

# Capstone Project : 1

## Global Terrorism Analysis

### TEAM MEMBERS

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# Points for Discussion

- Understanding Problem Statement
- Data Set Information
- Nan Value Handling
- Data Wrangling
- Variable Explanation
- Year wise analysis
- Region wise analysis
- Type of attack
- Analysis on India
- Terrorist group analysis
- Map
- How to Stop Terrorism
- Challenges
- Conclusion
- Q&A

# Understanding Problem Statement

- Topic – “Global Terrorism”
- Problem Statement -- Explore and Analyze the Global Terrorism dataset to discover the key finding to understand terrorism and their activities
- Terrorism is the unlawful use of force or violence against persons or property to intimidate or coerce a government or its citizens to fulfill certain political or social objectives.
- Law enforcement generally recognizes two types of terrorism: domestic and international.



# Data Set Information

- The Global Terrorism Dataset is a open source database including terrorist attack all over the world from 1970 till 2017.
- This dataset includes systematic data of more than 180,000 attacks around the world.
- The database is maintained by researchers at the National Consortium for the Study of Terrorism and Response to Terrorism (START).

# Data Processing and Nan value Handling

```
encoding = "ISO-8859-1",
```

- Data encoding
- Dataset contain 181691 records and 135 columns
- There is a significant amount of missing information
- We have dropped all the null columns and then we left with a Significantly fewer column
- We have used around 20 variables for the analysis

#	Column	Non-Null Count	Dtype
0	eventid	181691 non-null	int64
1	year	181691 non-null	int64
2	imonth	181691 non-null	int64
3	iday	181691 non-null	int64
4	approxdate	9239 non-null	object
5	extended	181691 non-null	int64
6	resolution	2220 non-null	object
7	country	181691 non-null	int64
8	country_txt	181691 non-null	object
9	region	181691 non-null	int64
10	region_txt	181691 non-null	object
11	provstate	181270 non-null	object
12	city	181257 non-null	object
13	latitude	177135 non-null	float64
14	longitude	177134 non-null	float64
15	specificity	181685 non-null	float64
16	vicinity	181691 non-null	int64
17	location	55495 non-null	object
18	summary	115562 non-null	object
19	crit1	181691 non-null	int64
20	crit2	181691 non-null	int64
21	crit3	181691 non-null	int64
22	doubtterr	181690 non-null	float64
23	alternative	29011 non-null	float64
24	alternative_txt	29011 non-null	object
25	multiple	181690 non-null	float64
26	success	181691 non-null	int64
27	suicide	181691 non-null	int64
28	attacktype1	181691 non-null	int64
29	attacktype1_txt	181691 non-null	object
30	attacktype2	6314 non-null	float64
31	attacktype2_txt	6314 non-null	object
32	attacktype3	428 non-null	float64
33	attacktype3_txt	428 non-null	object
34	targtype1	181691 non-null	int64
35	targtype1_txt	181691 non-null	object
36	targsubtype1	171318 non-null	float64
37	targsubtype1_txt	171318 non-null	object
38	corp1	139141 non-null	object
39	target1	181055 non-null	object
40	natlty1	180132 non-null	float64
41	natlty1_txt	180132 non-null	object
42	targtype2	11144 non-null	float64

NULL values

# Data Wrangling

Cleaning and unifying dataset for easy access and analysis. Ex-(Orissa to Odisha)

More then 70% of the dataset contain null column or contain duplicate column

We have dropped all the duplicate column and then we left with a Significantly fewer column

Important columns:

year, month, day, longitude, latitude, region, country, state, attack type, target type, terrorist group, wound, kill, success rate, weapon type, property, location.

#	Column	Non-Null Count	Dtype
0	eventid	181691 non-null	int64
1	iyear	181691 non-null	int64
2	imonth	181691 non-null	int64
3	iday	181691 non-null	int64
4	approxdate	9239 non-null	object
5	extended	181691 non-null	int64
6	resolution	2220 non-null	object
7	country	181691 non-null	int64
8	country_txt	181691 non-null	object
9	region	181691 non-null	int64
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14	longitude	177134 non-null	float64
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18	summary	115562 non-null	object
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20	crit2	181691 non-null	int64
21	crit3	181691 non-null	int64
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23	alternative	29011 non-null	float64
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33	attacktype3_txt	428 non-null	object
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35	targtype1_txt	181691 non-null	object
36	tangsubtype1	171318 non-null	float64
37	tangsubtype1_txt	171318 non-null	object
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42	targtype2	11144 non-null	float64

# Variable Explanation

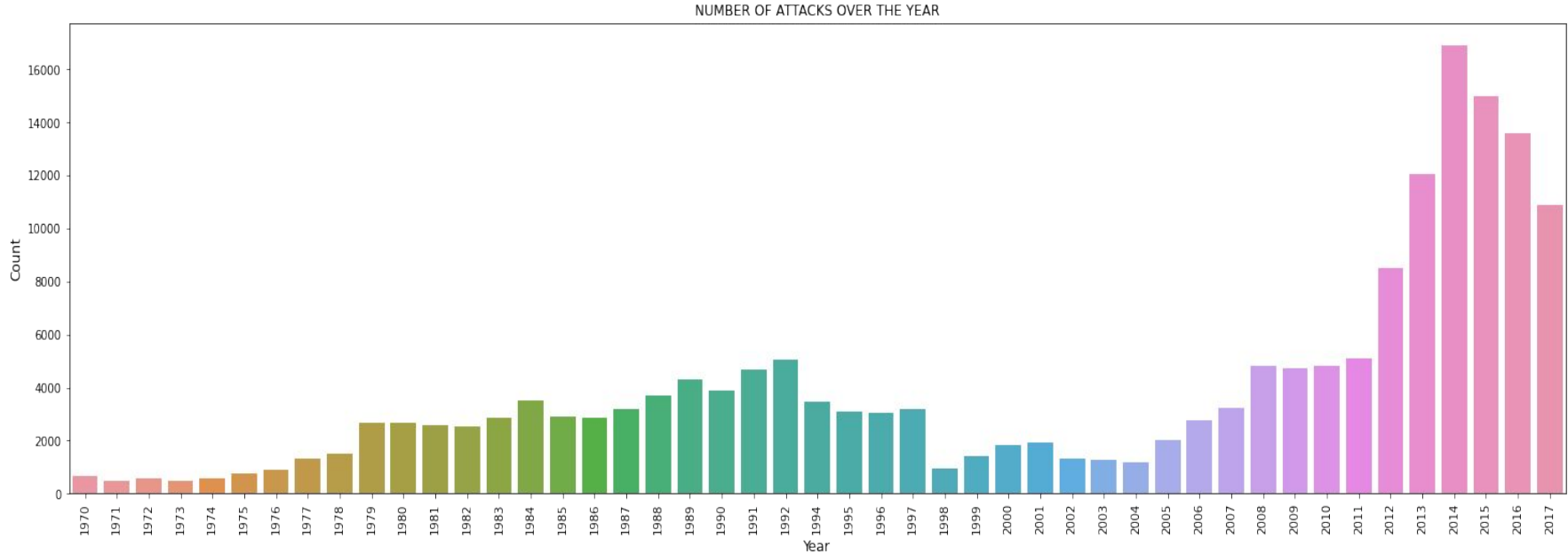
- **event\_id**: The terrorist attacks have unique id which can be used for our future ref.
- **iYear**: Year in which attacks happened.
- **iMonth**: In which month the attacks has been takes place
- **iday**: In which day the attacks has been takes place.
- **Country\_txt**: It gives the country name at which the attack took place.
- **Region\_txt**: It gives the Region name at which the attack took place.
- 1. ● **provstate**: It shows name of the state attacked.
- **attacktype1\_txt**: It shows the weapon used in attack.

## Variable Explanation (Continued)

- **targetype1\_txt**: It gives us an idea about the victims of the terrorist attack.
- **Nkill**: No. of casualty killed.
- **Nwound**: No. of people wounded
- **weapsubtype1\_txt**: It gives us a brief idea about the most used weapons.
- **gname**: It gives us an idea about the most active terrorist group in the world.
- **Propvalue**: Value of damage property.
- **Location**: It shows the place of attack.
- **Latitude & longitude**: It shows exact location of attack

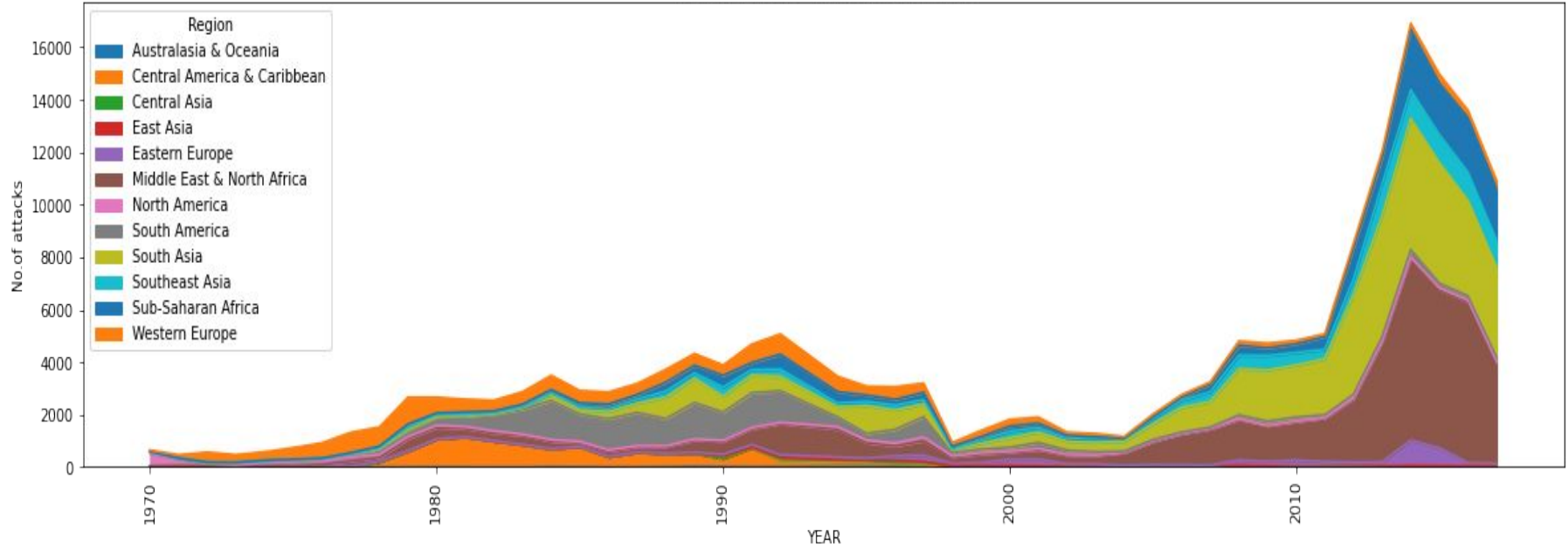


# Number of Attacks over the year

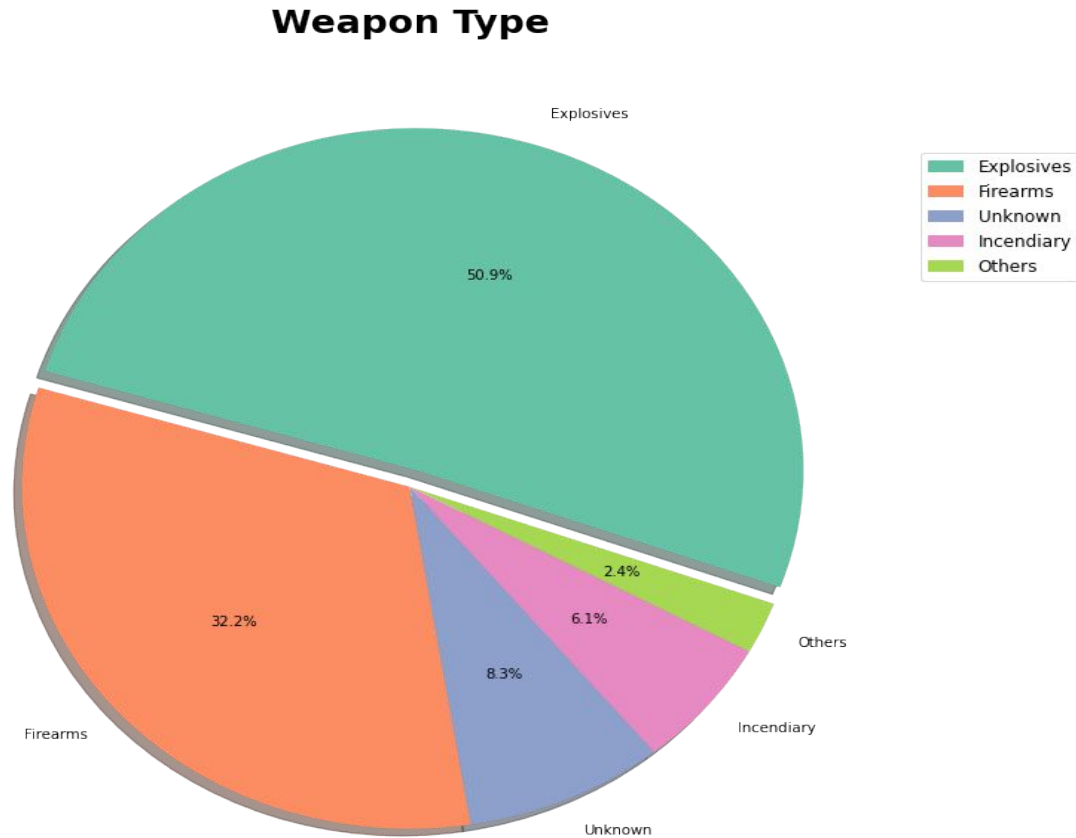


Terrorism then had a fairly rise in the 1980s and early 1990s and was considerably low in the next decade but then terrorism rose from early the 2000s topping the charts like never before in the history.

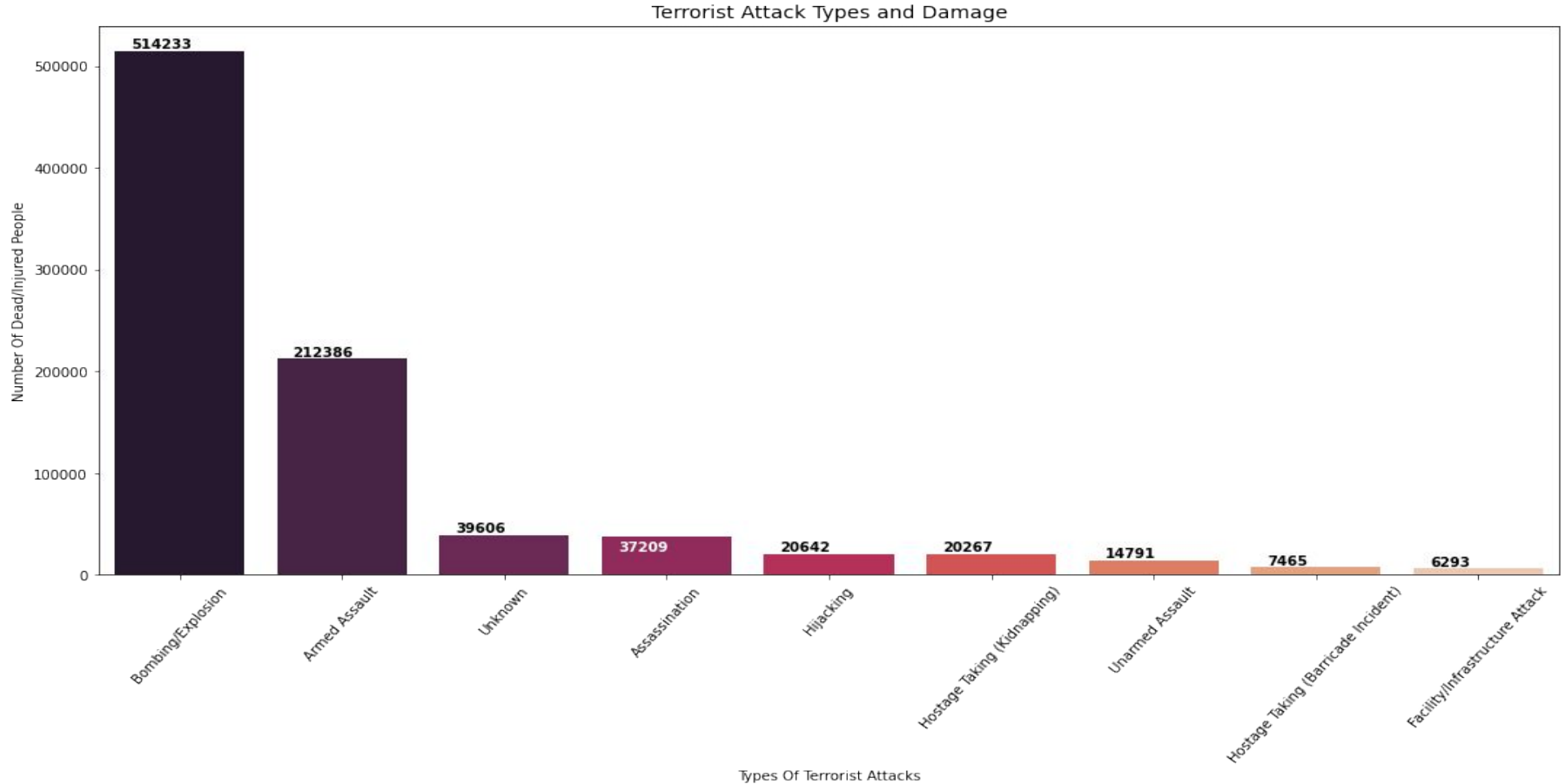
The chart displays the number of attacks by region from 1970 to 2015. The Y-axis represents the 'No. of attacks' (0 to 16,000) and the X-axis represents the 'YEAR' (1970 to 2015). The regions are stacked as follows: Australasia & Oceania (blue), Central America & Caribbean (orange), Central Asia (green), East Asia (red), Eastern Europe (purple), Middle East & North Africa (brown), North America (pink), South America (grey), South Asia (yellow-green), Southeast Asia (cyan), Sub-Saharan Africa (dark blue), and Western Europe (light orange). The chart shows a significant increase in attacks starting around 2000, peaking in 2015 at over 16,000 attacks. The regions contributing most to the increase are South Asia, Middle East & North Africa, and Southeast Asia.



# Type of weapon used for attacks

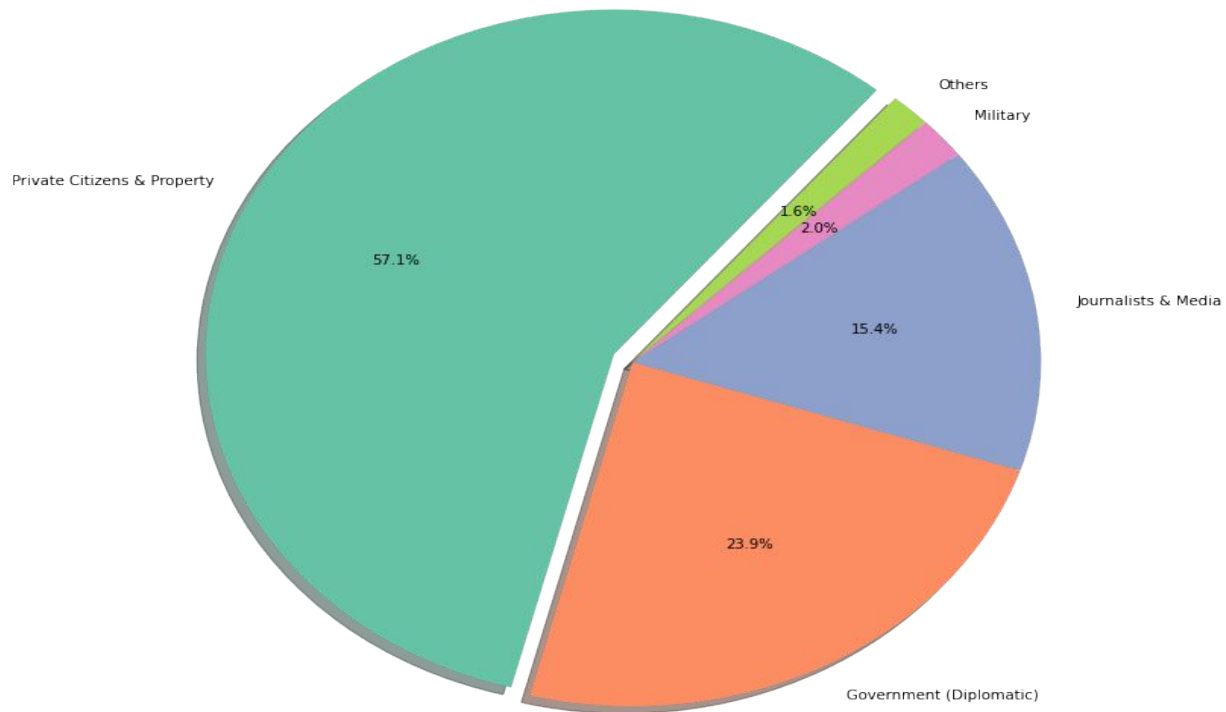


# Attack type V/S Casualties

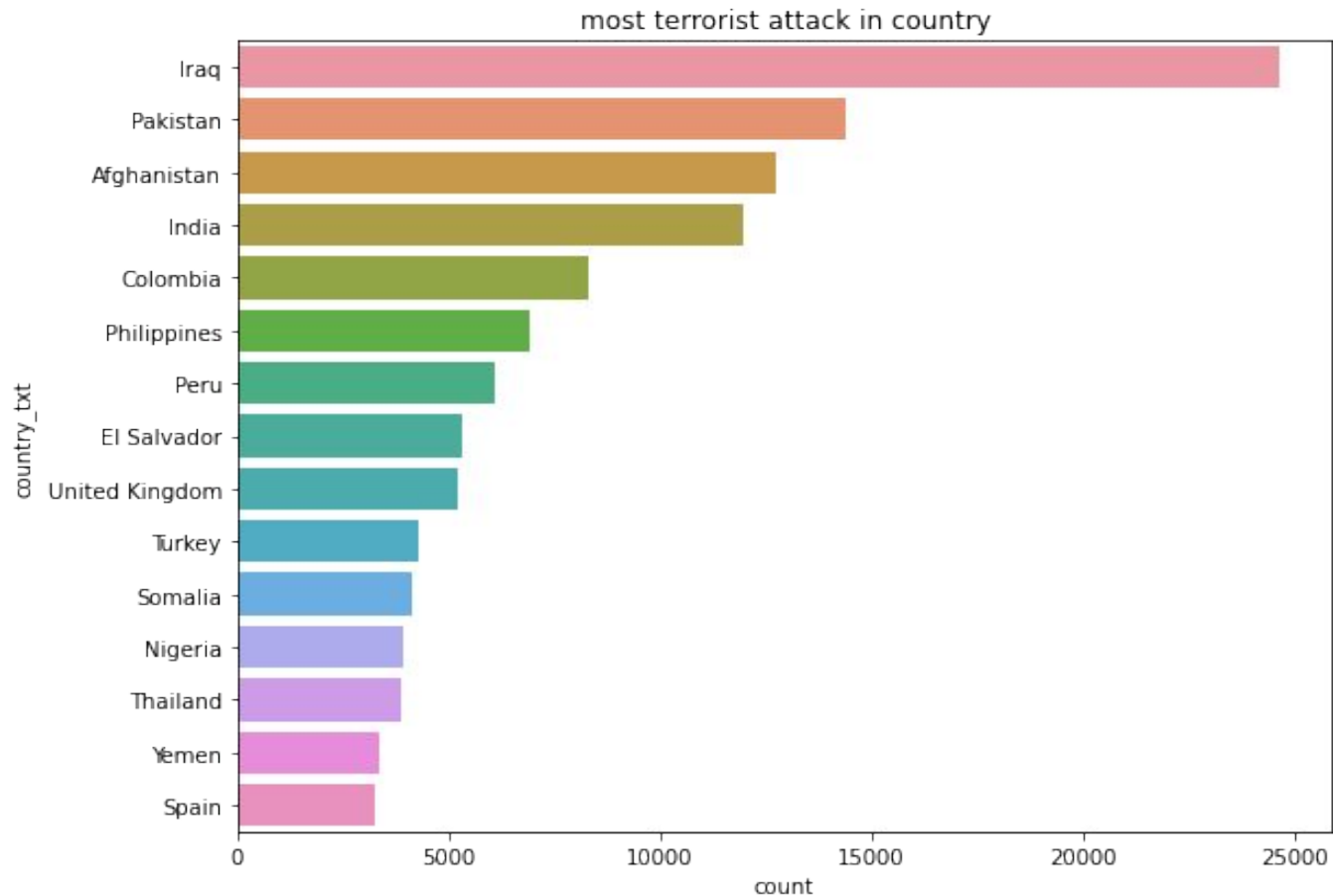


# Type of Target

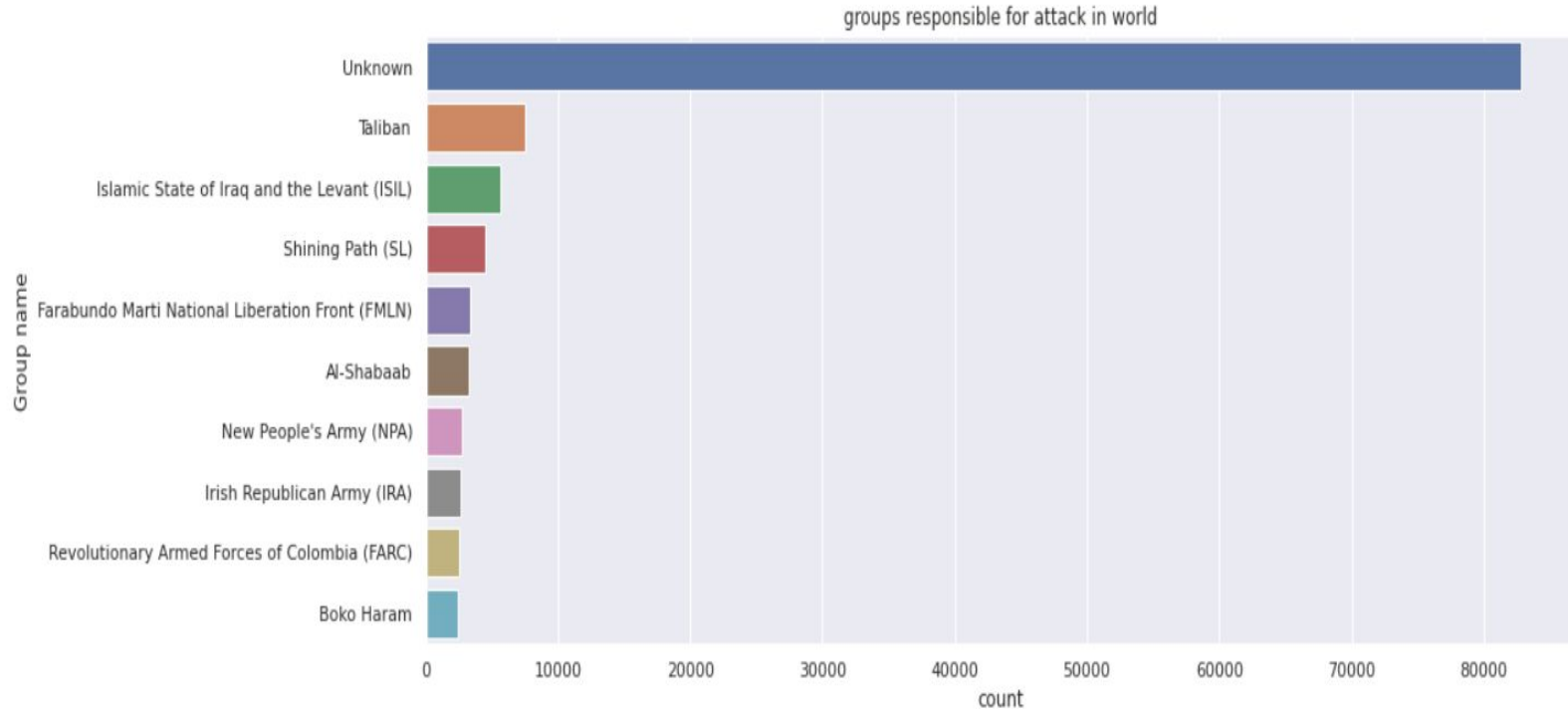
Type of Target of Attacks



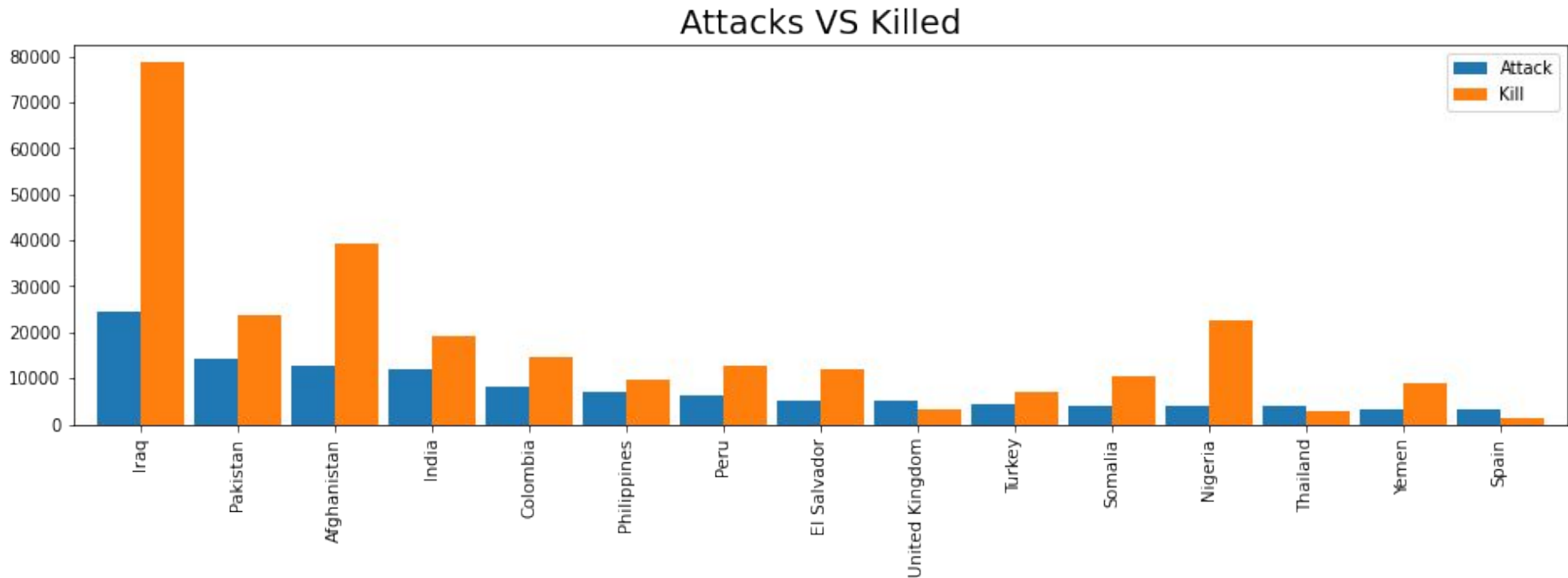
# Most Attacked Country



# Terrorist Group Responsible for Attacks Globally

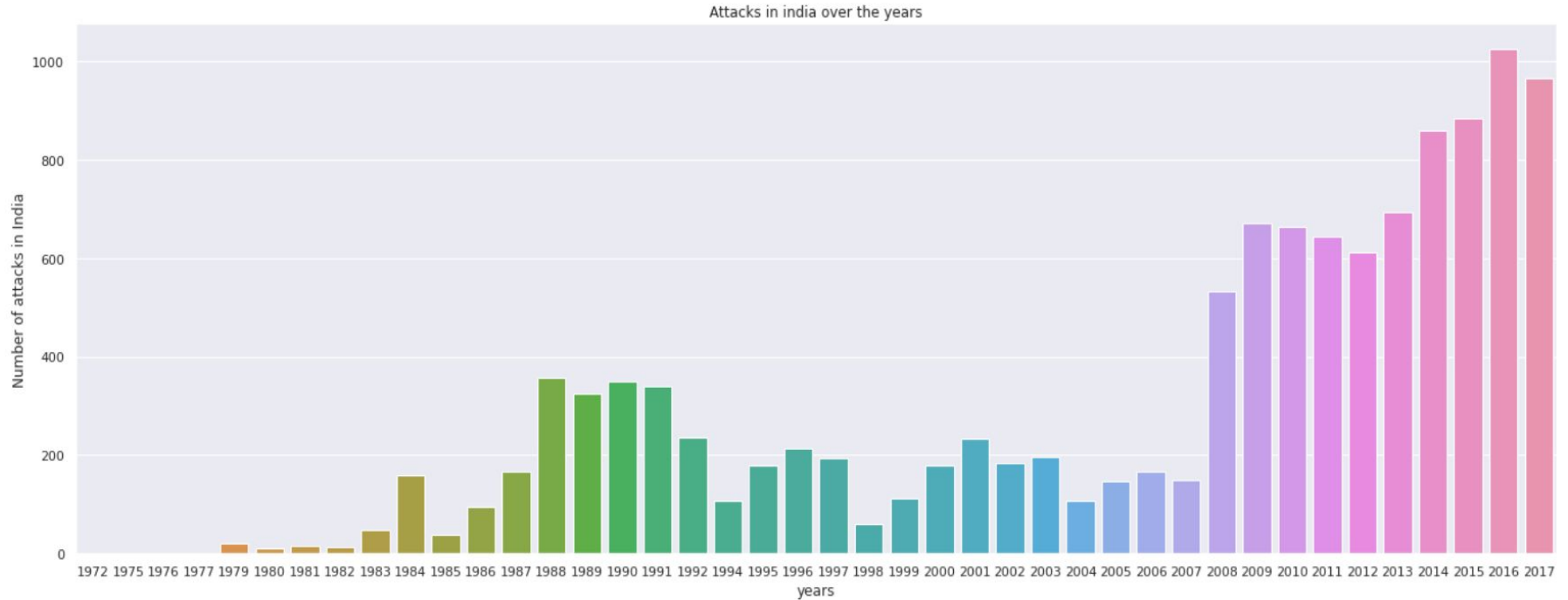


# Attack vs. Killed Analysis



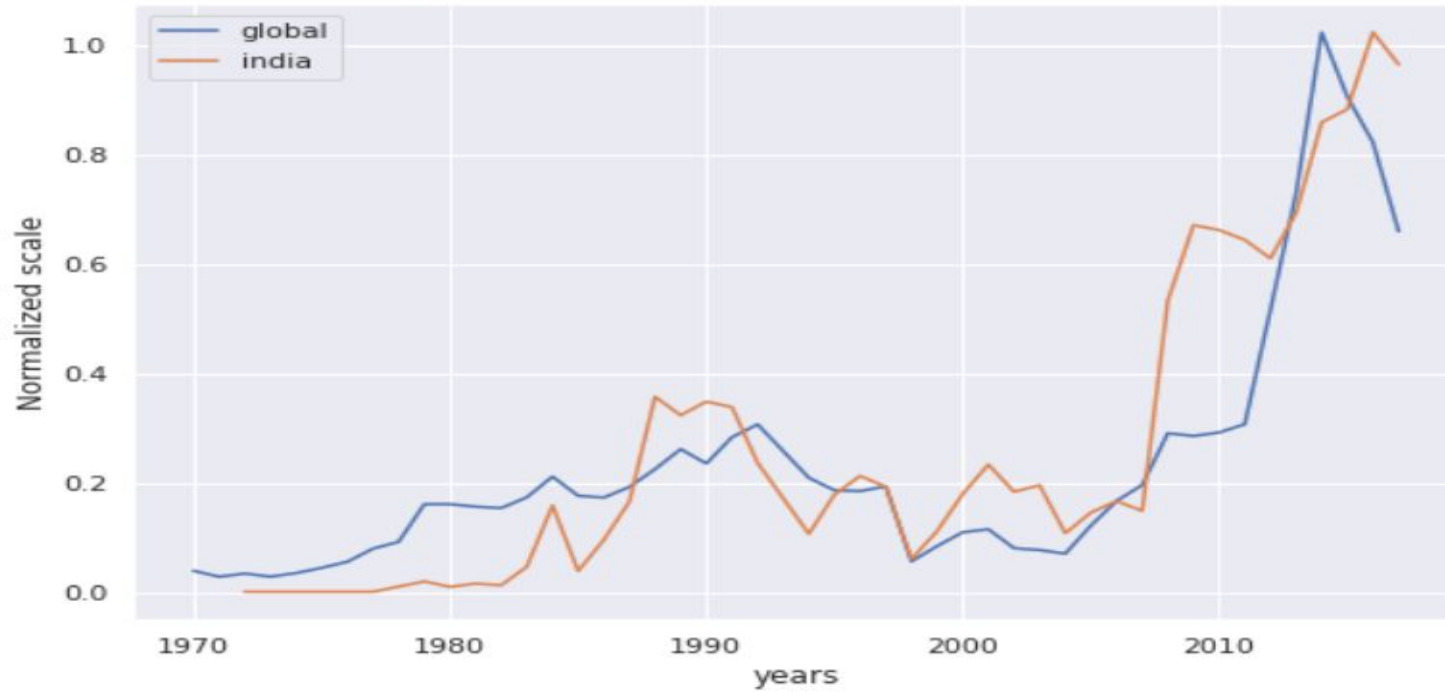


## Terrorist Attack in India over the Years

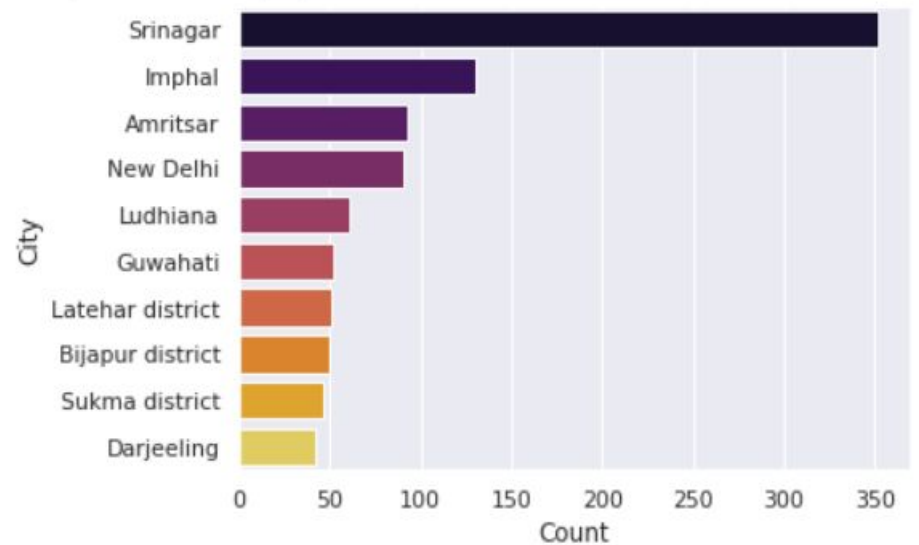
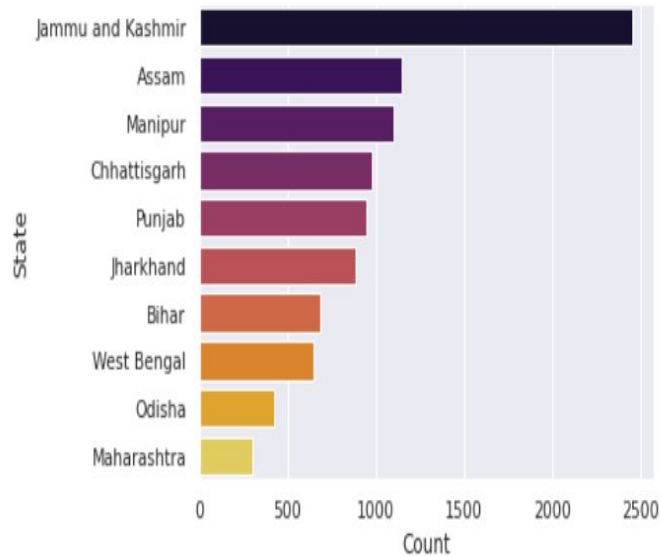


149 incidents were recorded in 2007 were as 534 incidents are recorded in 2008. This shows 258% rise in the incidents just in single year.

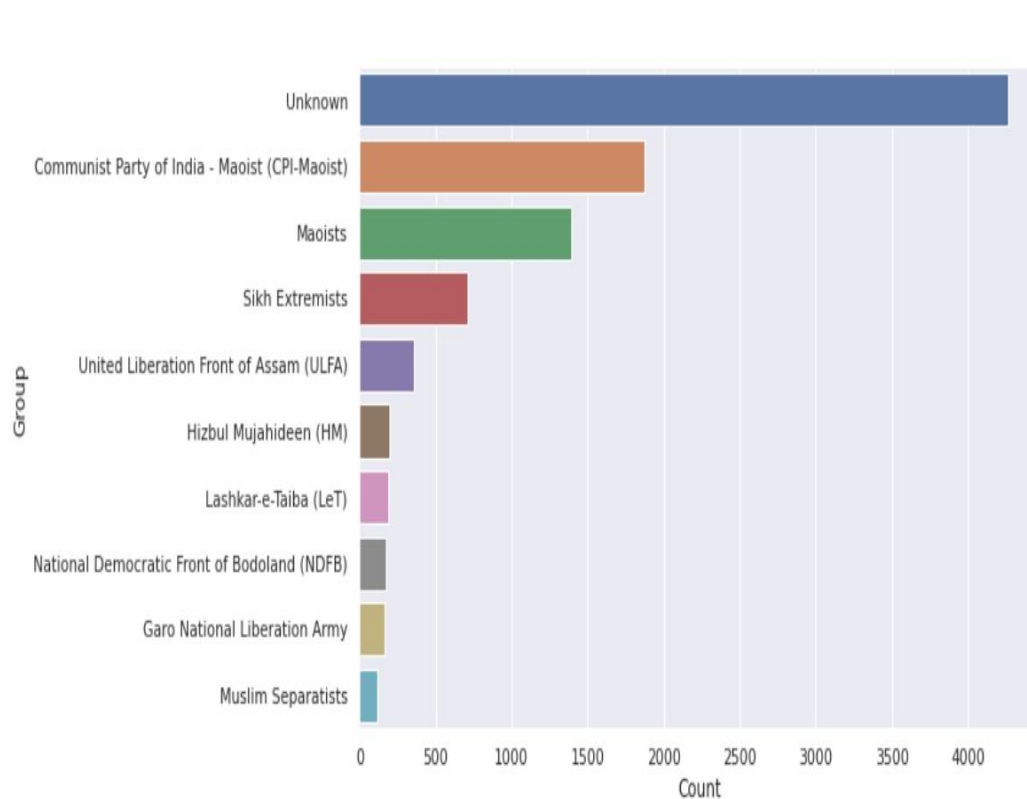
## Compare Global vs. India Terrorist activity



## Region in India most affected by the Terrorist



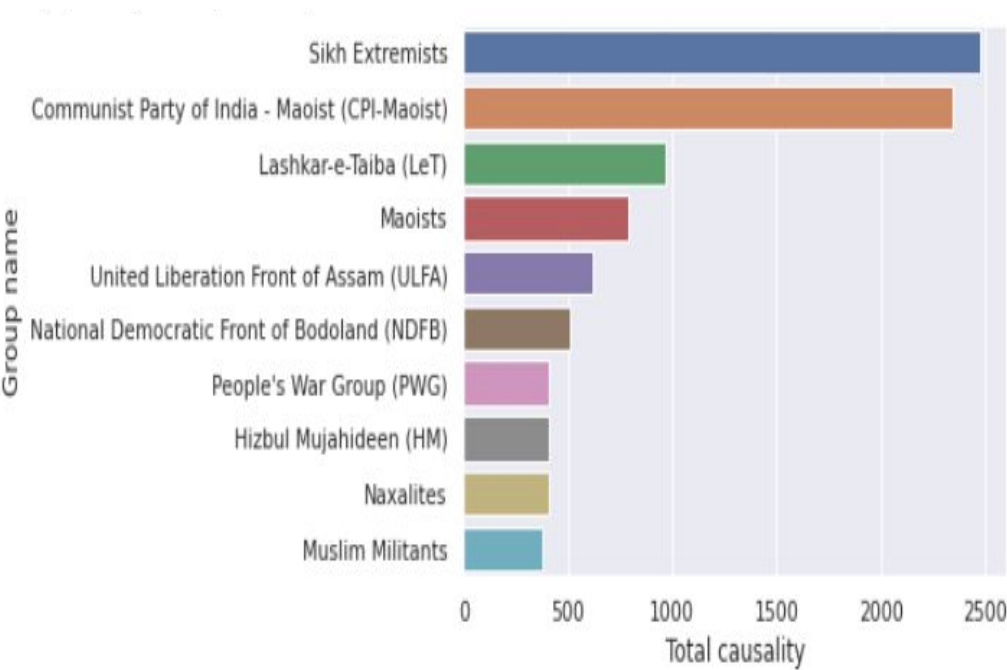
## Active terrorist group in India



Group_name	number_of_attack	percentage(%)
Communist Party of India - Maoist (CPI-Maoist)	1861	24.652272
Maoists	1366	18.095112
Sikh Extremists	703	9.312492
United Liberation Front of Assam (ULFA)	350	4.636376
Hizbul Mujahideen (HM)	199	2.636111
Lashkar-e-Taiba (LeT)	186	2.463903
National Democratic Front of Bodoland (NDFB)	172	2.278447
Garo National Liberation Army	153	2.026759
Muslim Separatists	118	1.563121
People's War Group (PWG)	97	1.284938
Bodo Militants	87	1.152471
Muslim Militants	87	1.152471

Unknown terrorist groups are more than ~50%

# Most casualties by terrorist group in India

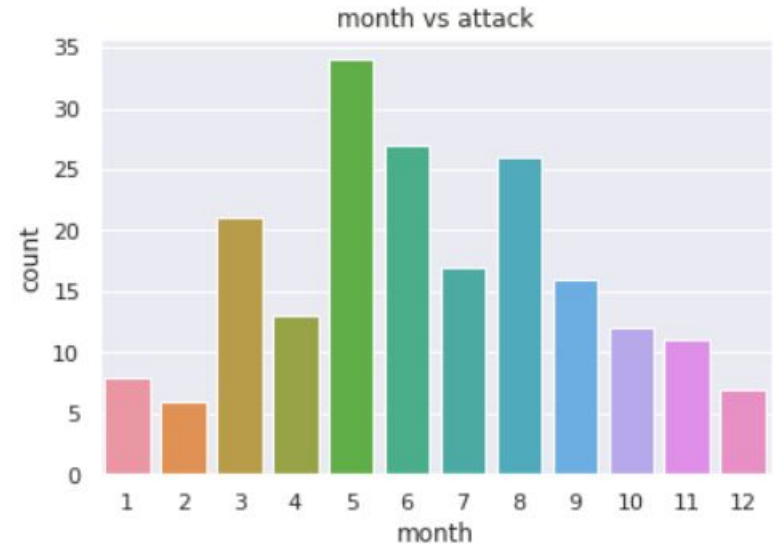
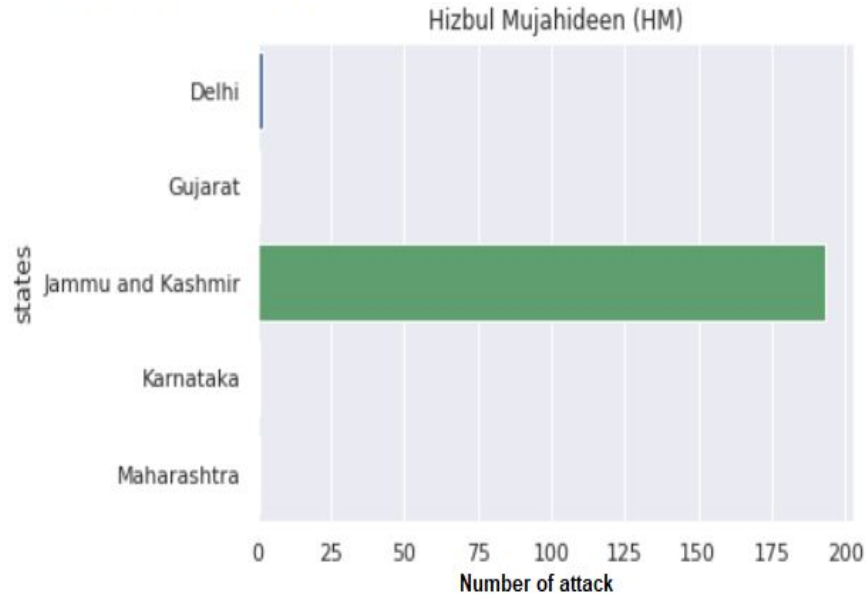


Group_name	kill	percentage(%)
Sikh Extremists	2477.0	16.978545
Communist Party of India - Maoist (CPI-Maoist)	2344.0	16.066900
Lashkar-e-Taiba (LeT)	969.0	6.641991
Maoists	790.0	5.415039
United Liberation Front of Assam (ULFA)	617.0	4.229214
National Democratic Front of Bodoland (NDFB)	514.0	3.523202
People's War Group (PWG)	410.0	2.810337
Hizbul Mujahideen (HM)	409.0	2.803482
Naxalites	408.0	2.796628
Muslim Militants	377.0	2.584139

Total causality in India alone 14589, Between the year 1972 to 2017

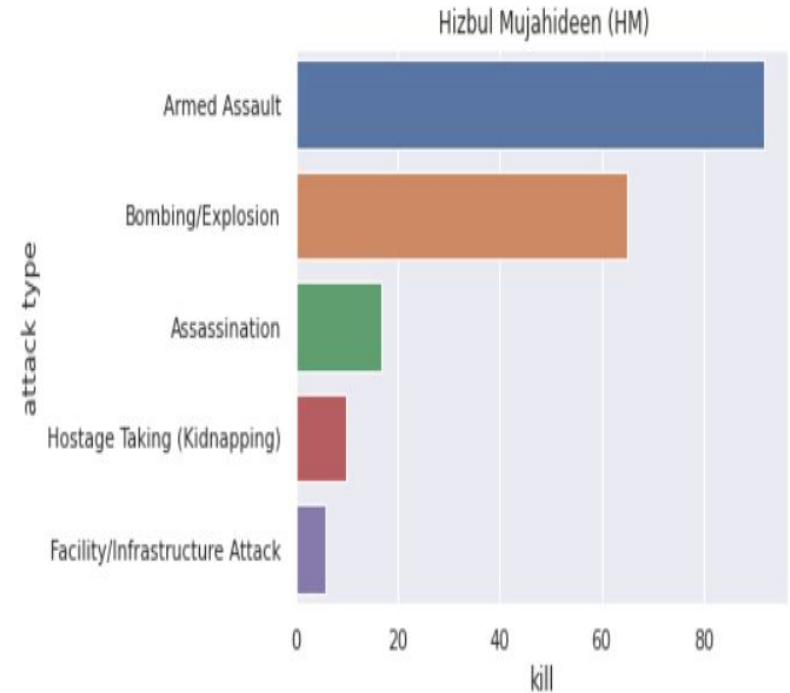
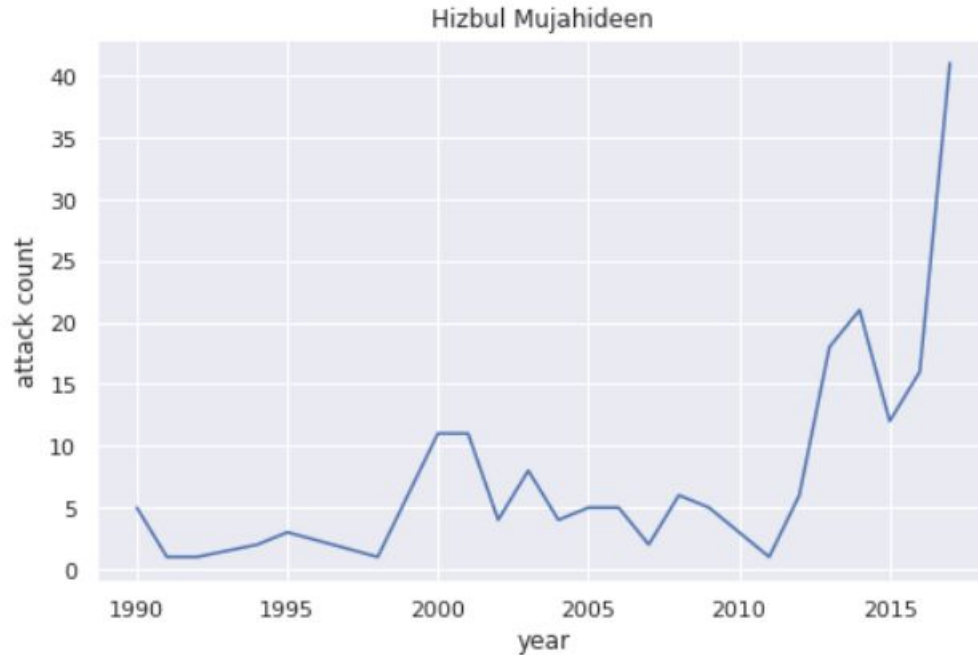
## Terrorist group

### Hizbul Mujahidden



### India based terrorist group

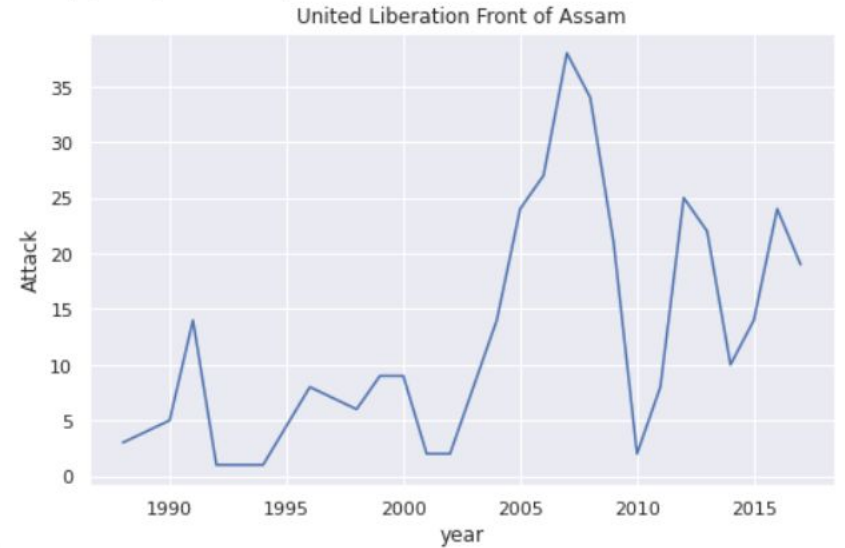
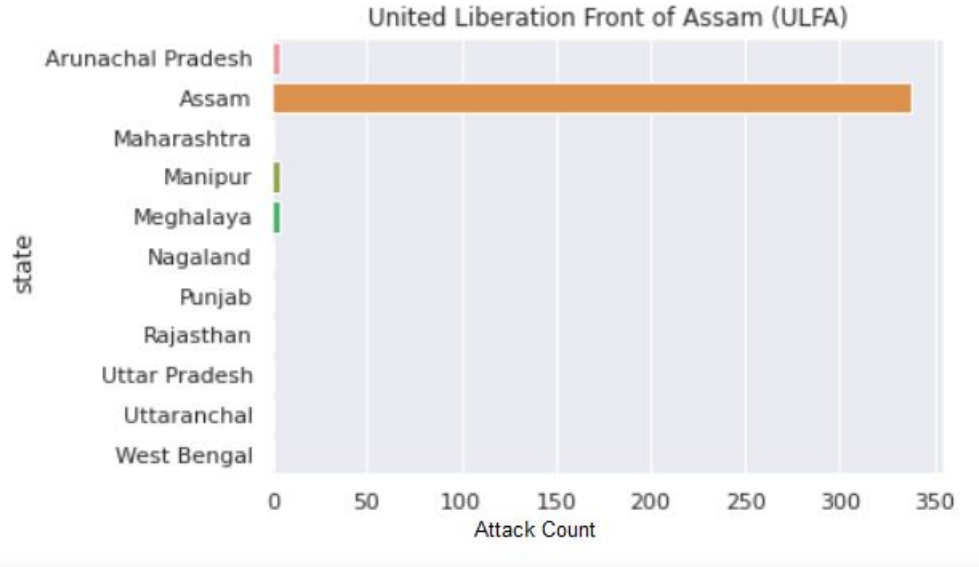
## Terrorist group



HM terrorist group has killed 408

## Terrorist group

### United Liberation Front of Assam

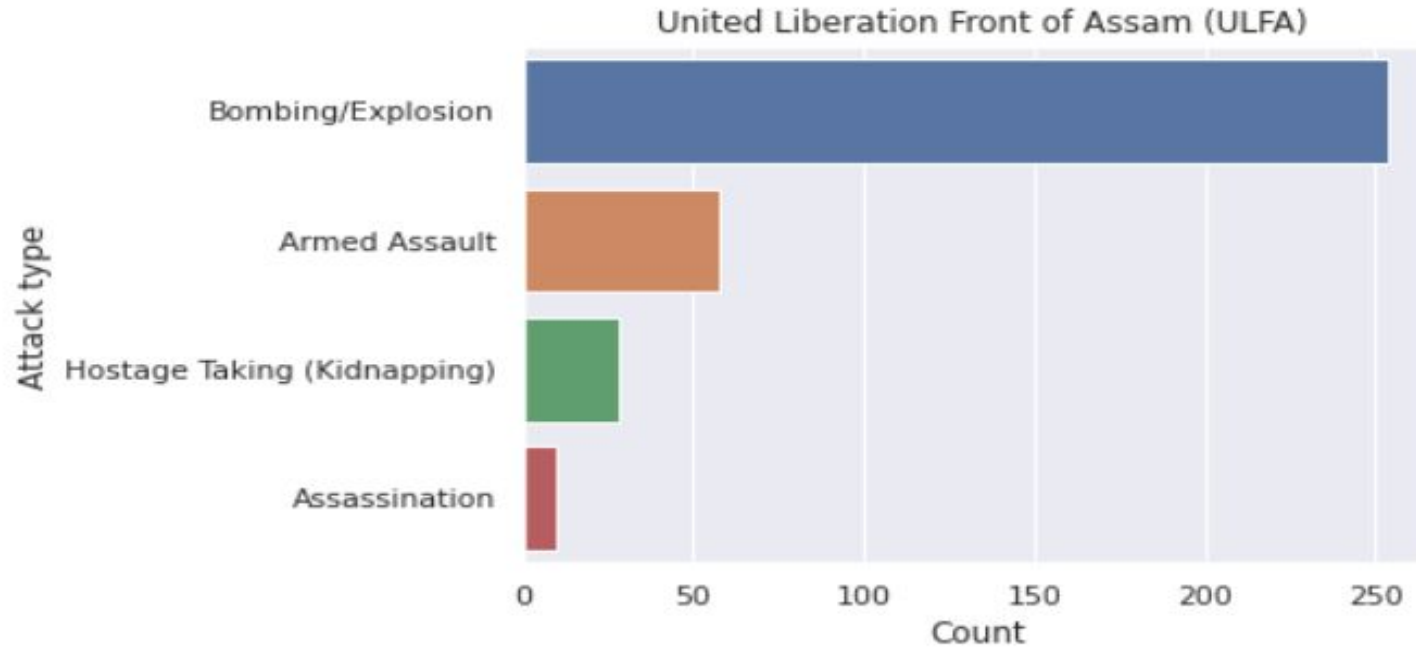


India based terrorist group



## Terrorist group

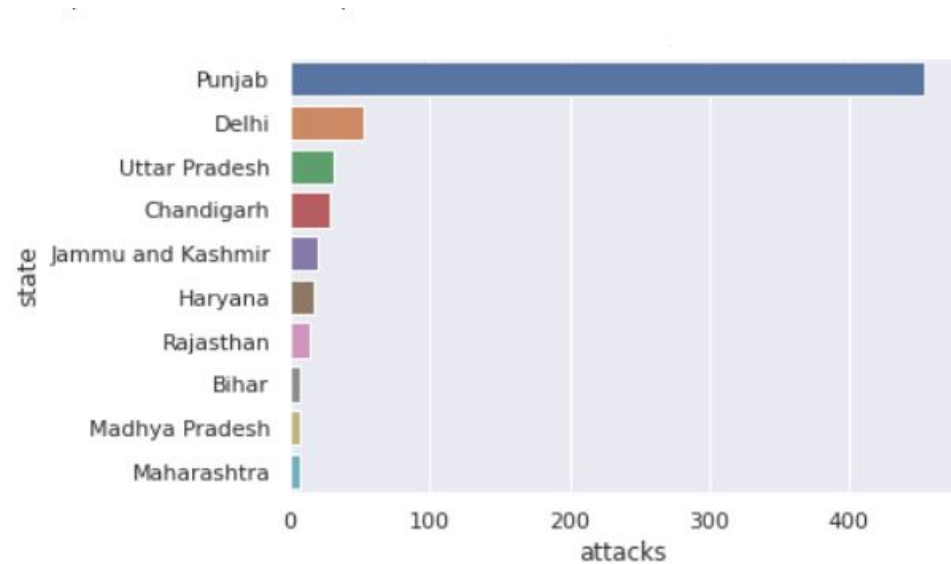
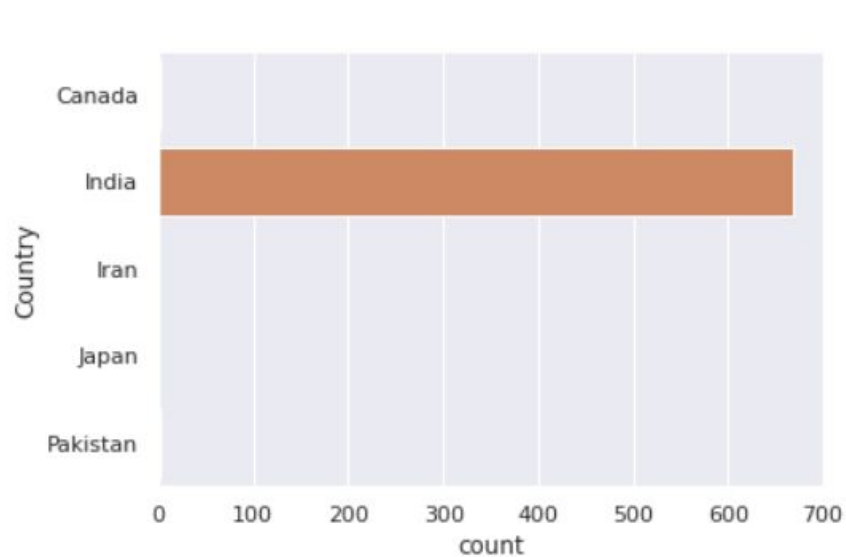
### United Liberation Front of Assam



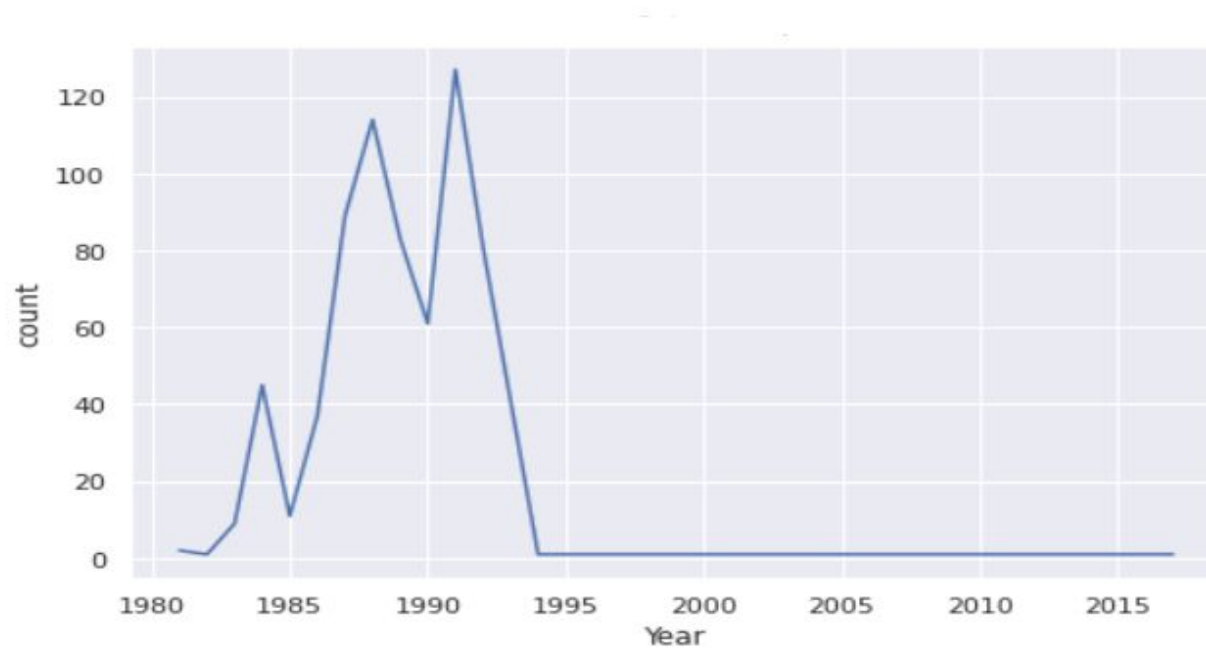
ULFA terrorist group has killed 617

## Terrorist group

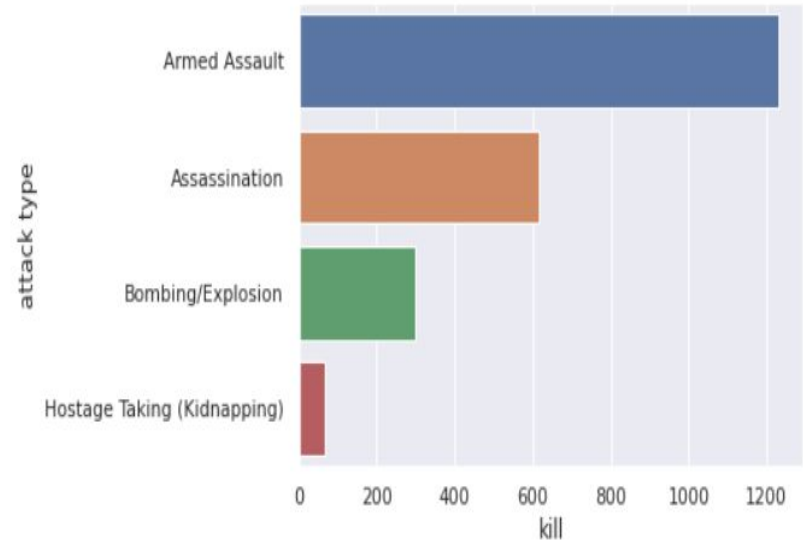
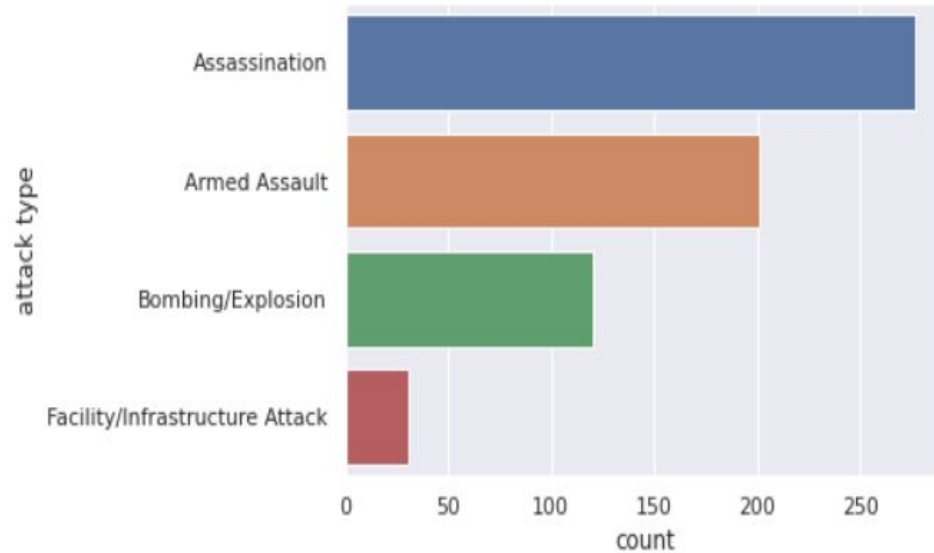
### Sikh Extremists



## Sikh Extremists

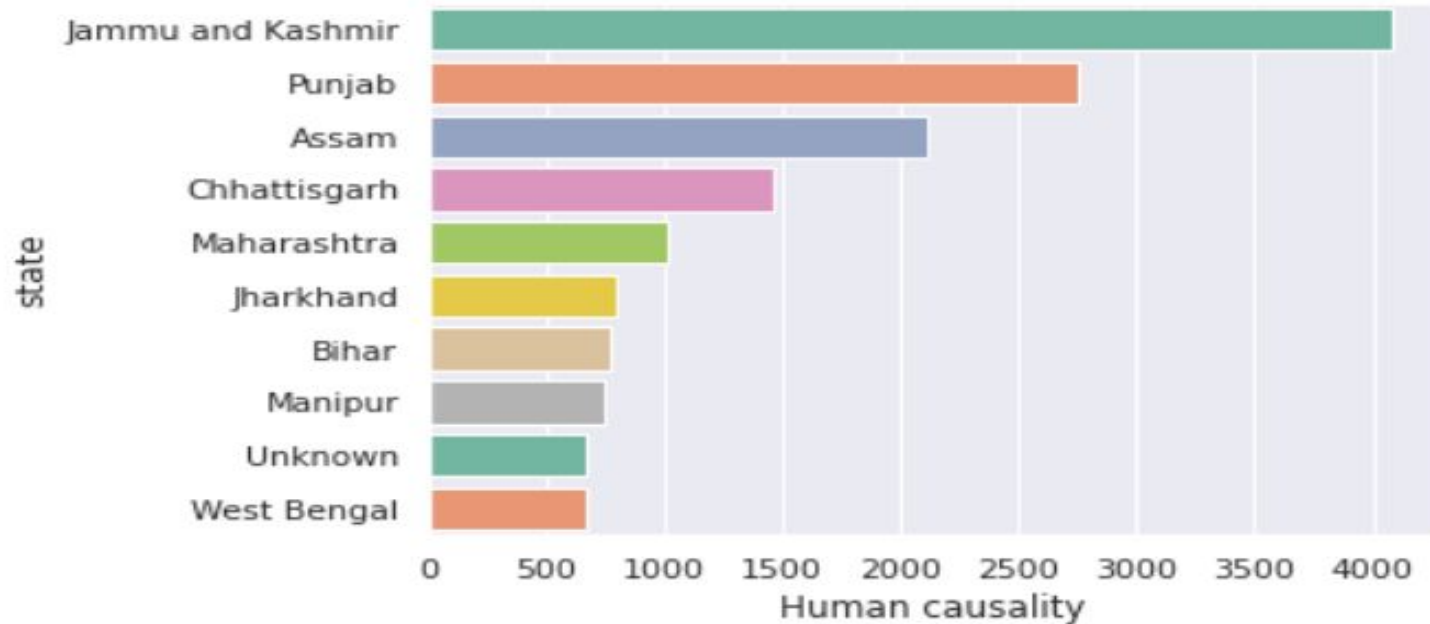


## Sikh Extremists



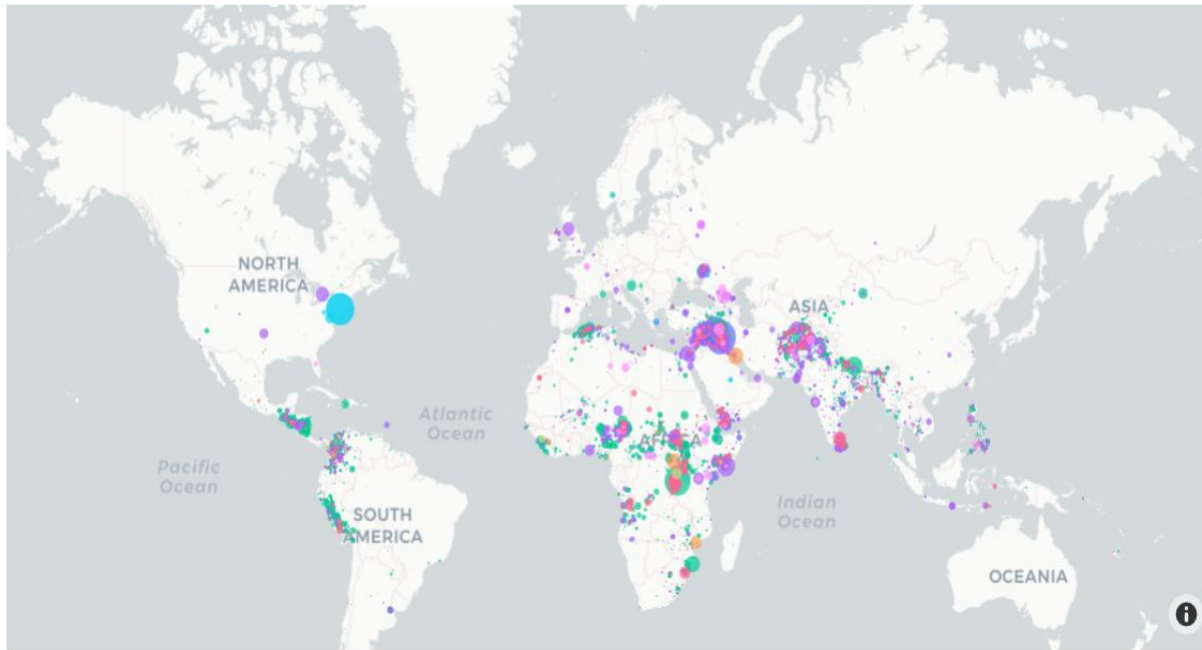
Sikh Extremists terrorist group has killed 2303

## Human causality assessment in India



- Total Human causality in India is 14028

## Worldwide Impact Of Terrorism



- attack\_type=Hostage Taking (Kidnapping)
- attack\_type=Assassination
- attack\_type=Armed Assault
- attack\_type=Bombing/Explosion
- attack\_type=Facility/Infrastructure Attack
- attack\_type=Hijacking
- attack\_type=Unknown
- attack\_type=Unarmed Assault
- attack\_type=Hostage Taking (Barricade Incident)

# How to stop Terrorism

- Global cooperation
- Making strict law against terrorism
- Education
- Good governance
- Terrorist Analysis



# Challenges

- Data Cleaning
- Data mining
- Deciding the flow of the presentation
- Team coordination \*\*\*





## Conclusion

- We can see by analysis that not even a single part of world is untouched by the terrorist attacks
- Asian and African country's are mostly affected.
- Most attacked country by terrorist is Iraq followed by Pakistan, Afghanistan , India
- Border states of India are most affected by the terrorist activities
- Most affected state in India is Jammu and Kashmir

# Q&A