Global Terrorism Analysis and its Impact on Social Media

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Abstract - *Terrorism has become one of the rising concerns around the world. Every year, thousands of people become the victims of terrorist attacks. So, terrorism encompasses a range of complex threats, organized terrorism in conflict zones, foreign terrorist fighters, radicalized 'lone wolves', and attacks using chemical, biological, radiological, nuclear and explosive materials.*

This project aims to understand the threat level of terrorism and getting an insight into the characteristics and activities of the most dangerous terrorist groups. This project also gives us a deeper understanding of the patterns and trends in terrorist activities in different regions and countries especially India, over the years.

Key Words: **Terrorism, ISIL, Tweets, Attacks, Terrorists, Taliban, Victims, Analysis.**

1. INTRODUCTION

Terrorism, the calculated use of violence to create a general climate of fear in a population and thereby to bring about a particular political objective. Terrorism has been practiced by political organizations with both rightist and leftist objectives, by nationalistic and religious groups, by revolutionaries, and even by state institutions such as armies, intelligence services, and police. Terrorism involves the use or threat of violence and seeks to create fear, not just within the direct victims but among a wide audience. The degree to which it relies on fear distinguishes terrorism from both conventional and guerrilla warfare. Although conventional military forces invariably engage in psychological warfare against the enemy, their principal means of victory is strength of arms.

2. DATASET USED

In the field of Machine Learning, the datasets play a vital role to perform any kind of analysis or prediction in a program. In the project, I used the following datasets:
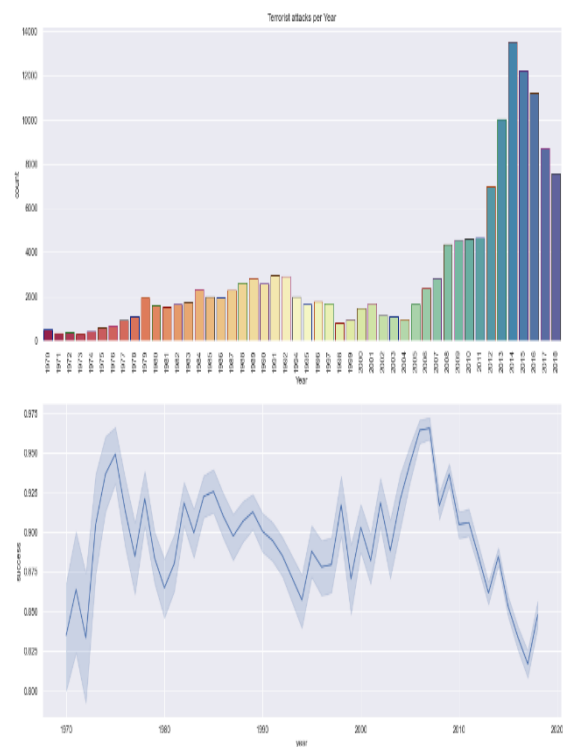
A. The Global Terrorism dataset, downloaded from the GTD website which is managed by the National Consortium for the study of Terrorism and Responses to Terrorism (START). The Global Terrorism Database (GTD) is an open-source database including information on domestic and international terrorist attacks around the world from 1970 through 2018, and now includes more than 200,000 cases. For each event, information is available on the date and location of the incident, the weapons used and nature of the target, the number of casualties, and–when identifiable–the group or individual responsible.

B. The ISIS tweets dataset, downloaded from the Kaggle. The dataset contains 17,000 tweets from 100+ pro-ISIS fanboys from all over the world since the November 2015 Paris Attacks.
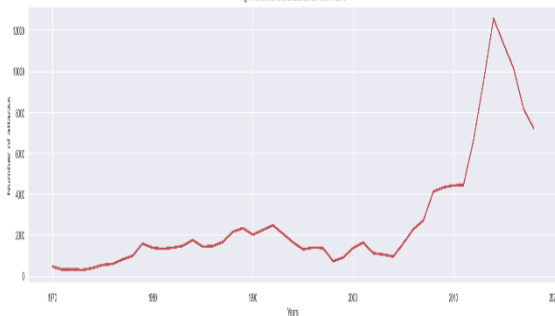
3. DATA ANALYSIS
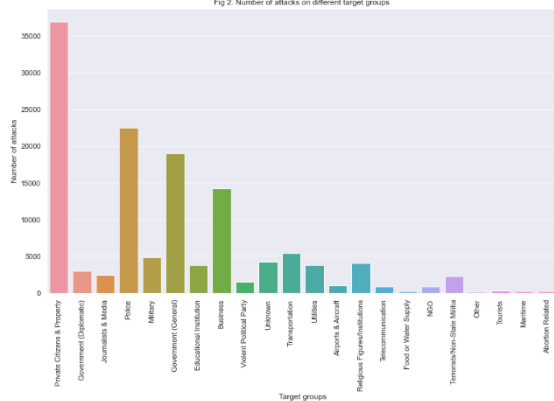
3.1. Terrorist attacks per Year

From the above figure it is clear that the terrorist activities were negligible till the early 70s but later on it gradually increases year by year. The terrorist activities increased significantly from the year 2005 and the year 2014 experienced the highest number of terrorist attacks in all over the world.

Fig 1. Number of terrorist attacks from 1972 to 2018

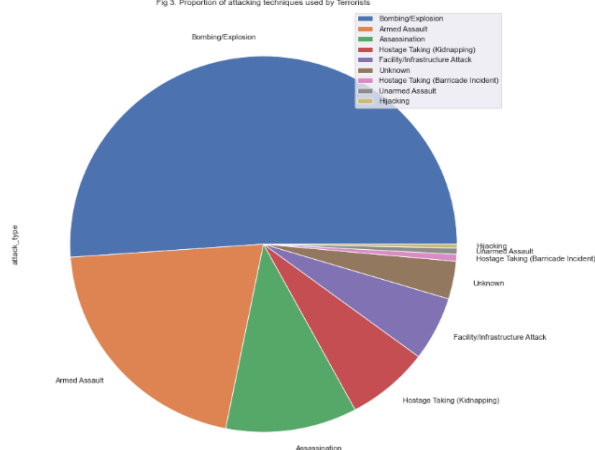## 3.2. Main target of the terrorist

Fig 2. Number of attacks on different target groups

From the above figure it seems like Private Citizens and Property are the favorite targets of terrorists. Apart from these, police, government and business are also among the most targeted groups.

3.3. Attacking Techniques

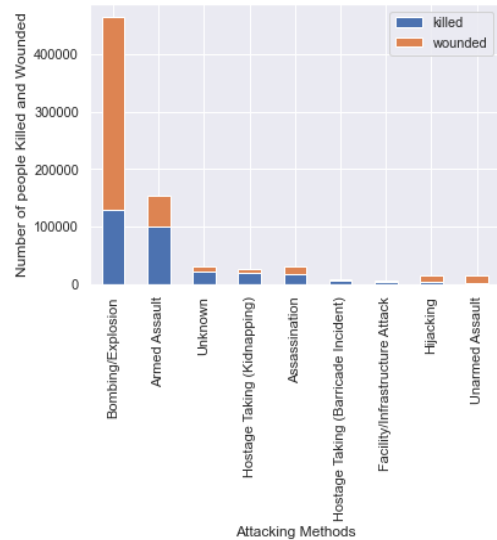Fig 3. Proportion of attacking techniques used by Terrorists

From the above figure it is observed that Bombing/Explosion and Armed Assault are the most used attacking techniques by terrorists around the globe. Assassination and Hostage taking/Kidnapping are also used to create terror among the people around the world. Hijacking, Unarmed Assault,

Barricade Incidents are among the least used attacking techniques by terrorists.
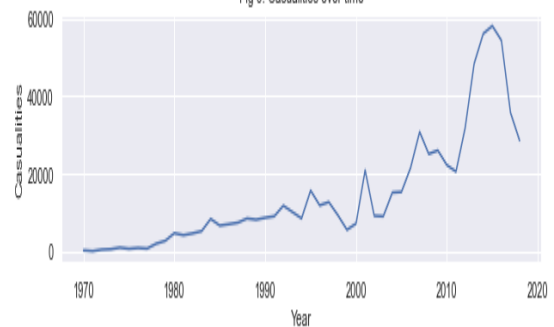
3.4. Number of Causalities due to different attack

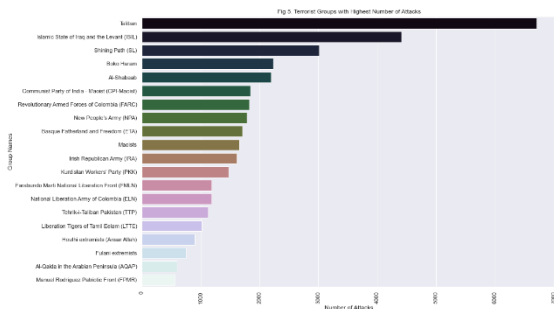Fig 4. Number of People Killed and Wounded with respect to Attacking Methods

It is observed that, maximum number of people are killed and wounded in case of Bombings/Explosions, this is followed by high number of causalities due to Armed Assaults.
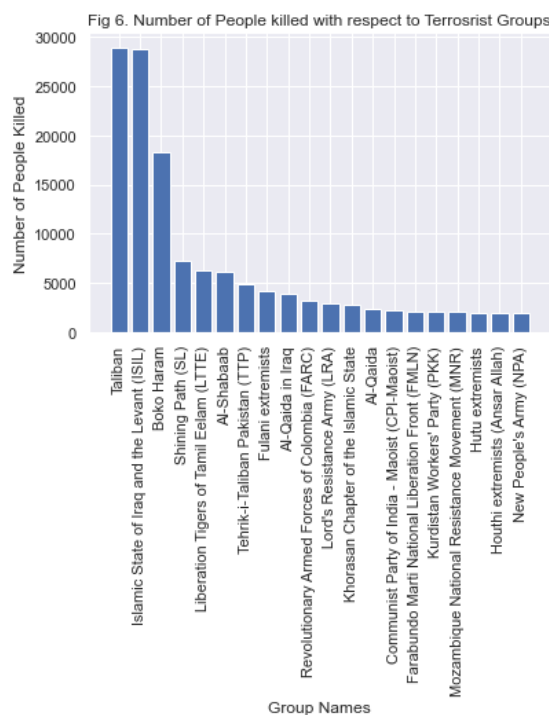

Fig 9. Casualities over time

This could be one of the major reasons which explains why these two attacking methods are used the most by terrorists as depicted in figure as they lead to more causalities and fear among the general public.

3.5. Most active terrorist groups

Fig 5. Terrorist Groups with Highest Number of Attacks

From the above figure it is clear that Taliban is the most active terrorist groups, followed by Islamic State of Iraq and the Levant (ISIL) or better known as ISIS. Taliban has been involved in more than 6000 attacks followed by ISIL with 4000+ attacks. It can be observed that 5 groups have led to more than 2000 attacks. These terrorist groups are - Taliban, ISIL, Shining Path, Boko Haram and Al-Shabaab.

3.6. Number of people killed by Terrorist groups

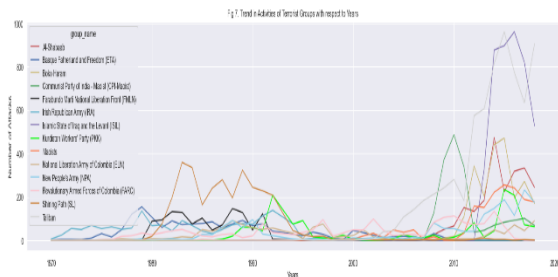Fig 6. Number of People killed with respect to Terrosrist Groups

The above figure gives us an insight into the number of people that have been killed by top 20 terrorist group. This tells us something very interesting - even though the number of attacks by ISIL is less than Taliban, it has killed a greater number of people as compared to Taliban. This is the case with many other terror groups. For example, some of the other groups like LTTE have killed much more people than groups like TTP and PKK, although their number of attacks was less than that of the latter.

The above number represents that 258,067 people have been killed by terrorists between 1987 and 2017. This is an enormous number of deaths.

Based on the findings from figure and figure I have formed a metric below to calculate which terrorist groups are very effective. Here, I have defined the effectiveness of terrorist as the ratio of number of people killed and number of attacks by the respective terrorist groups. So, if a terrorist group manages to kill a greater number of people with a smaller number of attacks, then it is found to be very effective. I have found the effectiveness of only those terrorist groups which have attacked more than 1000 times.
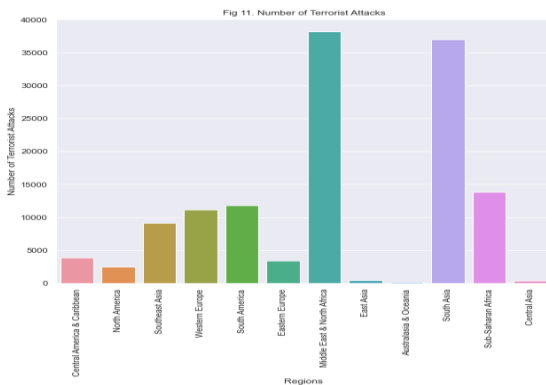
3.7. Trend in activities

Fig 7. Trend in Activities of Terrorist Groups with respect to Years

From figure we can make the following observations-

a. Shining Path (SL) was the most active terrorist group till late 1980s. The number of attacks by SL started declining during early 1990s and then it became almost nil in 2000s.
b. Taliban became an active terrorist group only in 2000s. The number of attacks by Taliban has an upper ward trend from early 2000s till 2015.
c. ISIL also known ISIS became active only after 2011. Ever since then, the number of attacks by ISIs has been increasing drastically. ISIL has become more active than Taliban in the recent years, and has killed thousands of people around the world.
d. ISIL has become one of the most dangerous terrorist groups in the recent years.

3.8. Region wise Terrorist attack analysis

Fig 11. Number of Terrorist Attacks

From figure it is observed that Middle East & North Africa and South Asia are the most attacked regions of the world. However, terrorist groups seem to target Australasia & crania, Central Asia and East Asia very rarely.

3.9. Trend in terrorist attacks

Fig 12. Trend in terrorist attacks in different regions in every year
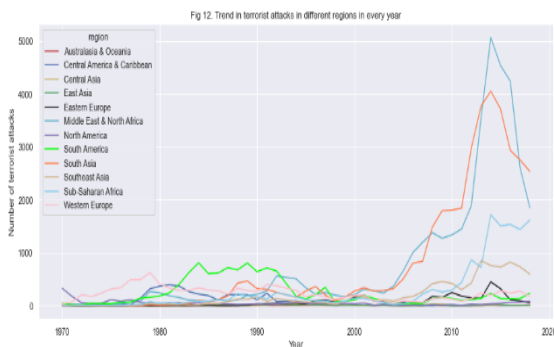
Figure represents that South America had the maximum number of attacks till late 1980s and then it started declining in early 1990s. It can also be seen that people of Middle East & North Africa and South Asia became the most frequent victims of terrorist attacks only from early 2000s and continue to be the same. The year 2014, saw maximum number of attacks in almost all the region, though it was the most in Middle East & North Africa. However, we can observe that there is a small decline in the number of attacks in South Asia and Middle East & North Africa after 2014.

3.10. Most active terrorist groups
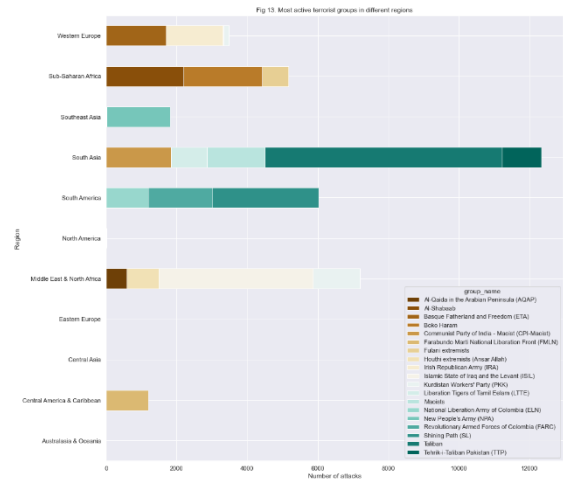

Fig 13. Most active terrorist groups in different regions

Figure gives the following information-

a. Al-Shabaab is the most active group in Western Europe.
b. ISIL is the most active group in Middle East & North Africa, followed by PKK.
c. Most of the terrorist attacks in South Asia are organized by the Taliban.
d. Al-Qaida carries out most of its attacks on Sub-Saharan Africa. Countries with highest attacks.

3.11. Countries with highest attacks

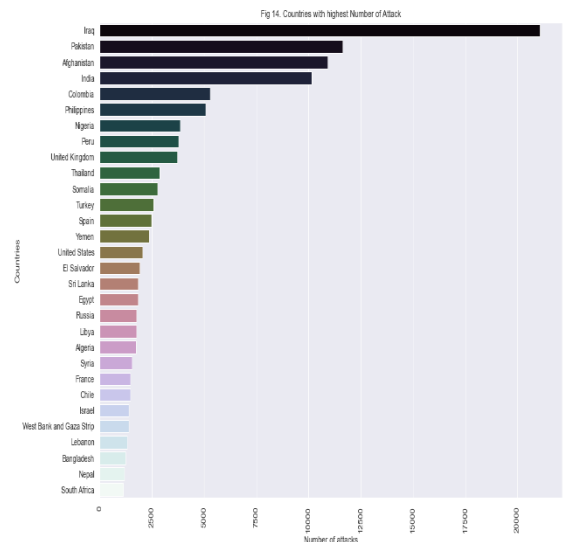Fig 14. Countries with highest Number of Attack

Figure depicts that among all the countries of Middle East & North Africa, Iraq has the highest number of attacks. After Iraq, countries of South Asia are the most common victims of terrorist attacks. These countries include Pakistan, Afghanistan and India. United Kingdom is ranked 9th among the most attacked nations of the world.
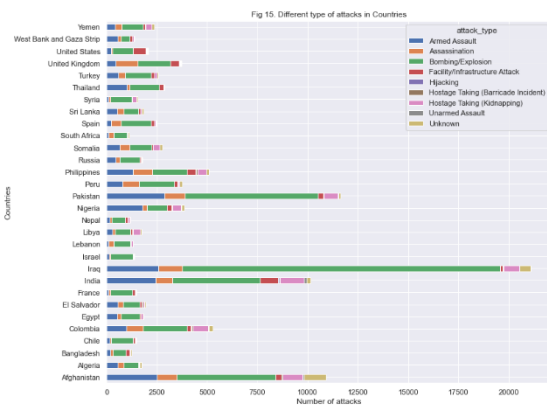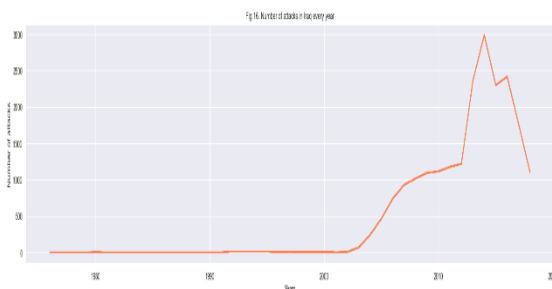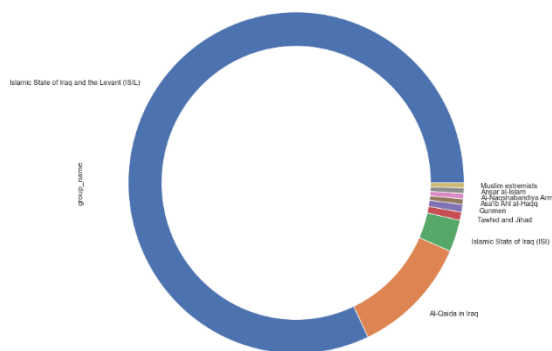
3.12. Attacking methods for top targeted Countries

Fig 15. Different type of attacks in Countries

Figure depicts that bombing/explosion is used the most used attacking technique in all the countries.

4. TERROR ACTIVITIES IN IRAQ

Fig 16. Number of attacks in Iraq every year

Iraq is the most attacked nation of the world; the figure tells us that this was not always the case. Iraq had almost zero attacks till the year 2000. From the above graph we can see that the number attacks suddenly started increasing from the year 2000 and had even reached 3000 in the year 2014. However, it is observed that there is a decline in the number of attacks in Iraq since 2014.

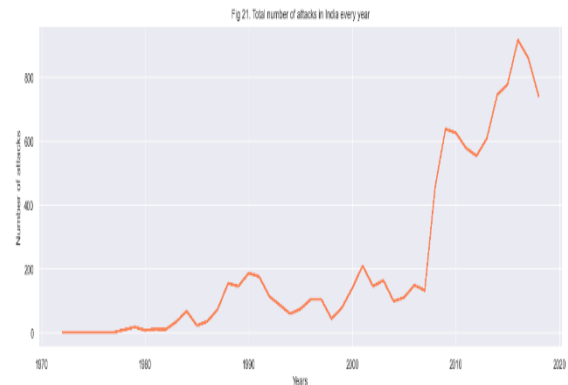

Fig 18. Most active terrorist groups

The above donut chart tells us that most of the attacks carried out in Iraq have been organized by the terrorist group ISIL. It is even observed in figure that ISIL is the most active group in Middle East & North Africa.
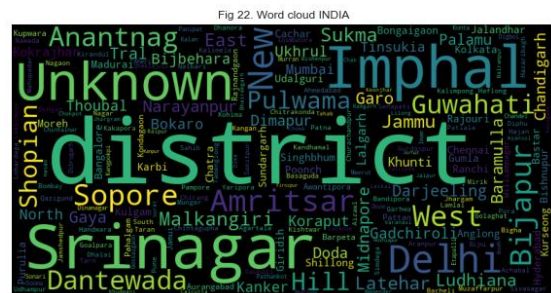
5. TERRORISM ANALYSIS IN INDIA

5.1. Number of attacks in every year

Fig 21. Total number of attacks in India every year

Coming to the terrorist data analysis in India, it is observed that the terrorist activities were negligible till early 80's and there were on around 100 to 200 attacks per year till 2007. But from the year 2008 onwards the number of attacks increased drastically. In the year 2012, India experienced all total 700+ attacks which is recorded as the highest number of terrorist attacks in a year till date.

5.2. Most affected cities

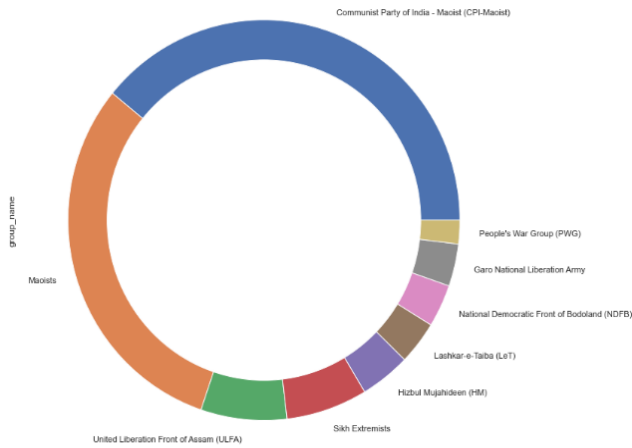Fig 22. Word cloud INDIA

The word cloud generated refers to Indian cities like Srinagar and Imphal experience the highest terrorist threats. Following them cities like Delhi, Anantnag, Guwahati, Dantewada, Amritsar, Bijapur, Phulwana, Jammu, Malkangiri and Shopian also experienced the terror threatening quite significantly.

5.3. Most active Terrorist Groups in India

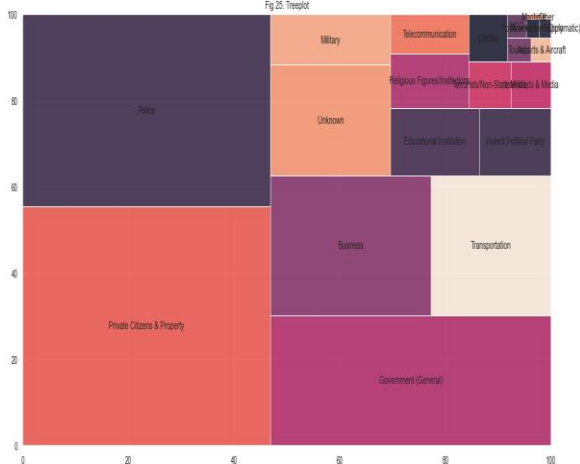Fig 23. Most active Terrorist Groups in India

The donut chart indicates that the Communist Party of India – Maoist (CPI-Maoist) and the Maoists group are the most active terror groups in India.

Following them the United Liberation Front of Assam (ULFA), Sikh Extremists, Hizbul Mujahideen (HM) and Lashkar-e-Taiba (LeT) are also very active in spreading the terror threatening in the country.

5.4. Most attacked places in India

Fig 25. Treeplot

As compared to the world, in India also the private citizen and property and the police areas are the most favorite places of the terrorist for attacking. The government (General), business places and the transportation medium also experienced often terror attacks.
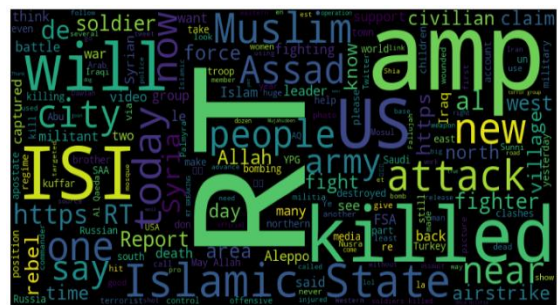
6. TWITTER DATA ANALYSIS

Terrorism, using the social media, has become one of the most concerning issues across the world. There is interplay between home-grown terrorist groups and international terrorist organizations which is playing the central role in accelerating the situations. Terrorist organizations are using social media platforms for recruiting, training and communicating with their followers, supporters, donors, as it is cheaper, easier, faster and effective method of communication. The members of the terrorist organizations are spreading their ideological thoughts, propaganda and their activities, not only to South Asia but also to the world, using social media platforms.

The Islamic State of Iraq and Syria (ISIS) has attracted the world's attention because of its spread in Iraq and Syria and its brutal treatment of people.

I have collected the dataset from Kaggle as mentioned earlier and perform some analysis on the available data.

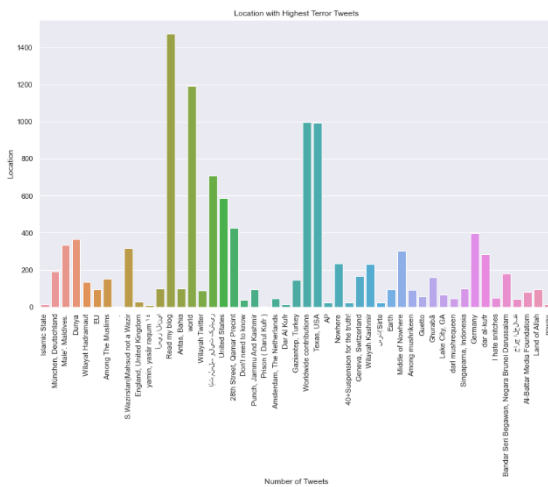## 6.1. Most trending topics in Twitter related to terrorism

The word cloud generated shows the most trending topics in the twitter related to the terror activities. Words like

- RT
- Killed
- Islamic State
- ISI
- Muslim / Islam
- Azad
- Attack
- Civilian
- Syria
- Captured
- Kuffar (Kafir)
- Al Qaeda
- Iraqi
- Allah
- Bombing
- Apostate

Used significantly in twitter which are red flagged by the anti – terror groups.

6.2. Location with highest terror tweets

Location with Highest Terror Tweets

As obvious most of the tweets were miscellaneous location. The people involved in all these activities are also smart enough to hide or bounce their locations. But there are a few places in the United States of America, Germany, Maldives and in India also where some tweets are sent that can be red flagged. These tweets are sent from Texas, München (Munich), Male and Wilayah Kashmir respectively.

7. CONCLUSIONS

From the above analysis it is observed that there is a rising trend in terrorist activities since 2000s. Terrorist attacks have led to the deaths of 258,067 people around the globe in the last 30 years. Taliban, ISIS and Boko Haram have emerged to be very lethal terrorist groups in the recent years. They tend to attack the private citizens and property, government and police, through bombing/explosions and armed assaults. It is also seen in our analysis that suicide attack has become common only in the last 15 years and was almost nil before that.

Middle-East & North Africa and Southern-Asia are the regions with highest terrorist attacks as well as causalities. Iraq, Pakistan, Afghanistan and India are among the highly attacked countries of the world. Iraq has witnessed the maximum number of attacks in the world by ISIS. This has caused thousands of deaths every year in the cities of Iraq like Baghdad and Mosul.

The terror activities in India were mostly caused by the CPI-Maoists, ULFA, Hizbul Mujahideen and Lashkar-e-Taiba groups.

From the twitter data analysis, it can be concluded that developed nations of most of the tweets related to the terrorism were from miscellaneous locations and the most trending topic related to terrorism is Islam/Muslim, ISI, Attack and Kuffar.

REFERENCES

[1] https://www.start.umd.edu/gtd

[2] https://www.kaggle.com/fifthtribe/how-isis-uses-twitter

[3] https://www.interpol.int/en/Crimes/Terrorism

[4] https://www.merriam-webster.com/dictionary/terrorism

[5] https://www.fbi.gov/investigate/terrorism

[6] https://www.britannica.com/topic/terrorism

[7] https://en.wikipedia.org/wiki/Terrorism

[8] https://ourworldindata.org/terrorism

[9] http://visionofhumanity.org/app/uploads/2017/11/Global-Terrorism-Index-2017.pdf

[10] https://www.history.com/tag/terrorism

[11] https://fas.org/irp/threat/terror.htm

[12] https://www.tandfonline.com/doi/full/10.1080/09546553.2018.1439023

[13] https://www.researchgate.net/publication/338690432_The_Evolution_and_Perspectives_of_the_Terrorism_Academic_Research

[14] https://www.tandfonline.com/doi/abs/10.1080/09546550701246817

[15] https://www.questia.com/library/criminal-justice/criminology-and-crime/terrorism

BIOGRAPHIES

Premjit Kumar, Undergraduate Student, School of Electronics Engineering, KIIT Deemed to be University, Bhubaneswar is pursuing his Bachelors of Technology (B. Tech) in Electronics and Telecommunication Engineering. He is having skills in various industrial technologies related to Web Technology, Data Science, Machine Learning and Deep Learning. His areas of research are machine learning and deep learning.