CAPSTONE PROJECT - 01

Global Terrorism Analysis

Project Type - EDA
Contribution – Individual
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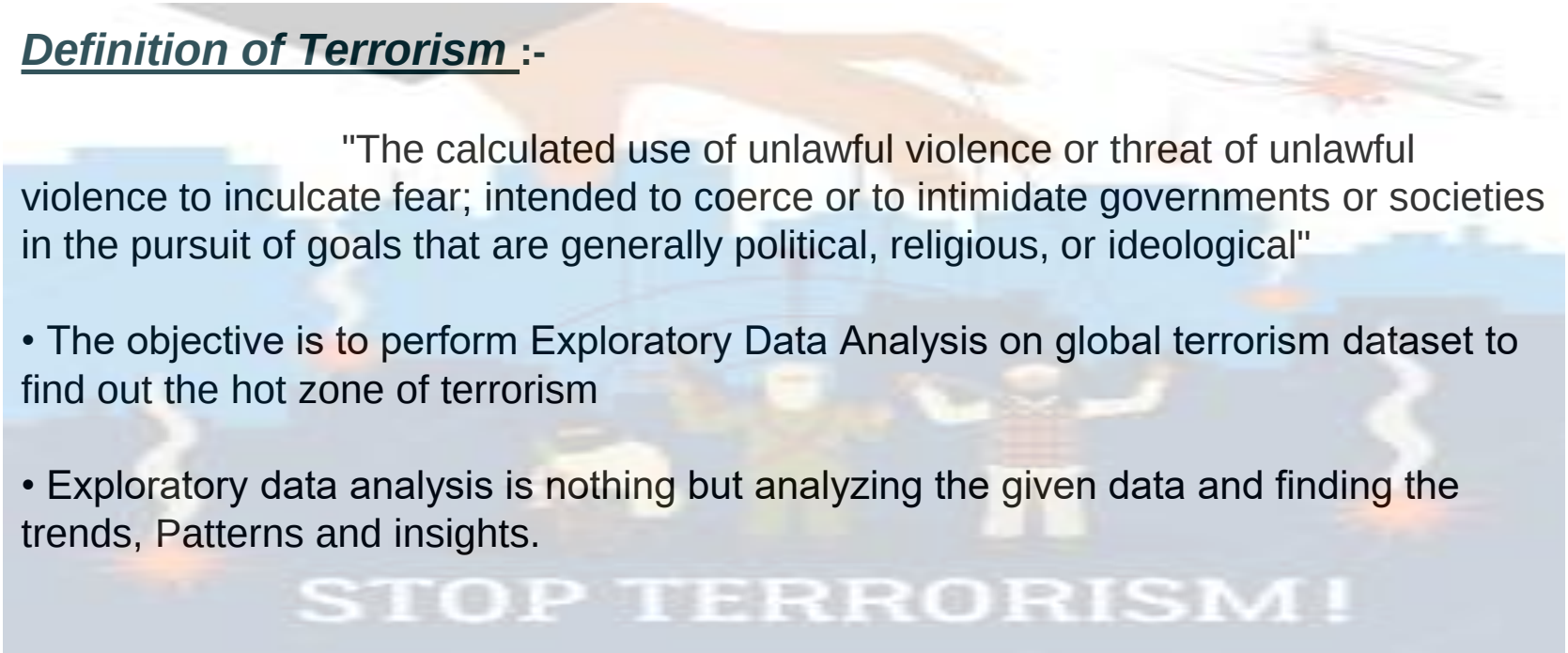
Introduction

Definition of Terrorism **:-**

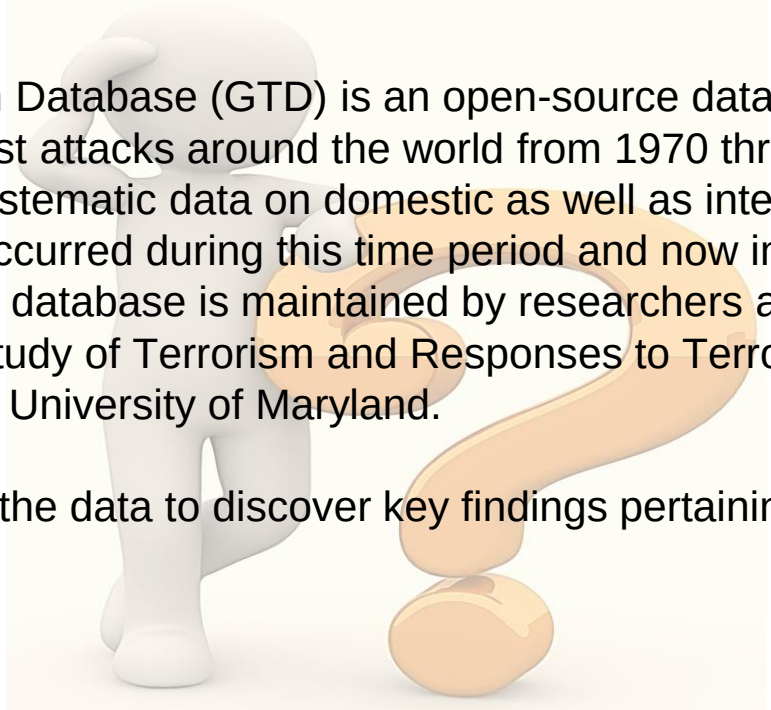
"The calculated use of unlawful violence or threat of unlawful violence to inculcate fear; intended to coerce or to intimidate governments or societies in the pursuit of goals that are generally political, religious, or ideological"

• The objective is to perform Exploratory Data Analysis on global terrorism dataset to find out the hot zone of terrorism

• Exploratory data analysis is nothing but analyzing the given data and finding the trends, Patterns and insights.



Problem statement



The Global Terrorism Database (GTD) is an open-source database including information on terrorist attacks around the world from 1970 through 2017.
The GTD includes systematic data on domestic as well as international terrorist incidents that have occurred during this time period and now includes more than 180,000 attacks. The database is maintained by researchers at the National Consortium for the Study of Terrorism and Responses to Terrorism (START), headquartered at the University of Maryland.

Explore and analyze the data to discover key findings pertaining to terrorist activities

Dataset Preparation

- *Loading the dataset*: Load the Global Terrorism Dataset by mounting the drive.
- *Import Libraries*: NumPy, Pandas, Seaborn and Matplotlib
- *Data cleaning*: Finding null values, Replacing the null value with zero, Finding duplicate values, Creating the copy of main dataset etc.
- *Exploratory Data Analysis*: Analyzing the data sets to summarize their main characteristics using statistical graphics and data visualizations method.

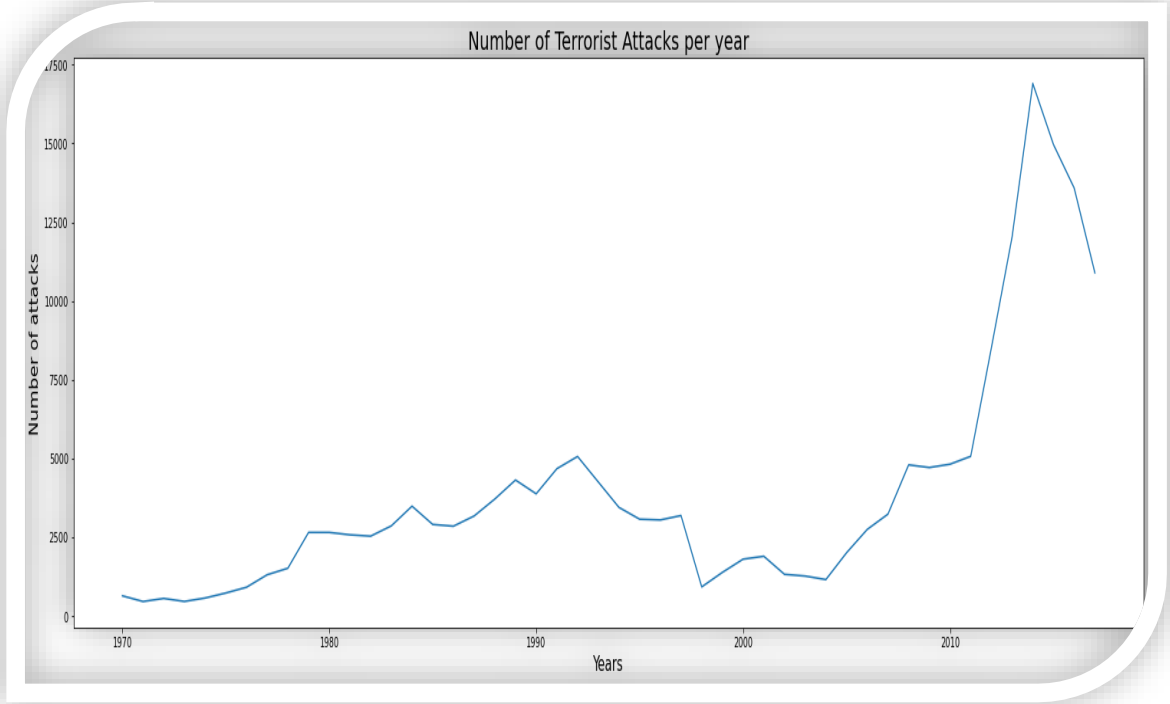
Data summary

Year	Year of Terrorist Attack
Month	Month of Terrorist Attack
Day	On which Day Terrorist Attack is happened
Latitude	Y Co-ordinates of Terrorist Attack point
Longitude	X Co-ordinate of Terrorist Attack point
Region	Region of Terrorist Attack
Country	Country of Terrorist Attack
State	State of Terrorist Attack
city	City in which terrorist attack happen

Attack_Type	Type of Terrorist Attack
Killed	Number of people killed in the Terrorist Attack
Gang_Name	Name of Terrorist Organization
Wounded	Number of people Injured in the Terrorist Attack
Main_Target	Main target of the Terrorist Attack
Sub_Target	Sub target of Terrorist Attack
Weapon_type	Weapon used in the Terrorist Attack
Motive	Motive of Terrorist Attack
Nationality	Nationality of Terrorist Organization
Casualties	It is the Sum of Number of people killed and Number of people Injured in the Terrorist Attack

Analysis and visualization of data

1.Yearly growth of terrorist attacks



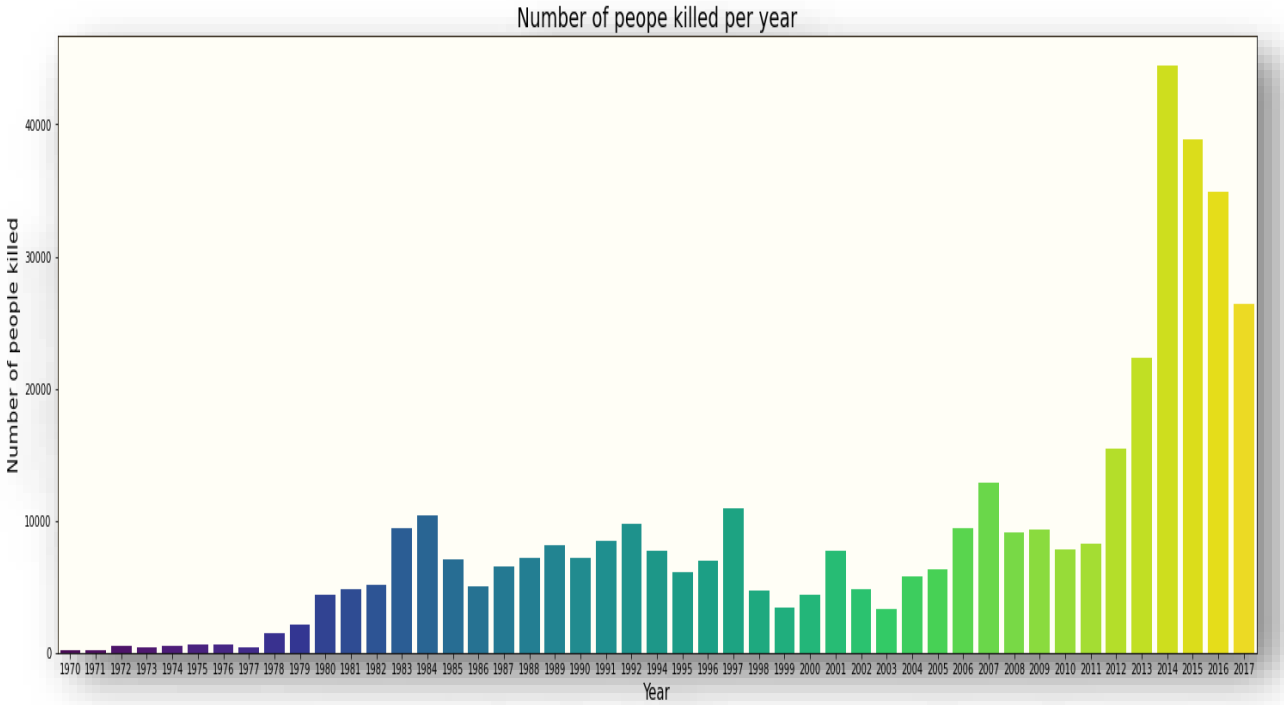
Observation :-

1.From the above graph we can say that After 2004 there is a large growth recorded in terrorist attack.

2.Maximum Number of the attacks were recorded in year 2014

3.Minimum number of attacks were recorded in the year 1971

2.Number of people killed Due to Terrorism per year



Observation:-

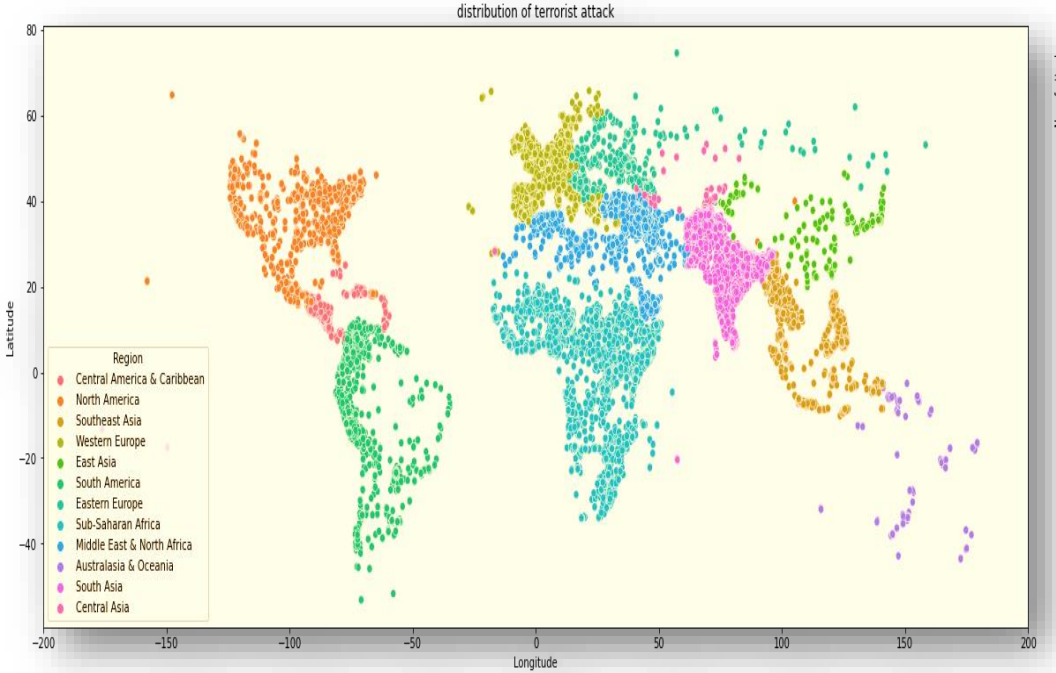
1.Due to increase in terrorism activity after 2004 ,number of people killed per year is also increases.

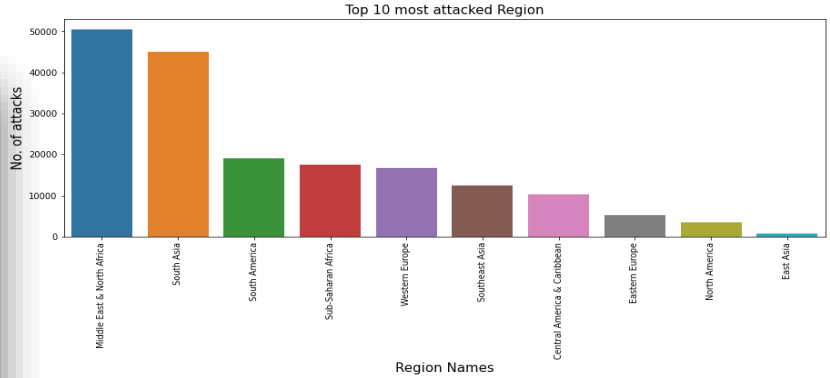
2.Most Number of People killed in year 2014.

3.Minimum Number of People killed in year 1971.

3.Analysis based on Most affected area of Terrorism

3.1Top 10 Most affected Region



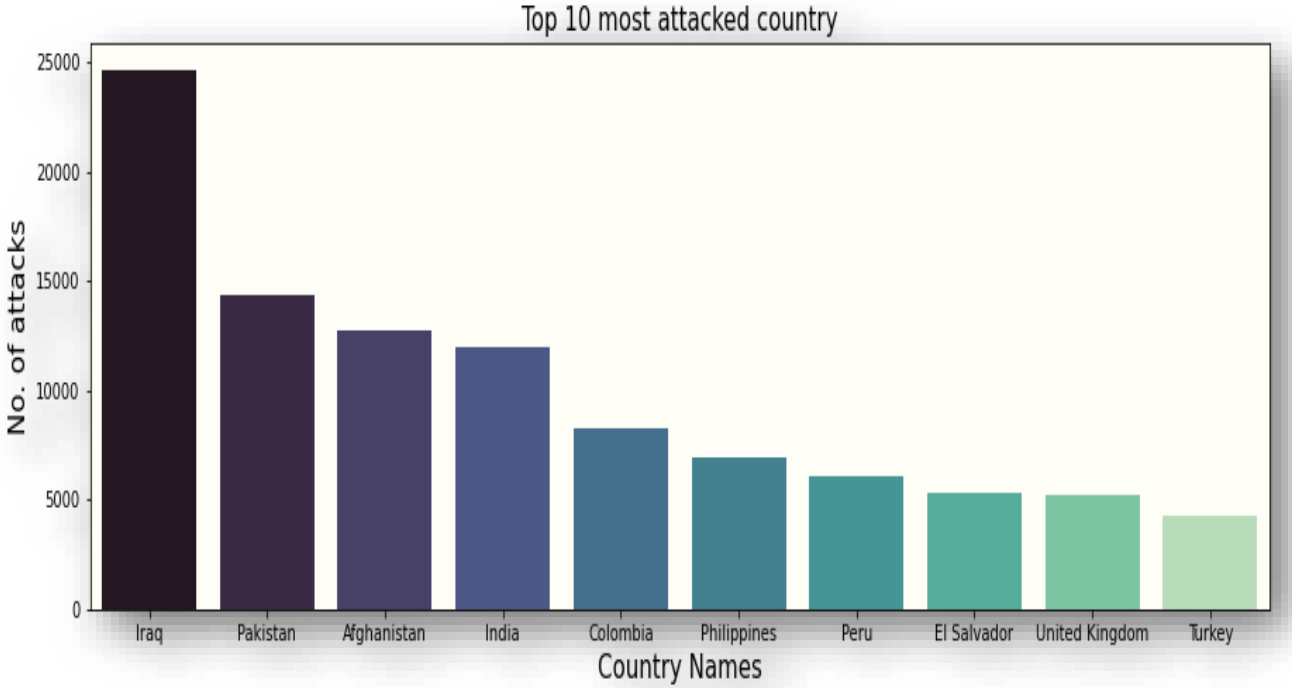


Observation:-

1.From the scatter and bar plot we can say that Middle East and North America is the most affected region of Terrorist Attack.

2.Australasia & Oceania is the most safest region because there is less number of Terrorism compare to other region.

3.2Top 10 Most affected Country



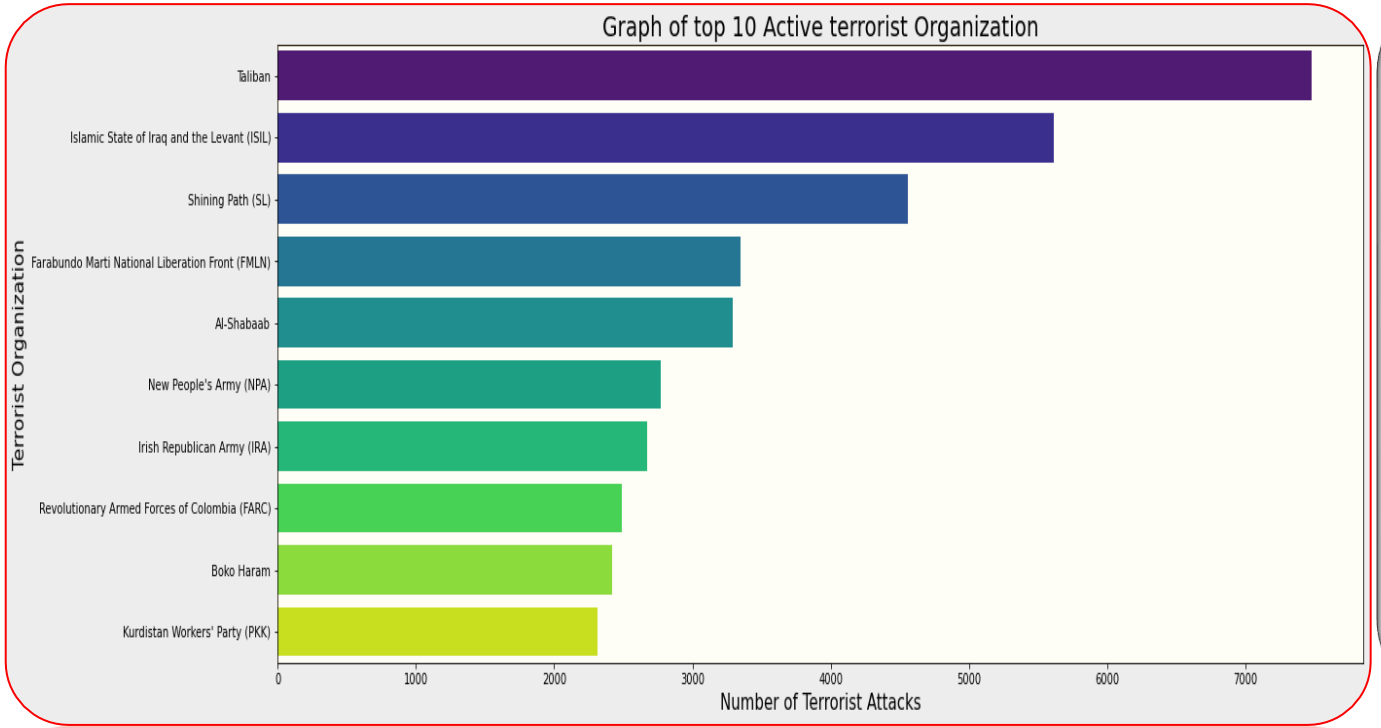
Observation:-

1.Iraq is the most affected country of terrorism which records highest number of terrorism activity in any country.

2.India ranked number 4 in terms of most affected country of the terrorist activity

4.Analysis based on Terrorist Organization

4.1Top 10 Active Terrorist Organizations who attack the most

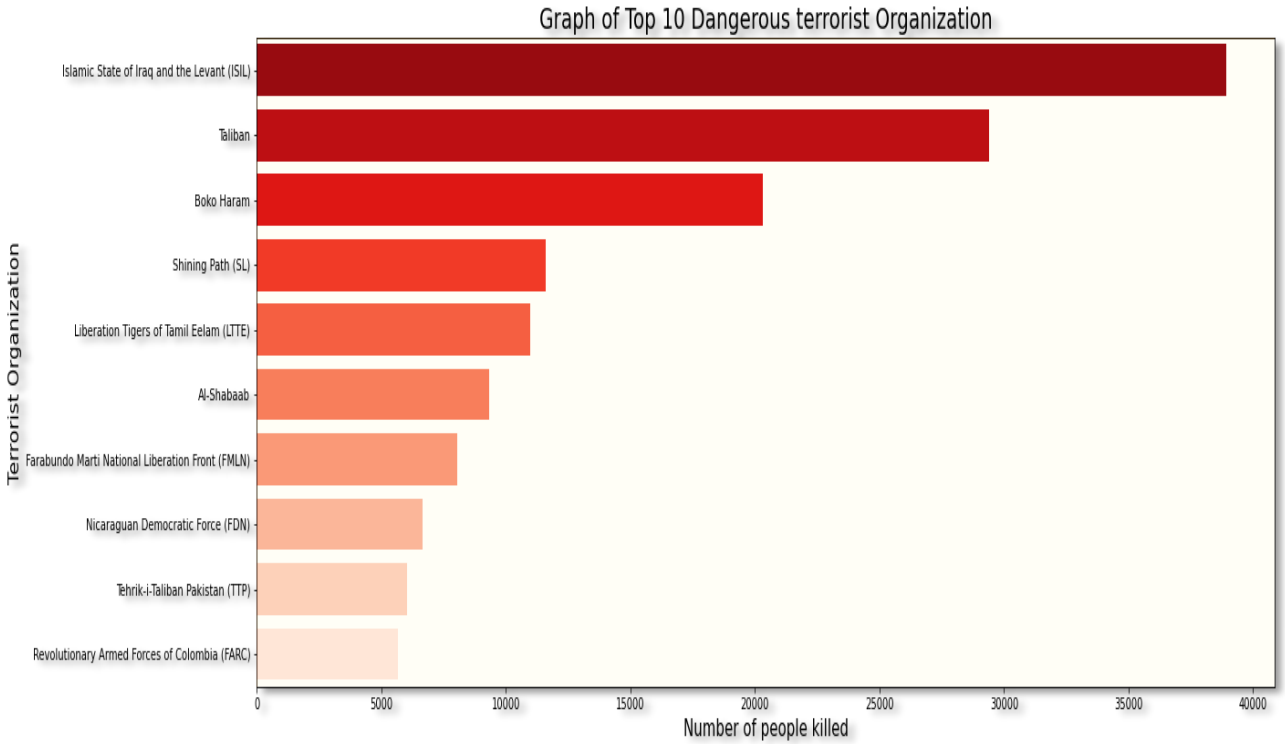


Observation:-

1.Taliban and Islamic State of Iraq and the Levant (ISIL) are the Most active terrorist Organization who attack the most around the world.

2.Taliban recorded most number of attacks

4.2Top 10 Dangerous Terrorist Organization who killed the most number of people



Observation:-

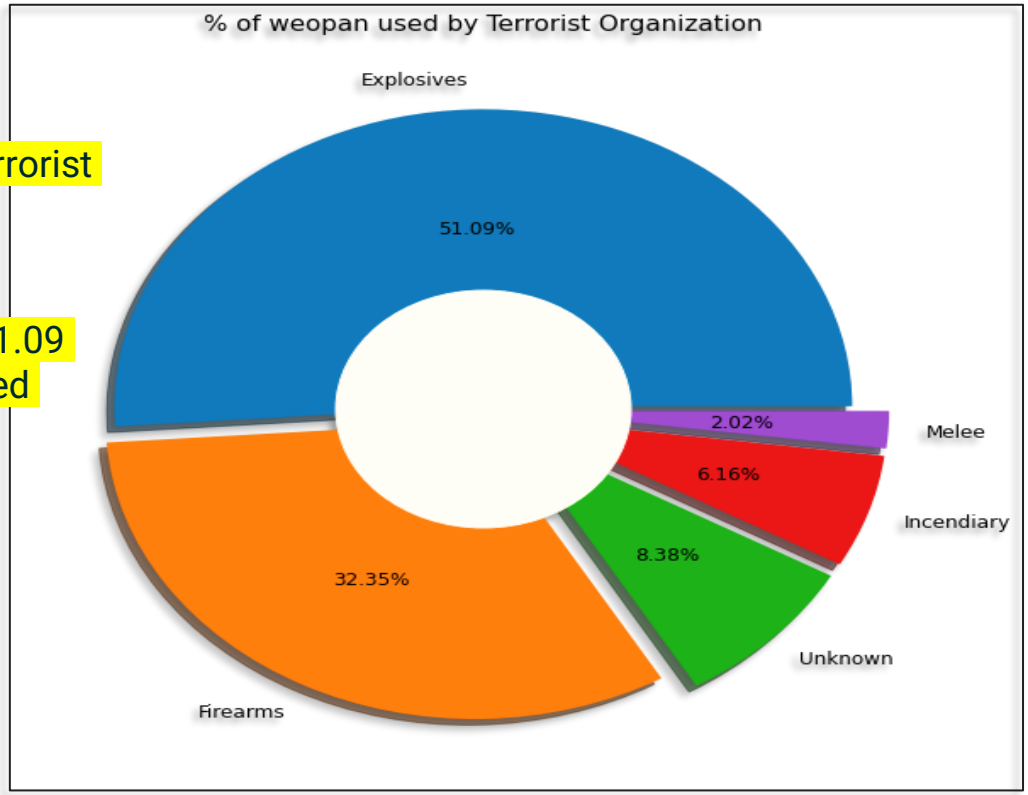
1.Islamic State of Iraq and the Levant (ISIL) and Taliban is the most dangerous Terrorist Organization in the world which records highest kills 38923.0 and 29410.0 respectively

2.Out of all the top 10 Organizations, around 46% people killed by ISIL and Taliban organization

4.3Top 5 Most use weapon by Terrorist Organization

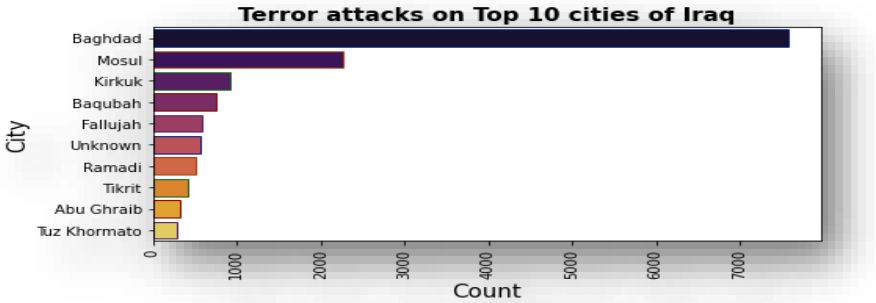
1.To get the Percentage of Weapon used by Terrorist Organization we use Pie Chart

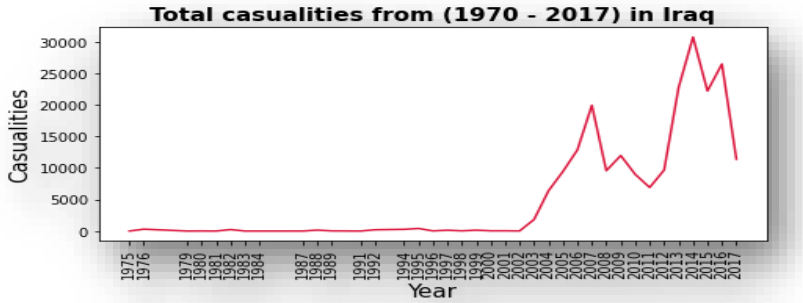
2.It seen that explosives were used in around 51.09 % of the attacks, followed by Firearms accounted for 32.35% of the attacks

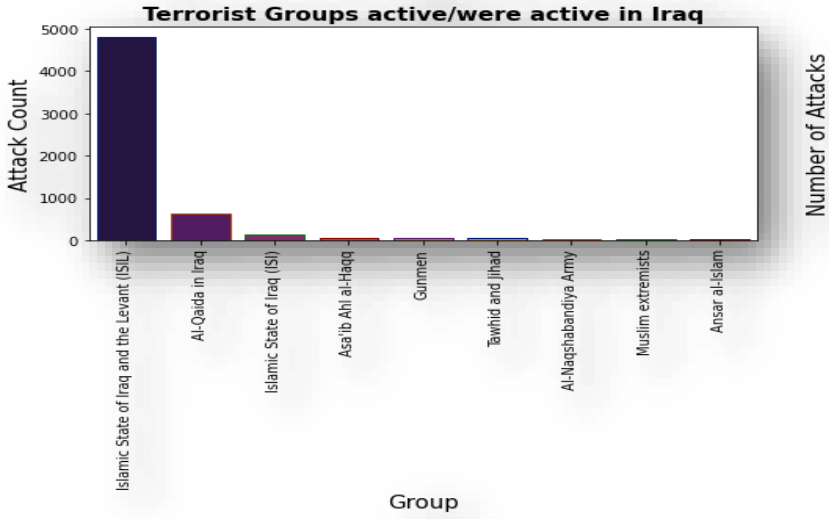


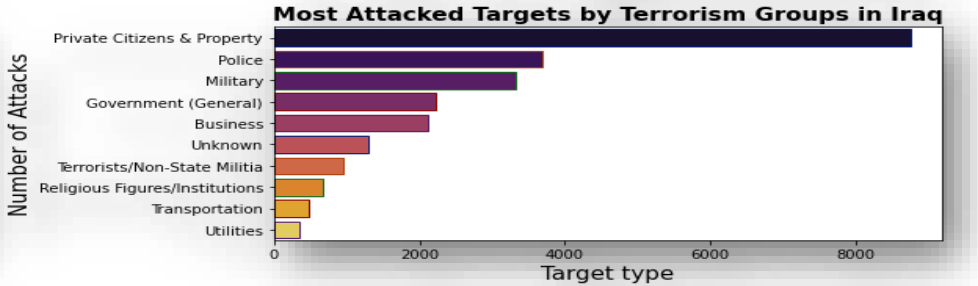
Country wise analysis

Country Iraq









here we are doing the country wise analysis of terrorist attacks and by using the bar plot we can easily find out the most affected city and most safe city of the country. also most active terrorist organization in the respective country and what are the main targets of terrorist attack by getting exact figures. We can also find out the trends in the casualties from the year 1970 to 2017.

Observation :-

1.Here we did the analysis of most affected country of terrorism Iraq.

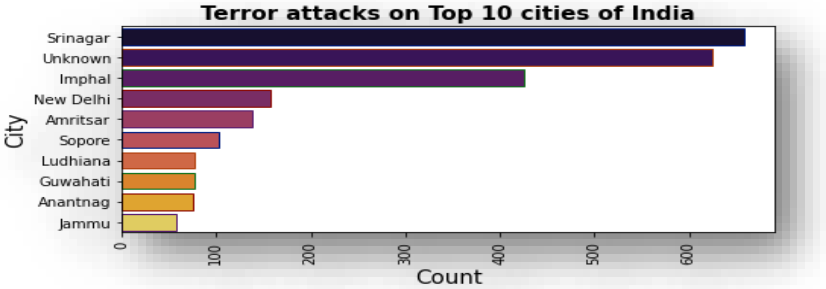
2.Most number of attacks happen in the Baghdad city of Iraq

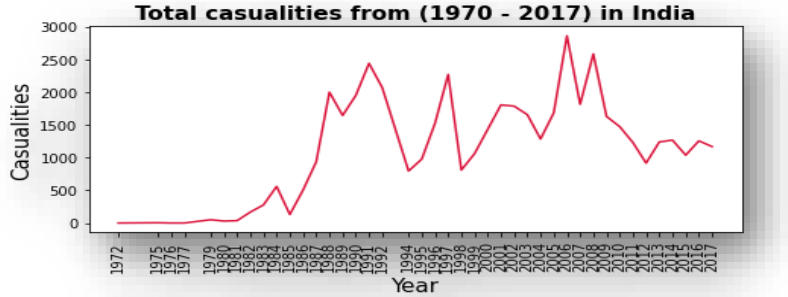
3.Islamic state of Iraq and the levant (ISIL) is the most active terrorist organization in the country which record highest attacks

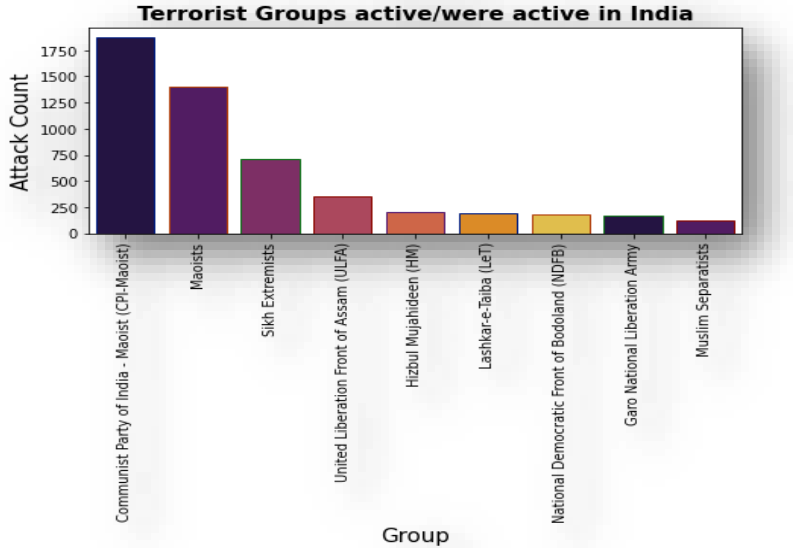
4.The number of casualties increases per year till 2014 later it is decreases.

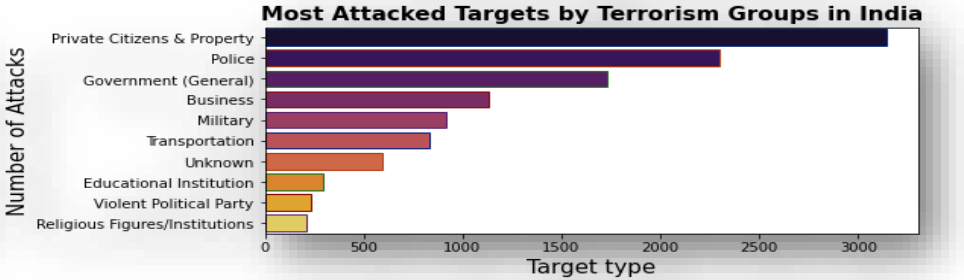
5.Main target of terrorist is private Citizens and Property followed by Police, Military, and Government

Country India









Observation :-

1.Here we did the analysis of most affected country of terrorism India.

2.Most number of attacks happen in the Shrinagar city of India.

3.Communist party of India - Maoist(cpi-Maoist) is the most active terrorist organization in the country which record highest attacks.

4.The number of casualties varies per year from 1985 to 2014.

5.Main target of terrorist is private Citizens and Property followed by Police, Government and Business.

Challenges Faced -:

- Reading the dataset and comprehending the problem statement.
- Examining the business KPIs for app development and devising a solution to the problem.
- Handling the error and NaN values in the dataset.
- Designing multiple visualizations to summarize the information in the dataset and successfully communicate the results and trends to the reader.

Conclusion's

- It was clear that numbers of terrorist attacks were increases from 2002-2004. Most of the attacks were done on year 2014 and Iraq is the most affected country from terrorism because most of the peoples killed in Iraq. In Iraq maximum of 1570 peoples killed in single attack. As expected Baghdad is most affected city(and yes this is also called province).

- Among all the regions "Middle East & North Africa" has the most number of killed people Approx 1.4 Lakhs followed by "South-Asia" & "Sub-Saharan Africa

- "Taliban" is the most powerful, dangerous and the most active gang among all the gangs, followed by "Islamic state of Iraq and the levant(ISIL)" and "shining path(SL)".

- The most targeted attacks are on "Private Citizens & Property" which is approximately 40% and 10-20% is the target on "Military", "Police", "Government", "Business".

- "It seen that explosives were used in around 51.09% of the attacks, followed by Firearms accounted for 32.35% of the attacks".

Thank You