# Global terrorism data analysis

## Overview of the Study:

The goal is to analyse the global terrorism data using data processing and manual data analysis.

Methods:

We followed the different techniques to understand the data in the given dataset.

### Python with Pandas:

As we are in the data analysis, we can choose number of ways to audit and analyse them, but python is a programming language which runs machine independent and on servers with no dependencies.

Pandas can be used with large datasets to understand the data quality and get the understanding of the same.

The given set of data is not more than 1GB so we no need to use and data processing tools like Spark.

We will be doing the analysis with Pandas in our study finally.

### Python with Map plot

With Pandas we can process the data and check the results with groping, remove duplicates and all which is technically very good though to see as a user it will be better to have visualization to have more intuitive understanding of the data with charts.

Matplot is the library we can use to plot charts and to a analysis with better understanding and which is very better with visualization.

So, we are going to use matplot library for visualization.

The below is the summary we follow for the setup on machine.

For **Ubuntu**:

Python (3.x) will be available on the machine, we no need to install

$ sudo apt install -y python3-pip

We use pip which is python package manager. Following commands will get us the

$ pip install pandas

$ pip install matplotlib

We can use jupyter notebook to work on our machine to execute the program.

The google drive package will help to connect to google drive with token authentication or we can run the program on google colab with on demand authorization to datasets.

### Results / Findings:

#### Exploratory Data Analysis (EDA):

* Terrorist attacks over the years from 1970 to 2017
* Most Terror affected Countries
* Region-wide Distribution of Terrorism
* Most affected States
* Killed People in Terror Attacks
* Injured People in Terror Attacks
* Kids Hosted By Terror Attacks
* Most common Mode of Terrorism
* Most Preferred Weapon of Terror
* Yearon year analysis of Terror attack in most affected countries
* Most Terror Targets
* Year-wise analysis of Casualties of Terrorism
* Co-relation between No.of Terrorist Organizations' active in a Country and Terrorist attack

#### Terror Attacks Year Wise

* Yearly attacks around the world will give us idea about the number of attacks due to terrorism every year.
* We can there is drastic increase in attacks from 2011 to 2014 and after that it is becoming down fall.

Chart, bar chart, histogram

Description automatically generated

#### Region Wise Analysis of Attacks

Chart, pie chart

Description automatically generated

* Region wise attacks analysis gives us good understanding of which region has more attacks with high occupied region in pie chart
* From the analysis we observe that Middle East & North Africa has more attacks and then South Asia.
* Central Asia and East Asia are less affected regions.

#### Year Wise Analysis of civilians killed in Terrorism:

* The following bar chart gives us the understanding about civilians killed due to terror attacks
* total civilians killed is **4,11,868**
* The lowest in the year **1971** is **171** and highest in in the year **2014** is **44,490** which is so sad.
* The data gives us idea on the reduction of numbers from 2014 to 2017 gradually.

Chart, histogram

Description automatically generated

#### Most common types of Terror attacks

* The below bar chart visualization will give us idea about terror attack types.
* The most attacked are happened with Bombing / explosion is 88,255 attacks
* There are 9 types of attacks including with Unknown
* We can observe that the hijacking is low in number

Chart

Description automatically generated

#### Most Attacked Terror Group Names

* The below bar chart visualization will give us idea about terror Group names and attacks.
* Here From Past Years number of terror groups participated in the attacks is 3536
* Among all the attacks the most Attacks done by group is Taliban here the unknown group name is given in our dataset because of that we not ignored, and we plotted
* In second place the most highly Attacked Group ISIL
* In third place SL,next place FMLn, Al-shabaad,NPA,IRA,FARC
* In 10th place Occupied Boko Haram

A picture containing chart

Description automatically generated

#### Conclusion:

* Terrorism has been on the rise from 1970 up to 1993 then there was a gradual decrease till 1998 followed by steady increase up to 2010 after that a sharp rise is being observed that peaks in 2014 again followed by a sharp decrease.
* In the list of top terror affected countries, surprisingly many countries were from North America and East Asia which are really in the news media, this shows how the World media ignores the plight of a large section of Human Population.
* Bombing/Explosion and Armed Assault are the major mode of Terror attacks used by Terrorist Groups followed by Hostage taking.
* Hijacking has greatly reduced which proves the effectiveness of modern equipment ensuring safety and security at high security zones.
* Explosives (like Car bomb, Rocket launchers and Mortars) and Guns (like Assault rifles and Pistols) are mostly preferred by Terrorists, Intelligence Agencies must ensure tight control over the availabilities of these or its parts in the black market.
* Among all other terrorist organization, the ISIL is the newest organization which came into being in 2013 and has spread into a large no.of countries within a very short span which is particularly concerning to Global Peace, it’s ideology and motivation must be countered by Global Media and De-radicalization of youth is necessary.
* Global Terrorism is declining from 2014, activities of most Terror outfits is seen to drop which is a good sign for Global Peace.
* In most cases, No. of Terror attacks is directly related to the no.of Terror outfits active in the country but exceptions are also there.
* A total of 411868 persons killed and 523869 people killed till date.
* India has one of the highest no. of active terror outfits yet much lower attacks compared to other countries; this proves that our Intelligence Agencies are doing a pretty good job.