

Capstone Project - I

EDA : Global Terrorism Analysis

Created by: Sakshi Dhyani

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Project Details

Exploratory Data Analysis process helps us us to develop our inferences from the data provided, discover patterns, check the credibility of our assumptions with the help of statistical data and visualizations.

In this project, I am using a dataset which is obtained from GTD (Global Terrorism open source database), which provides information related to the terrorist activities happening all over the world. It is an effort to improve understanding of terrorist activities and key findings related to it.

I have used python libraries to perform data wrangling and create effective visualizations. Python Libraries used : numpy, pandas, seaborn, matplotlib.

Basic data details and steps performed for EDA.

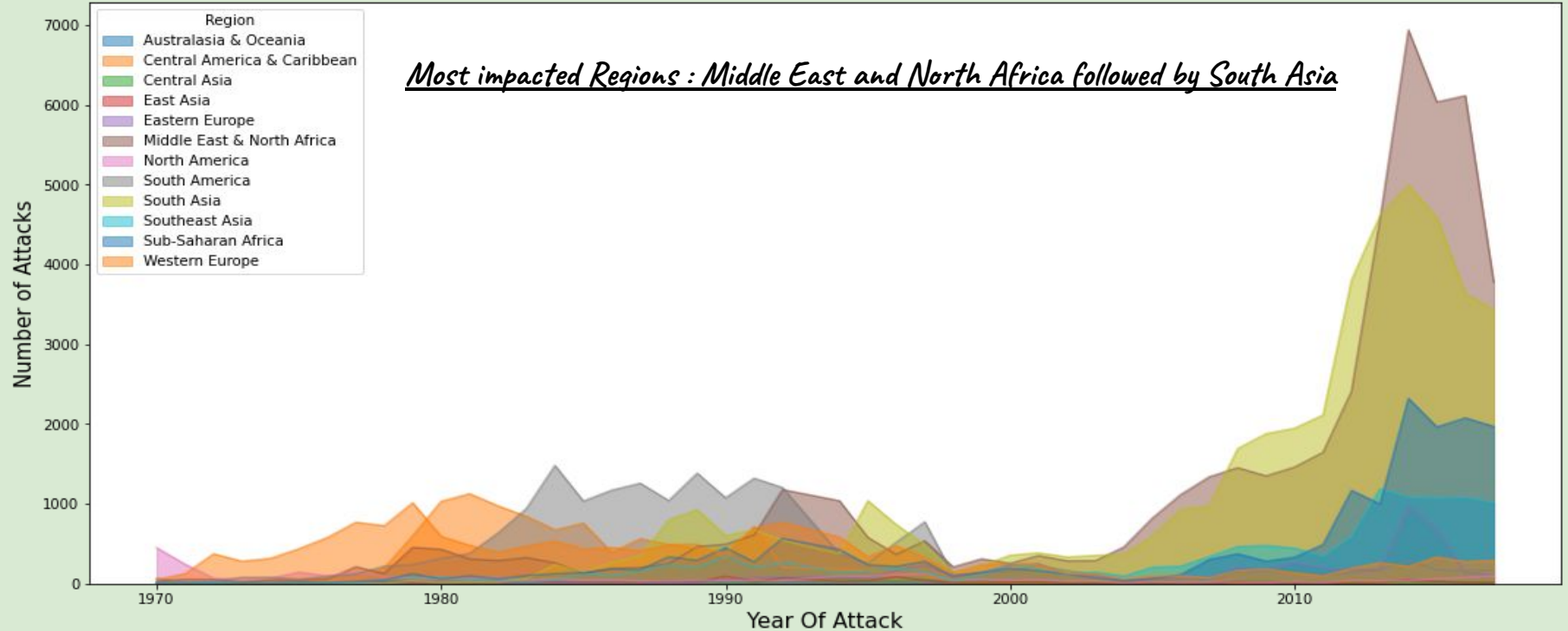
- *Initial number of rows and columns : 181691 rows and 135 columns. Data wrangling steps that were used : handling of missing/null values, handling of duplicate values, removal of columns which were not required.*
- *Number of rows and columns available after performing data wrangling : 179670 data rows and 40 columns.*
- *Some of the column names/features/variables provided for each terrorist event/attack :*

Year Of Attack , Country, City, Region, Political/Religious/Social Goal, Coerced/Intimidating/Publicize to larger audience Goal, Outside International humanitarian law, Unsure terrorism Incident, Successful Attack, Suicide Attack, Target Type, Perpetrator Group, Target/Victim Nationality, Number of perpetrators, Captured perpetrators, Weapon Type, Responsibilities Claimed, Fatalities Count, International Logistical Attack, International Ideological Attack, International Miscellaneous Attack.

In next slides, visualizations are created for different inferences and key findings

Overall terrorist Attacks worldwide (1970-2017)

Attacks for each region yearly

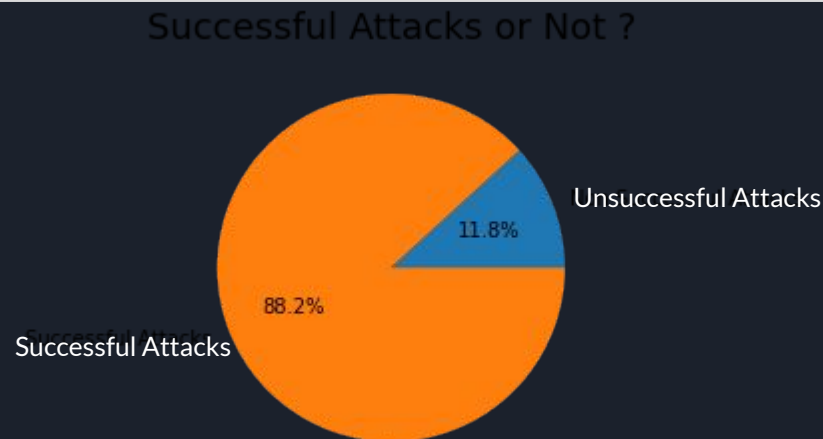




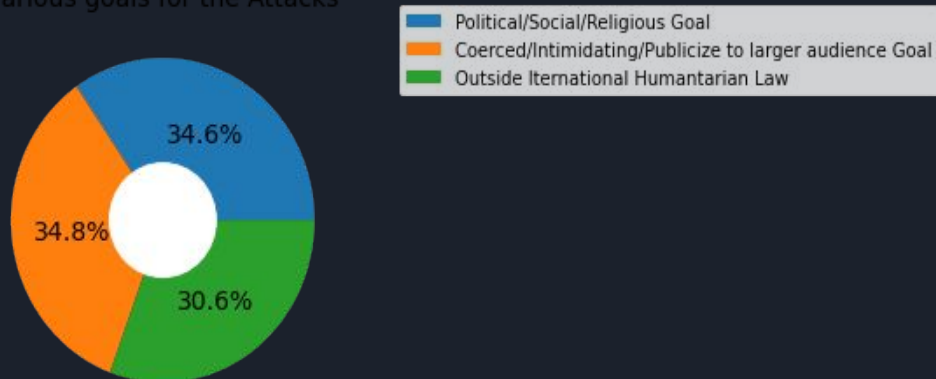
Successful / Unsuccessful Attacks worldwide

Successful Attacks - 88.2%

Unsuccessful Attacks - 11.8%



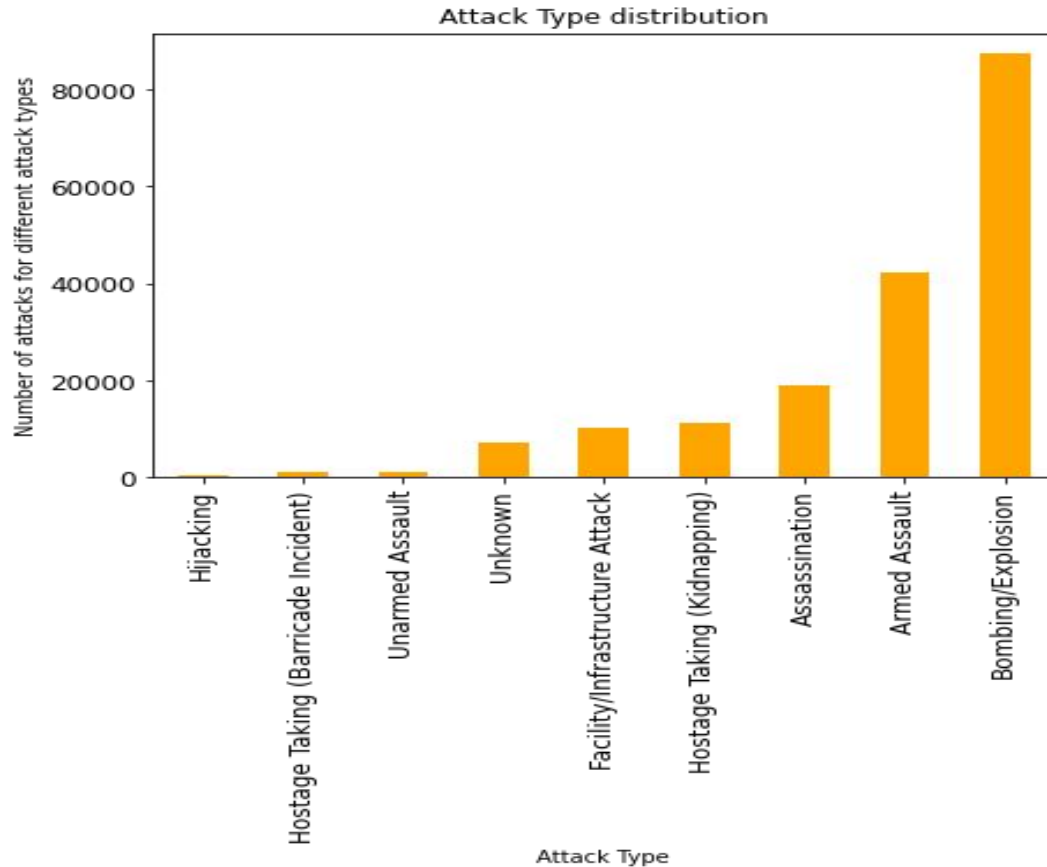
Various goals for the Attacks



Goals/Motive behind attacks worldwide.

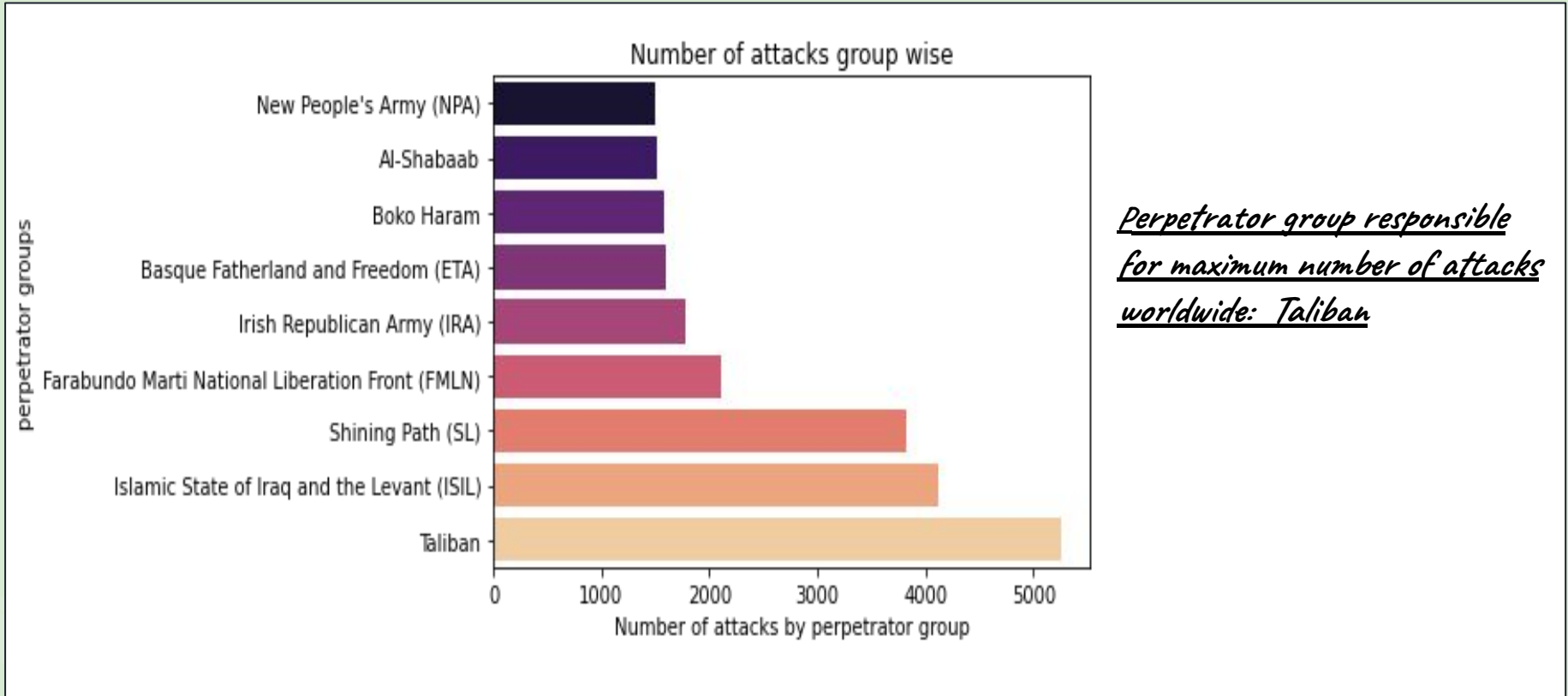
1. No. of attacks with coerced/intimidating/publicize to larger audience goals
2. No. Of attacks with political/Social/religious goals
3. No. Of attacks which do not follow International Humanitarian Law

Attack Type Vs Number of Attacks Worldwide



Most Common Attack type worldwide:
Bombing/Explosion

Number of attacks vs responsible perpetrator groups worldwide



Top targeted Victims

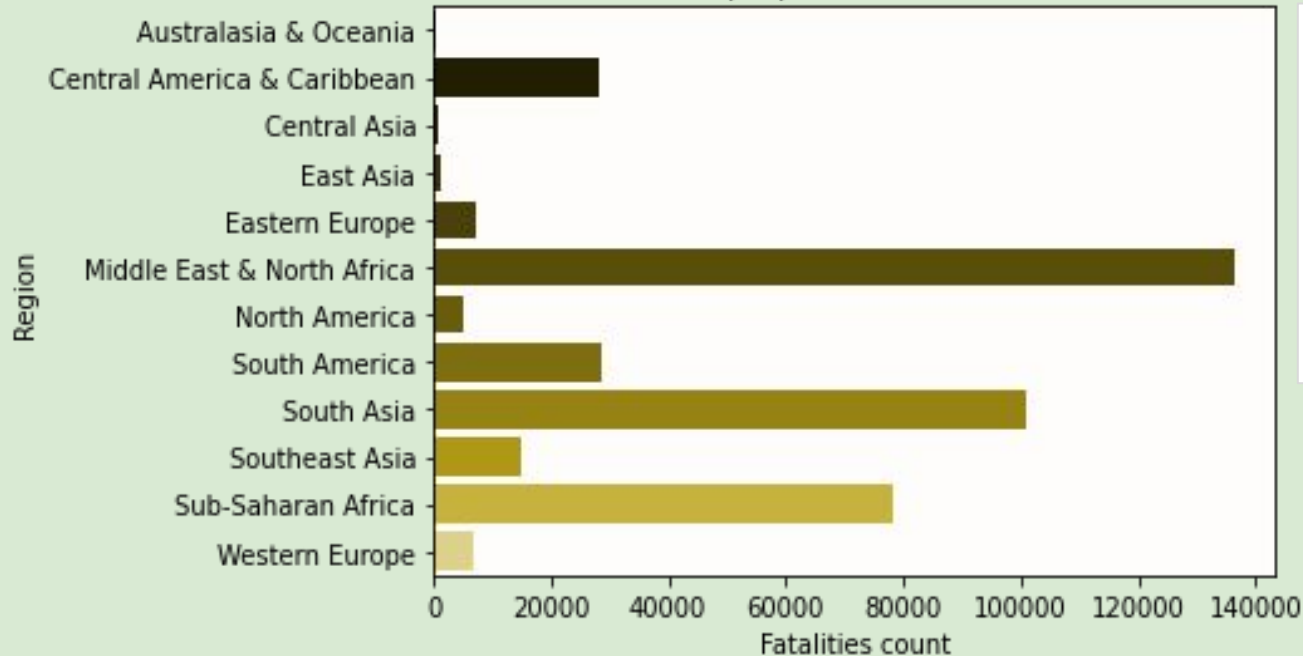


Iraq Citizens have been
impacted in large numbers

Successful/Unsuccessful attack
● 0
● 1

Region Vs. Number of fatalities Worldwide

Fatalities count of perpetrators and victims combined

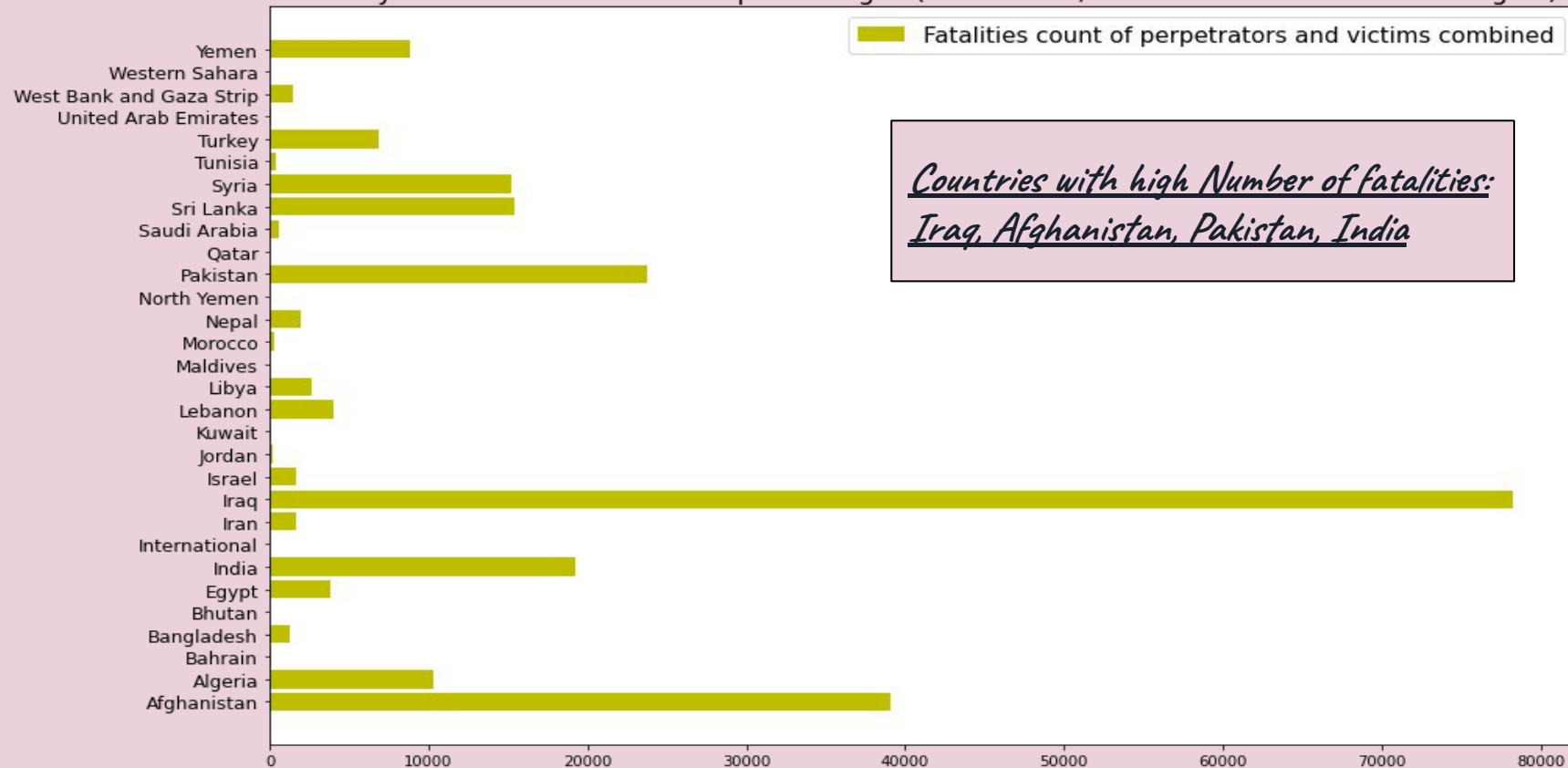


Region with high number of fatalities -

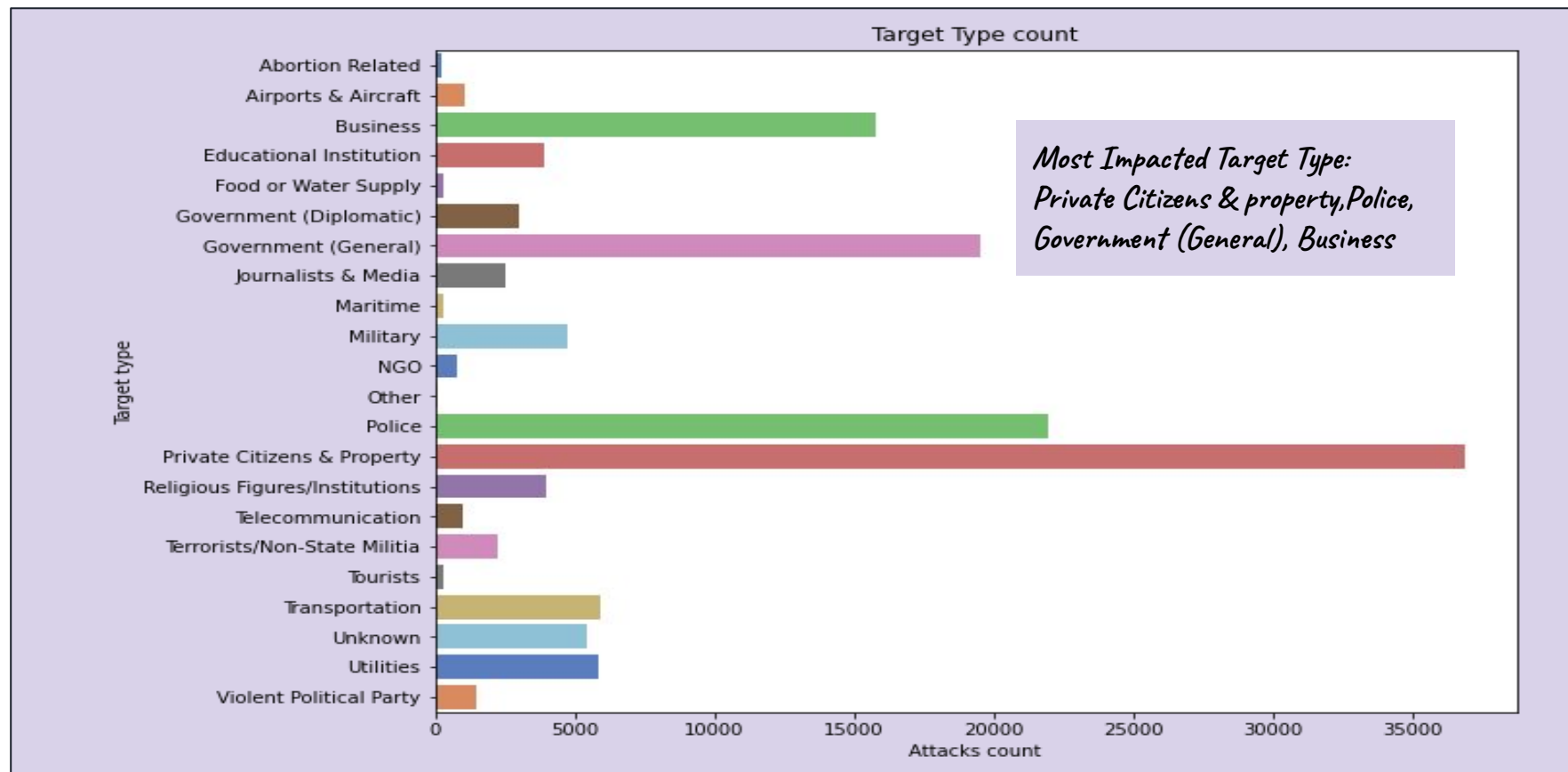
Middle East and North Africa followed by South Asia

Fatalities Count for some countries

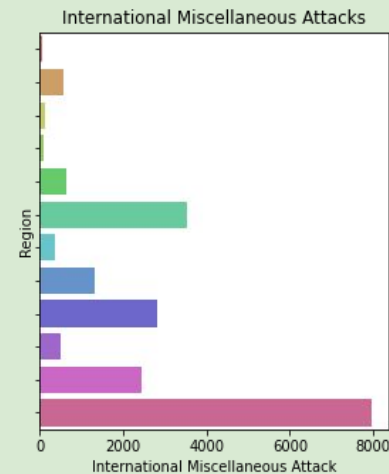
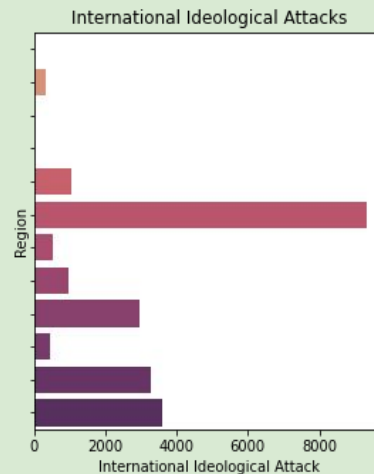
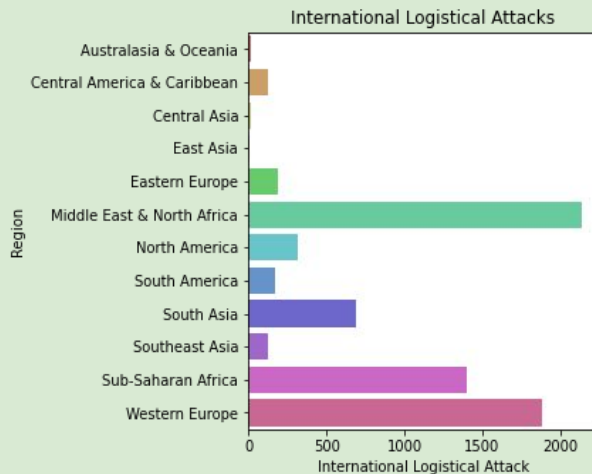
Country wise Fatalities count for specific region(Middle East, North Africa and south Asia region)



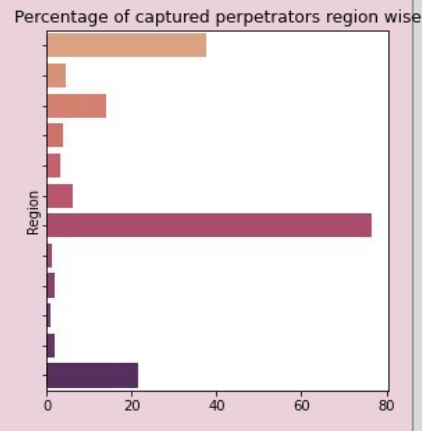
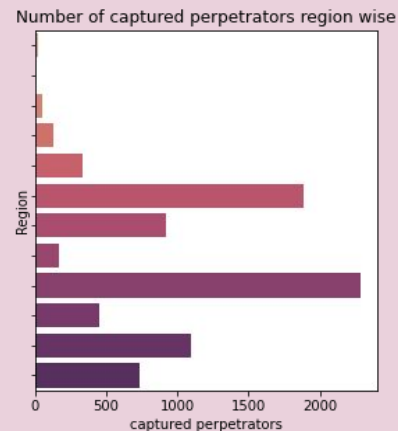
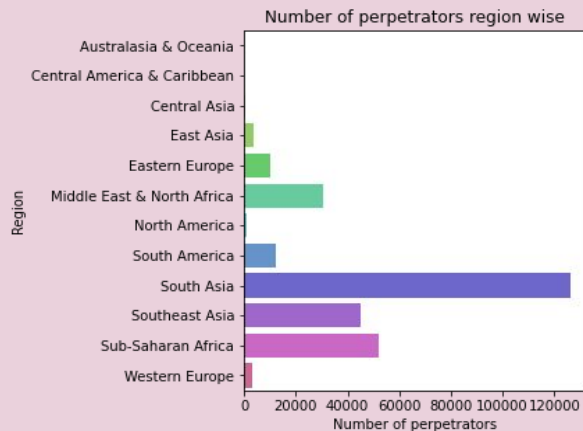
Target Type Vs Number of Attacks Worldwide



Region Vs.
International
Logistical/
Ideological/
Miscellaneous
Attacks

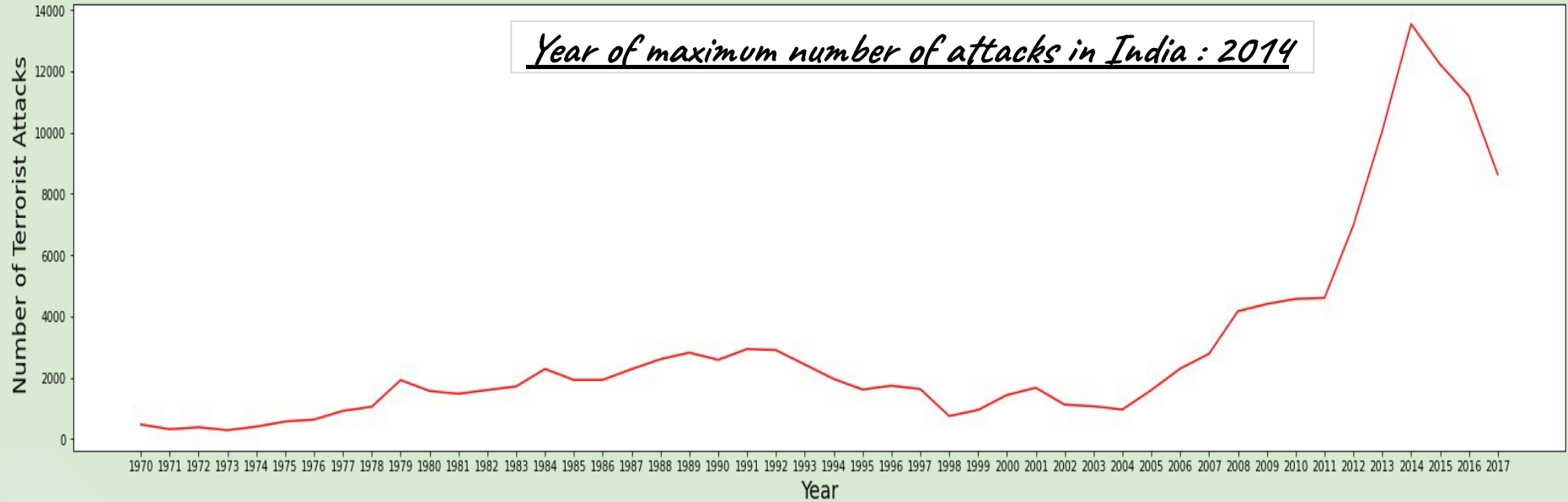


Region Vs
perpetrators/
Captured
Perpetrators



Year Vs. Number of Attacks (India)

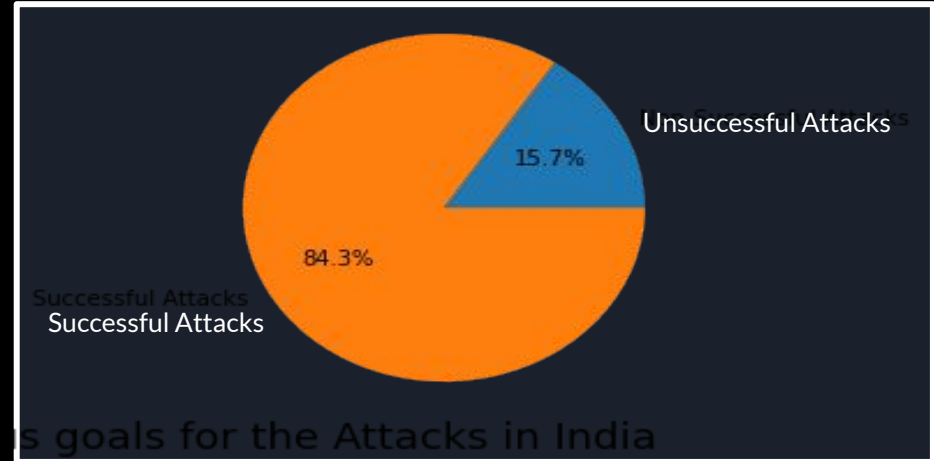
Overall Terrorist Attacks for India



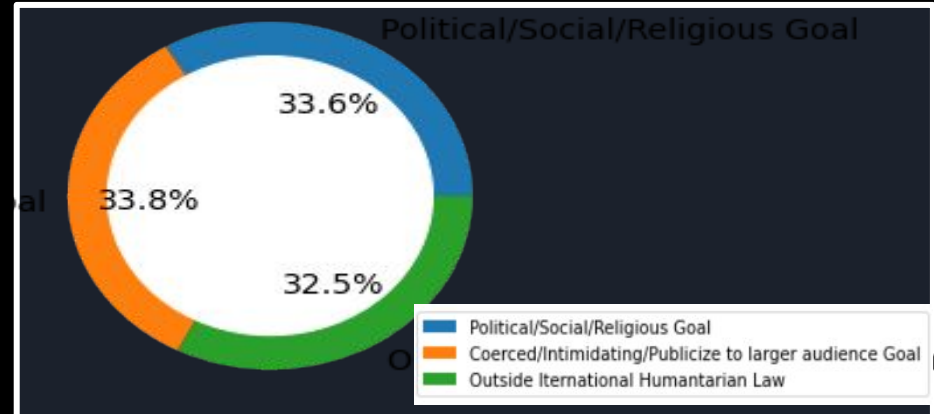
Successful / Unsuccessful Attacks (India)

Successful Attacks - 84.3%

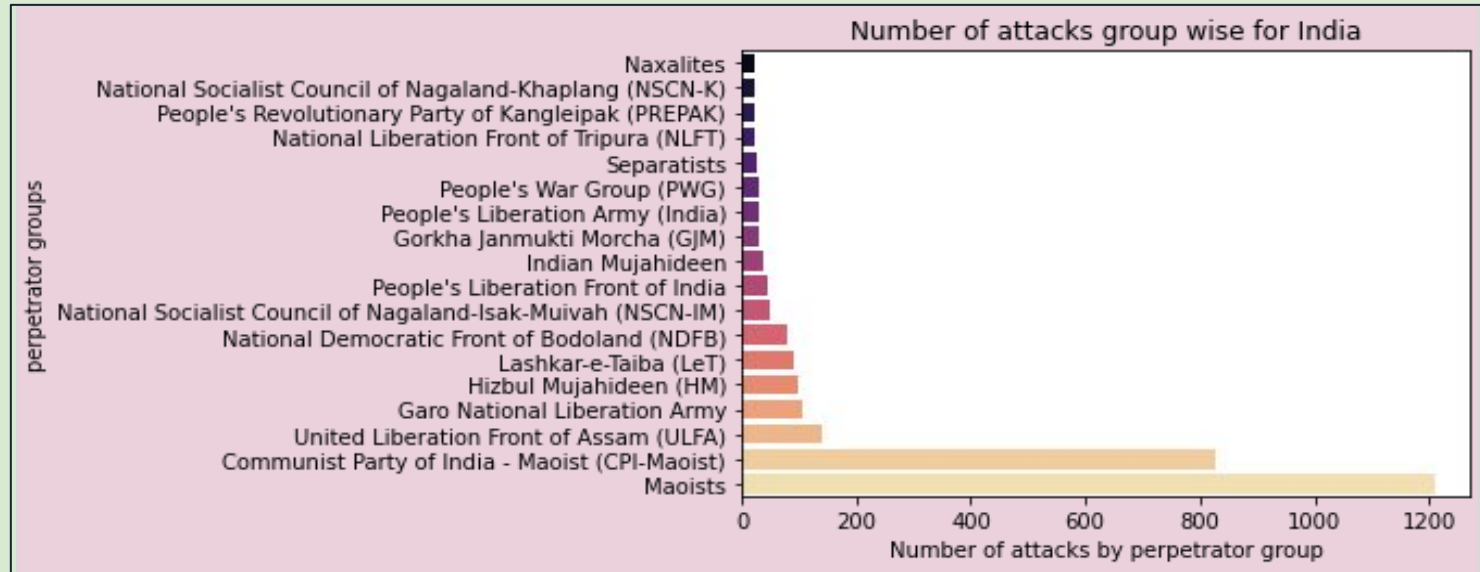
Unsuccessful Attacks - 15.7%



Goals/Motive behind attacks In India

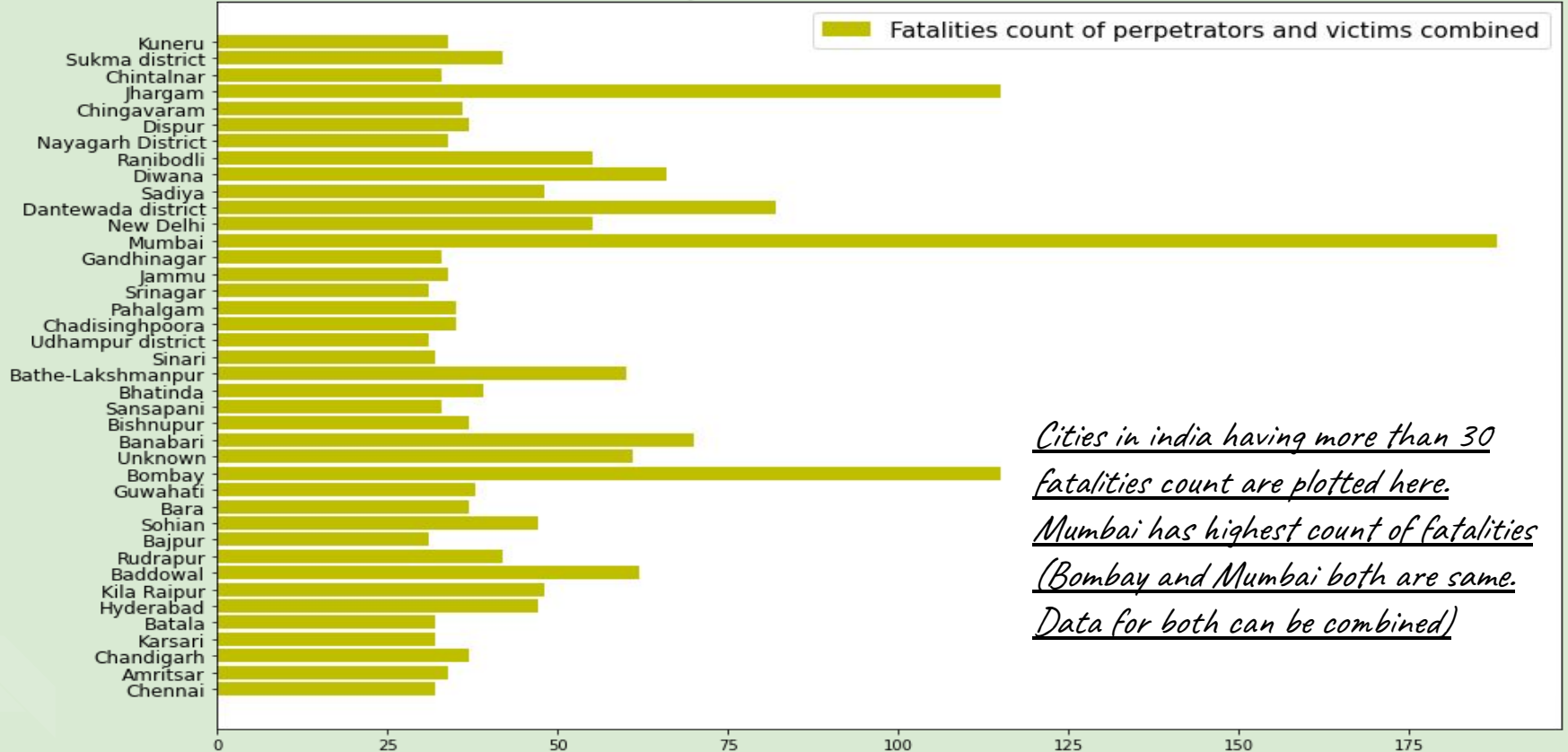


Perpetrator Groups Vs Number of Attacks (India) after year 2000



Maoists were most active perpetrator group after 2000 until 2017 in India

City Wise Fatalities count for India



Cities in india having more than 30
fatalities count are plotted here.
Mumbai has highest count of fatalities
(Bombay and Mumbai both are same.
Data for both can be combined)

Conclusion : Key Findings

(For below observations, year's range is from 1970 - 2017 if not mentioned.)

- *As years increased, attacks increased all over the world. 2014 was the year which showed that maximum number of attacks occurred during that year. For India also, we saw almost same trend.*
- *There were almost more than 80% attacks which were successful all over the world as well as for India, which is a matter of concern. Countries have failed to prevent these attacks and that too with a huge margin.*
- *The goals behind these attacks were either to intimidate and impact large audience to create fear, or religious, political reasons which seems obvious. Attacks that have such goals were almost having same occurring percentage in both cases - for world and specific to India.*
- *Bombing/explosion is the most common type or medium for attack which has been successful also all over the world.*
- *Taliban group is the most active group if attacks are considered for all the world for year 1970-2017. While for India, after 2000, Maoists were most active group responsible for attacks.*
- *Citizens of Iraq, Pakistan, India, Afghanistan were most impacted by attacks that took place all over the world.*
- *High number of fatalities were caused in Middle East, North Africa and South Asia region.*
- *Iraq, Afghanistan, India, Pakistan are the countries in Middle East, North Africa and South Asia region with high number of fatalities. Mumbai or Bombay has highest number of fatalities.*
- *Private Citizens, Property and Police were the most common target type for the attacks that took place all over the world in the years 1970-2017.*
- *Middle East and North Africa region has highest number of International Logistical and Ideological attacks. Western Europe region has highest number of international miscellaneous attacks.*
- *North America has highest number of Captured perpetrators percentage for the total number of perpetrators that attacked in that region.*

Thankyou