Motive	Count
0	The specific motive is unknown; however, sources suspected that the attack, which targeted members of the Sunni community, may have been part of a larger trend of sectarian violence between Iraq's minority Sunni and majority Shiite communities.	52
1	The specific motive is unknown; however, Al-Qa'ida in Iraq (AQI) claimed responsibility in an online statement, saying that the attack was part of a larger pattern of violence targeting government and security forces in "response to the campaign of detaining, torture, embargo and confiscation of lands of Sunni people, especially in Baghdad and its outskirts." Sources speculated that the attack may be part of a larger trend of sectarian violence between Iraq's minority Sunni and majority Shiite communities.	43
2	The specific motive is unknown; however, sources noted that the victims were attempting to leave the area at the time of the attack.	42
3	The specific motive is unknown; however, sources speculated that the attack is part of a larger trend of sectarian violence between Iraq's Sunni minority and Shiite majority communities.	38
4	Al-Qa'ida in Iraq claimed responsibility for the attack and stated that it was in retaliation for the Shiite-led government's torture and detention of Sunni Muslims.	35
5	Abu Mohammed al-Adnani, a spokesperson for Al-Qa'ida in Iraq (AQI), stated in an audio recording posted to a website that the attack was in response to Shiite campaigns which targeted Sunni people in their homes. Furthermore, AQI was targeting security and government forces in "revenge for the elimination and torture campaigns that Sunni men and women face in the prisons of Baghdad and other cities."	32
6	Al-Qa'ida in Iraq claimed responsibility and stated that the attack was part of a wave of violence launched by the group in response to the torture of Sunni Muslim prisoners, including females, by the Shiite dominated Iraqi government. Sources speculate that the attack was part of a larger trend of sectarian violence between Iraq's minority Sunni and majority Shiite communities.	28
7	Al-Qa'ida in Iraq claimed responsibility in an online statement, saying that the attack was part of a "blessed Wednesday invasion" targeting Shiites and "traitors of the Sunnis." Sources also noted that the attack occurred two days before an important Shiite religious ritual.	27
8	Abu Bakr al-Baghdadi, the leader of Al-Qa'ida in Iraq, claimed responsibility in a released audio recording, stating that the violence was part of a larger campaign, known as "breaking the walls" aimed at freeing Muslim prisoners, targeting judges and prosecutors, and recapturing territory once held by the group.	27
9	In a statement posted online, Islamic State of Iraq and the Levant (ISIL) claimed responsibility and stated that the attacks were in response to Iraqi security forces arresting hundreds of Muslims	23

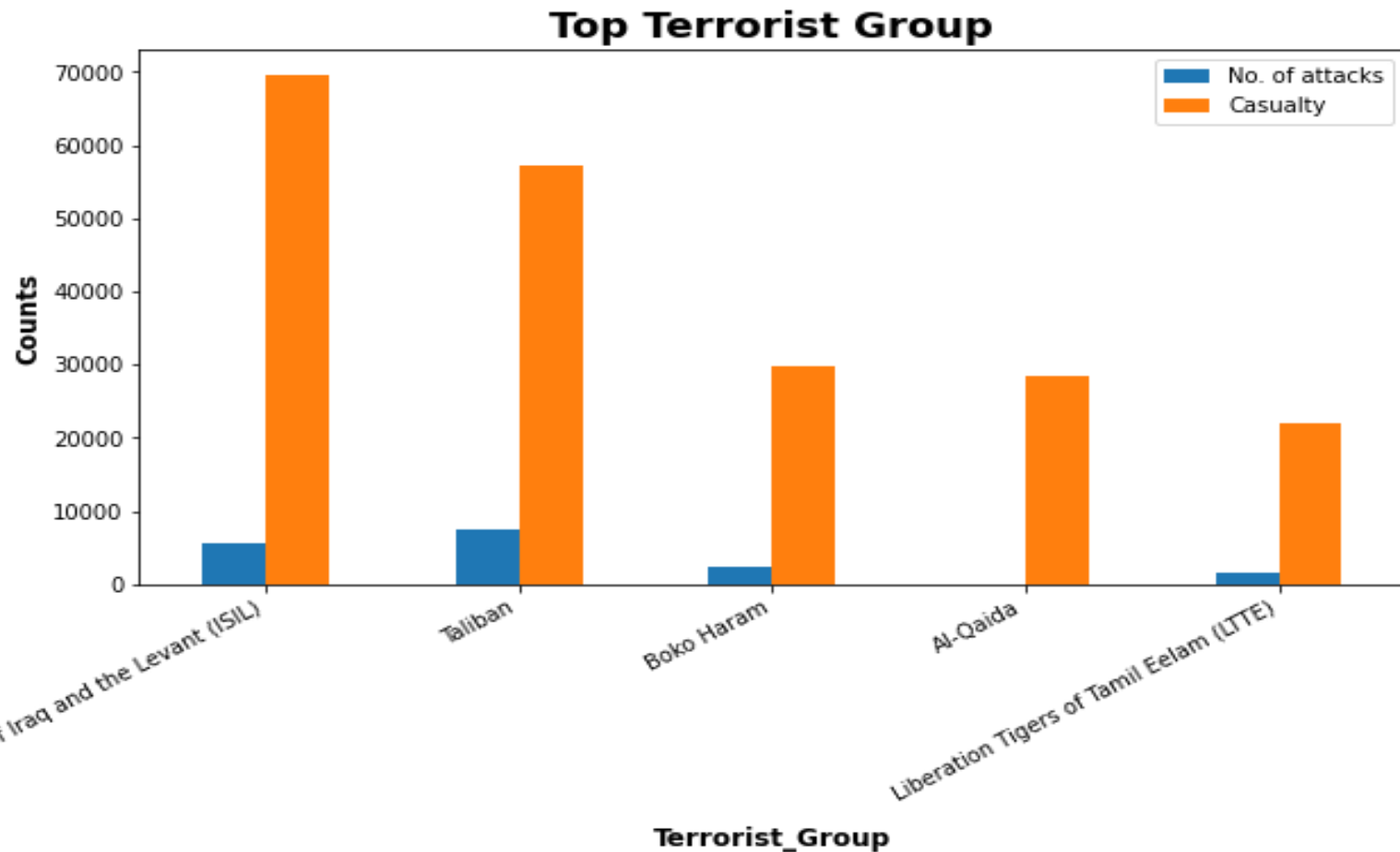
Most common motive for the attacks in South Asia on and after 2012.

index	Motive	Count
0	The specific motive is unknown; however, sources noted that the attack may have been part of a larger trend of violence related to Bangladesh's nationwide hartal, which began on January 6, 2015.	297
1	The specific motive is unknown; however, sources noted that parliamentary elections were scheduled for January 5, 2014. Sources also noted that the opposition advocated for citizens to "resist" the elections.	50
2	The specific motive is unknown; however, police speculated that the series of attacks were associated with a strike aimed at spreading fear and panic among people in protest of an anti-terror law.	32
3	The specific motive is unknown; however, sources posited that the attack was part of a larger trend of violence related to Gorkha Janmukti Morcha (GJM)'s call for a separate state.	31
4	The specific motive is unknown; however, sources noted that the attack on the polling station was meant to disrupt the run-off elections occurring on June 14, 2014.	27
5	The specific motive is unknown; however, sources speculated that the attack may be part of a larger trend of violence related to Pakistan's general election, scheduled to be held on May 11th, 2013.	25
6	The Taliban claimed responsibility for the incident, stating that the attacks on April 5, 2014 were aimed at disrupting the presidential elections.	23
7	The Haqqani Network claimed responsibility for the incident and stated that the attack was part of a larger pattern of violence designed to mark the start of the group's spring offensive. Mujahid claimed that the 18-hour offensive was in revenge for actions by American military forces, including the murder of 17 civilians by a United States (US) soldier and the burning of Korans at a military base. The spokesperson also claimed the attacks were designed to be a message in direct response to foreign commanders who claimed that the group had lost momentum.	22
8	The specific motive is unknown; however, sources noted that elections were scheduled for June 28, 2017.	15
9	The specific motive is unknown; however, sources posited that the attack was related to an extortion demand.	15

Top 5 most crime city



Top 5 terrorist group worldwide



Main motive of the groups-ISIL and Taliban behind their attacks.

ISIL

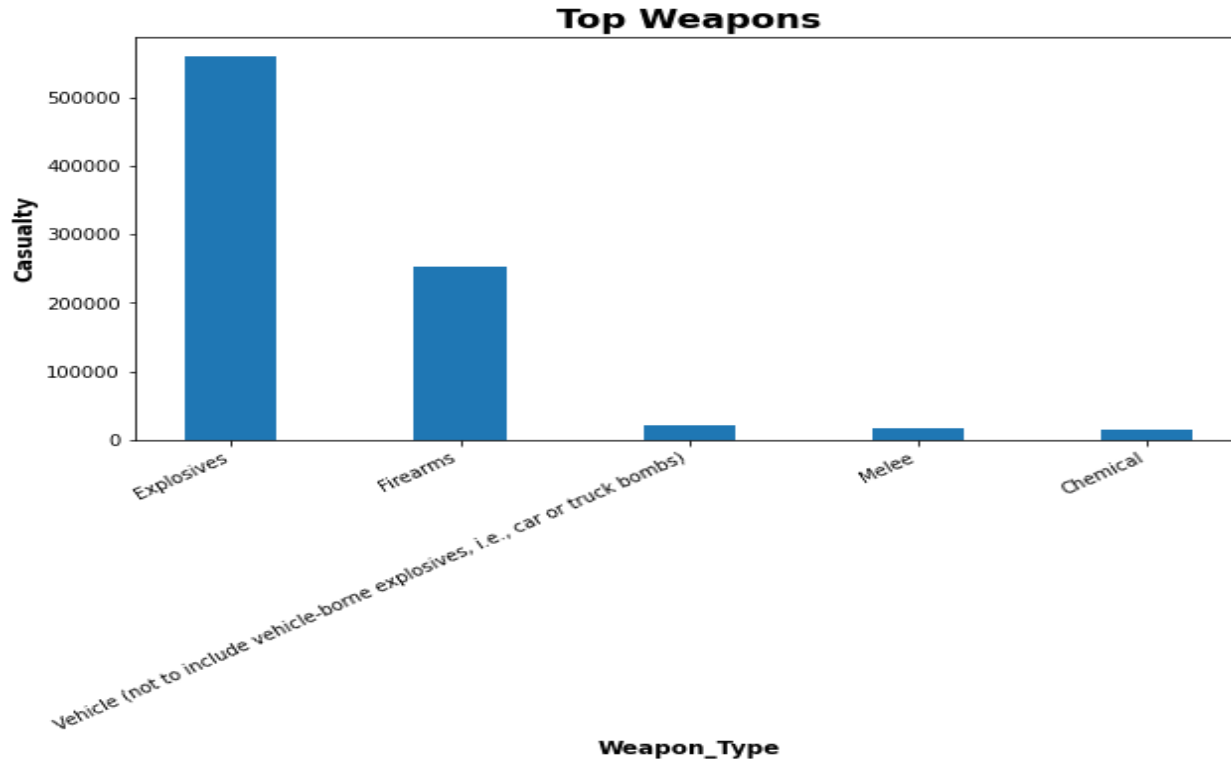
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1	In a statement posted online, Islamic State of Iraq and the Levant (ISIL) claimed responsibility and stated that the attacks were in response to Iraqi security forces arresting hundreds of Muslims.	23
2	According to an online statement, Islamic State of Iraq and the Levant (ISIL) claimed responsibility for the incident, stating that the attack was in retaliation for the Iraqi government's alleged "crimes" against the minority Sunni community. Moreover, the armed Islamist outfit claims that the incident was part of its newly launched offensive campaign called "Harvesting the Soldiers".	23
3	The specific motive is unknown; however, sources stated that the victims were accused of working with security personnel.	20
4	The specific motive is unknown; however, sources noted that the affected areas had witnessed a sharp increase in attacks on houses belonging to the army and police forces after Al-Qa ida distributed leaflets calling for security forces to leave their jobs or their homes will be blown up.	18

TALIBAN

0	The specific motive for the attack is unknown.	723
1	Unknown	605
2	The Taliban claimed responsibility for the incident, stating that the attacks on April 5, 2014 were aimed at disrupting the presidential elections.	23
3	The specific motive for the attack is unknown..	10
4	The specific motive for the attack is unknown; however, a polling station was targeted in the attack.	8

From the above two table it seems that we can understand some of the motives of ISIL behind their attacks but for Taliban it's difficult to understand their motive since most of them are unknown. So we need more information about Taliban to understand their motive.

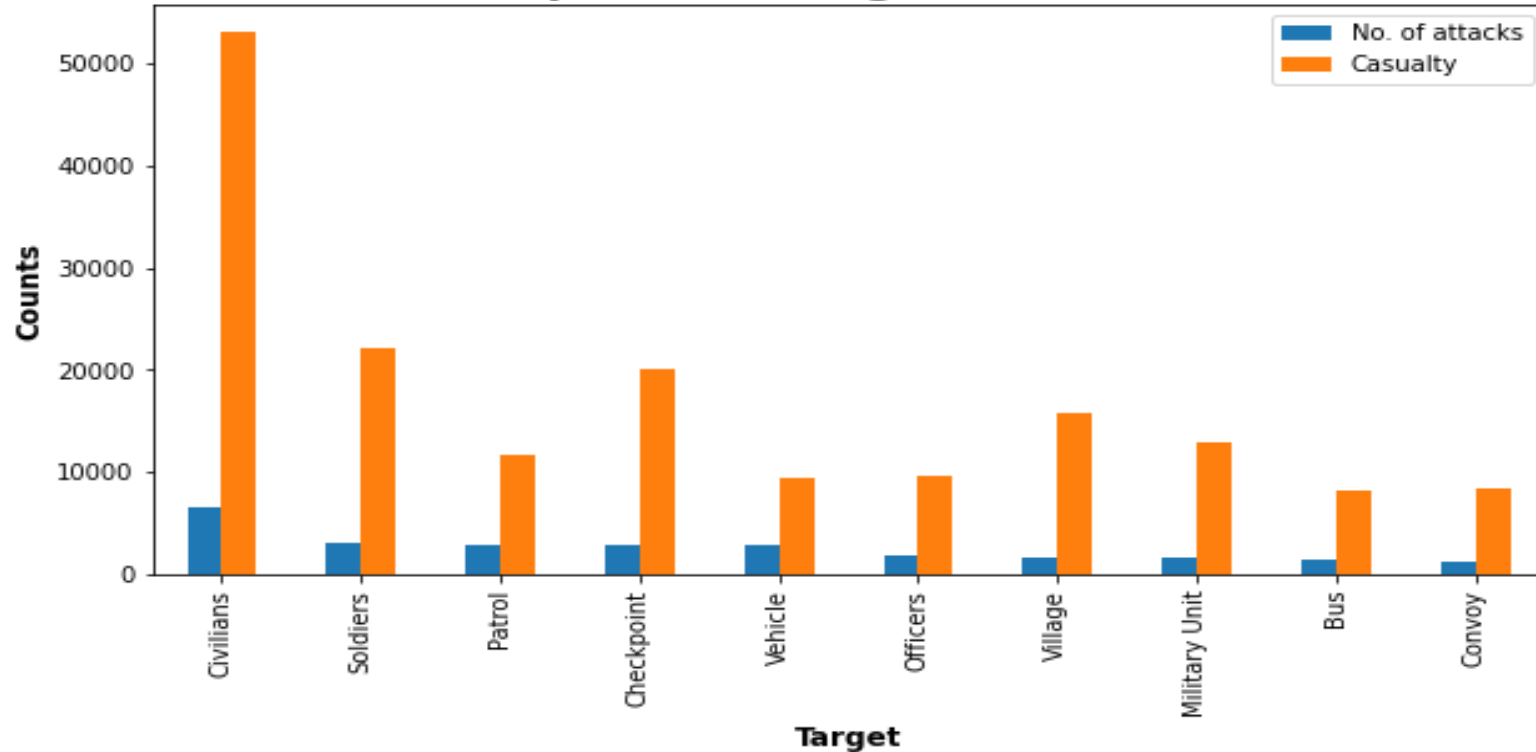
Most dangerous weapons of terrorists



Since Explosive and Firearms are the main weapons of terrorists, government should keep track of movement of these weapons illegally and also provide more number of bomb disposal experts where there is chances of any attack.

Most probable Target for terrorists.

Most probable Target for terrorists



Based on the above chart we can say that Civilians and Soldiers are the main target of terrorists, so when there is any chance of attack, the first step should be to escape all civilians and inform the soldiers to be prepared.

Conclusions

- The raw data contains 135 features among which only few were relevant for our analysis.
- The features like 'Motive' and 'Casualty' of data were found to be very helpful for finding some of the insights.
- The results like Top crime cities, top terrorist groups , top weapons will be very helpful in context of narrowing our target to arrest the terrorists or predict for next attacks.
- The motive of attacks for each group or for each region is quite different and its difficult to conclude to certain point. To tackle this problem we can use Natural Language Processing (NLP) to identify some of the repetitive terms in the motive paragraph like- Sunni community , tortures , revenge, religion, politics etc to identify their motives.

THANK YOU