

A Closer Look Into Terrorism

Reema Singhal (rrs459)

Akanksha Nilosey (arn337)

Apoorva Shukla (as11445)

Project goal: We plan to visualize the trend of terrorist incidents across the world over time.

DataSet: The dataset that we use is the Global Terrorism dataset available at Kaggle.

<https://www.kaggle.com/START-UMD/gtd>

Analytical Questions and Proxy Tasks:

Attributes:

Year - Year in which event had occurred. The data ranges from 1970 -2017

Month - Month in which event had occurred.

Date - Date on which event had occurred.

Country - Country in which the event has occurred. The data is given for 205 countries.

Region - Region in which the event has occurred. There are 12 unique regions in the data.

City - Region in which the event has occurred. It has about 36000 cities in the dataset.

Location - latitude and longitude of the city

Killed - Number of people killed in the attack

Wounded - number of people wounded in the attack

Attack Type - type of attack eg. assassination, kidnapping, bombing

Target - institution of target eg. US embassy, police headquarters

Target type - type of targets. For eg. Private Citizens & Property, government

Casualties - number of casualties in the attack i.e. number of people killed + number of people wounded

Weapon type - type of weapon used for the attack

Year	Month	Day	Country	Region	city	latitude	longitude	AttackType	Killed	Wounded	Target	Summary	Group	Target_type	Weapon_t	Motive	casualties
1970	7	2	Dominican	Central Am	Santo Domingo	18.45679	-69.9512	Assassination	1	0	Julio Guzman	MANO-D	Private Citizen	Unknown			1
1970	0	0	Mexico	North America	Mexico City	19.37189	-99.0866	Hostage Taking	0	0	Nadine Chaval, daughter of 23rd of Sep	Government	Unknown				0
1970	1	0	Philippines	Southeast	Unknown	15.4786	120.5997	Assassination	1	0	Employee	Unknown	Journalists	Unknown			1
1970	1	0	Greece	Western E	Athens	37.99749	23.76273	Bombing/Explosion			U.S. Embassy	Unknown	Government	Explosives			
1970	1	0	Japan	East Asia	Fukouka	33.58041	130.3964	Facility/Infrastructure Attack			U.S. Consulate	Unknown	Government	Incendiary			

High Level Questions:

1.What is the trend of terrorism attacks across the world?

Proxy Tasks: Analyzing the number of attacks that took place in different countries since 1992.

Proxy Value: Trend will translate to the increase or decrease in the number of total attacks. It can be made more specific by visualizing it over the years from 1992.

2. Do we see any geographical areas where the attacks are most prevalent over time?

Proxy Tasks: We can define the areas as countries where we can show whether the number of attacks have significantly increased or decreased over the years.

Proxy Values: We can make the term geographical areas more concrete by taking the top 20 countries where the number of attacks are maximum.

3. How critical were the attacks in the most affected countries?

Proxy Task: The Critical can be defined by the total number of casualties (killed + wounded) caused by each type of attack across the countries with the maximum number of attacks.

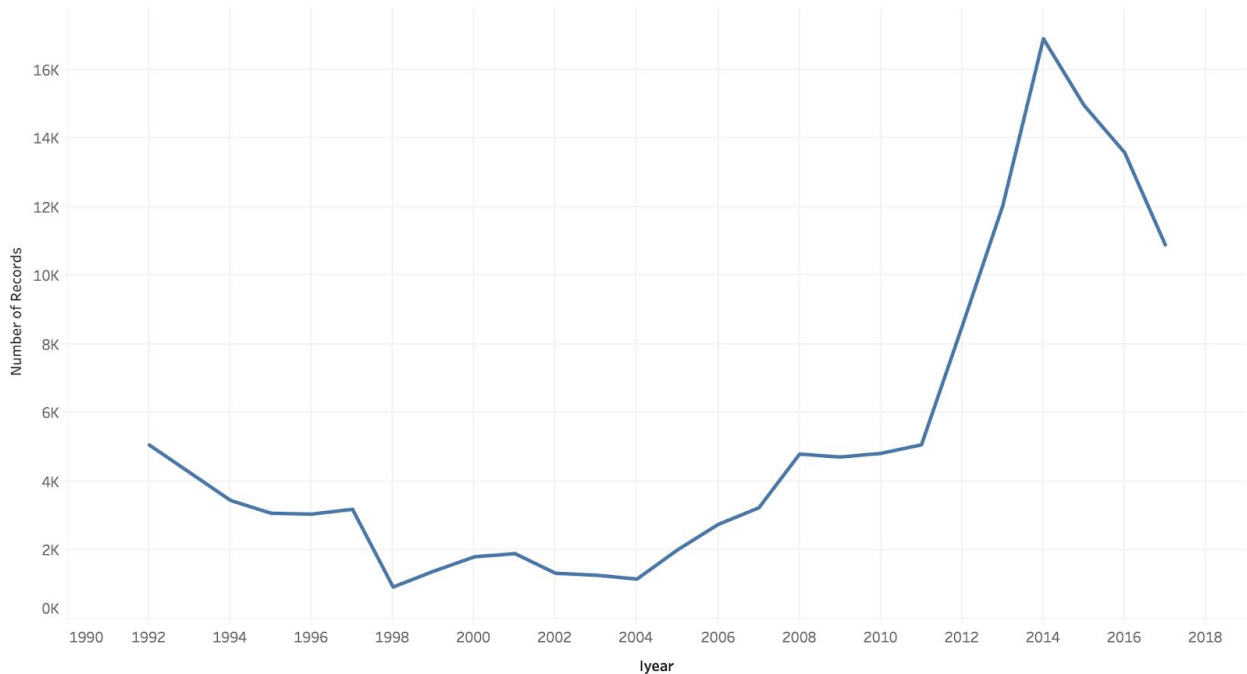
Proxy Value: Critical can be defined by the total number of casualties which can be found by summing up the number of killed and wounded. Most affected can be made concrete by finding the top 20 countries with the maximum number of attacks

Story Design

Data Analysis

1.What is the trend of terrorism attacks across the world?

Global Terrorism Trend

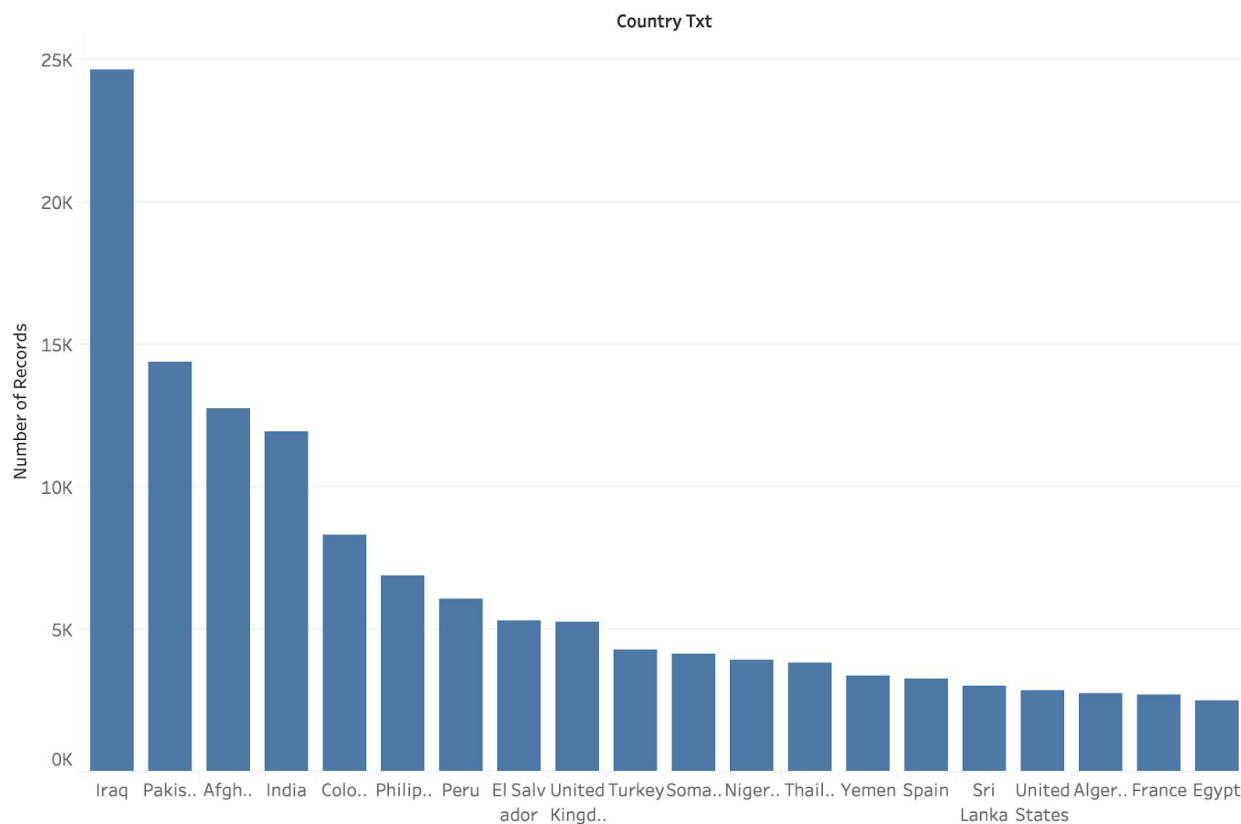


The trend of sum of Number of Records for lyear. The data is filtered on Country Txt, which keeps 205 of 205 members. The view is filtered on lyear, which ranges from 1992 to 2017.

This graph shows, how the terrorist attacks have prevailed over the years .

Do we see any geographical areas where the attacks are most prevalent over time?

Countries with maximum terrorist attacks

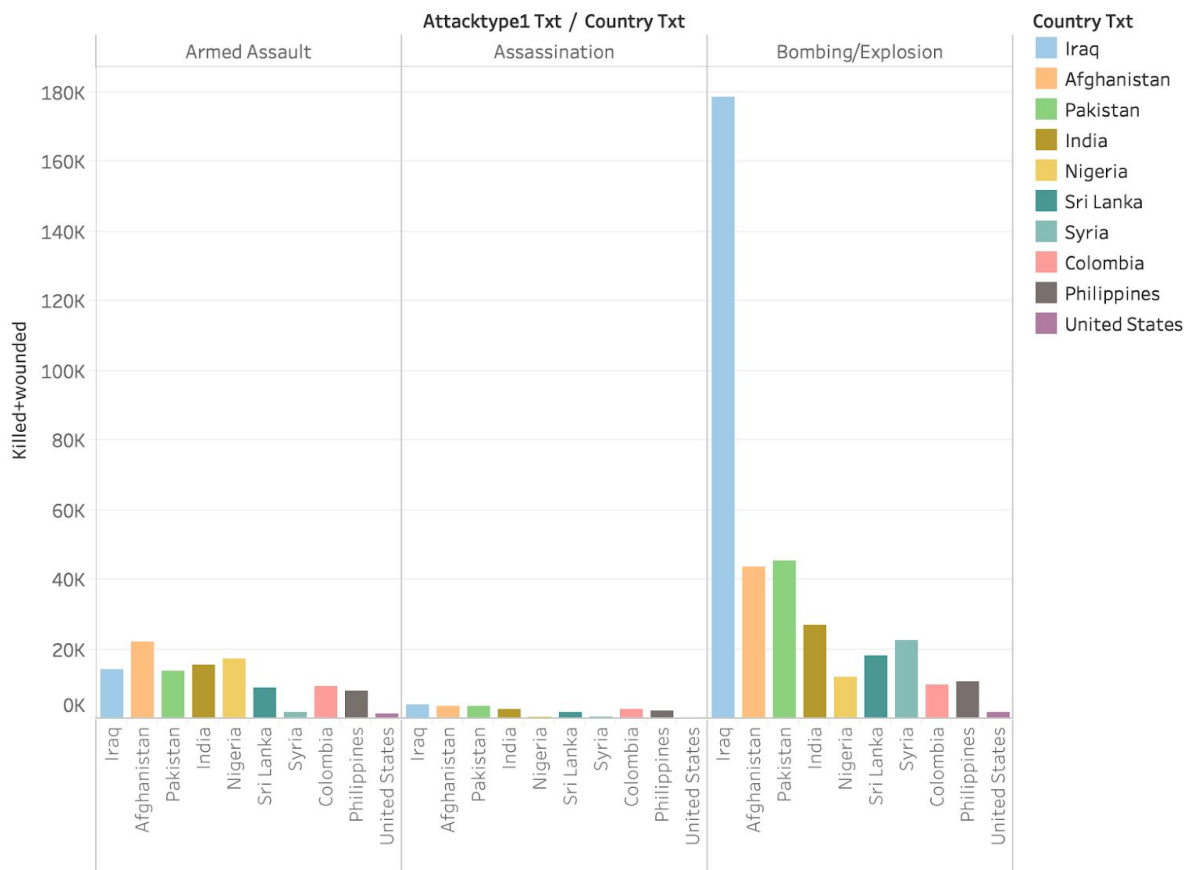


Sum of Number of Records for each Country Txt. The view is filtered on Country Txt, which keeps 20 of 205 members.

There are certain countries which are affected the most by the terrorist attacks. This graph shows the most affected countries.

How critical were the attacks in the most affected countries?

Most affected countries by Attack Type



Killed+wounded for each Country Txt broken down by Attacktype1 Txt. Color shows details about Country Txt. The view is filtered on Attacktype1 Txt and Country Txt. The Attacktype1 Txt filter keeps Armed Assault, Assassination and Bombing/Explosion. The Country Txt filter keeps 10 of 205 members.

This graph shows how critical the attack were in the most affected countries by attack type.

Story:

While analyzing the data, we observed a correlation between terrorist groups and their rise in certain parts of the world. We also analyzed the number of attacks by certain terrorist groups and their prevalence over the years.

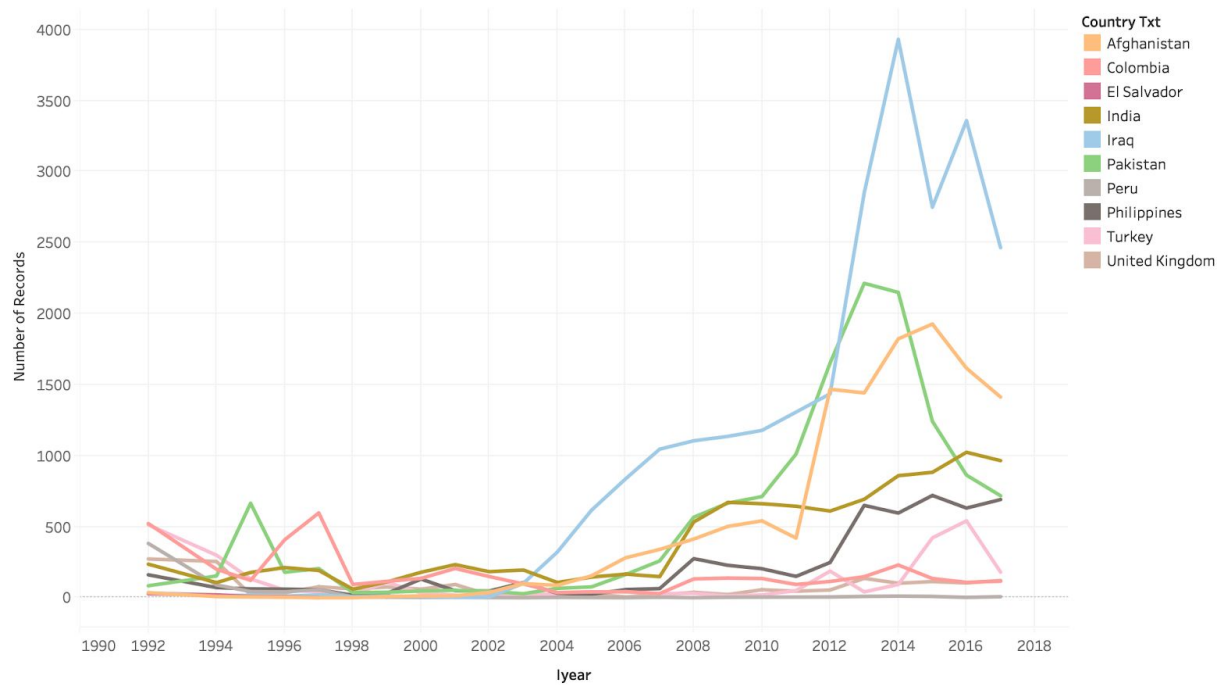
Our interest developed in analyzing the terrorist groups which are dominant over the recent years and are planning to increase their dominance by radicalizing people in various countries.

We have broken down our story in 5 parts, where we focus on different aspects of the dominant terrorist groups. We would be focusing on the three most dominant groups that we saw in the visualization, which are ISIS, Taliban and Al-Qaeda.

Below are the topics on the basis of which our story would be formed:

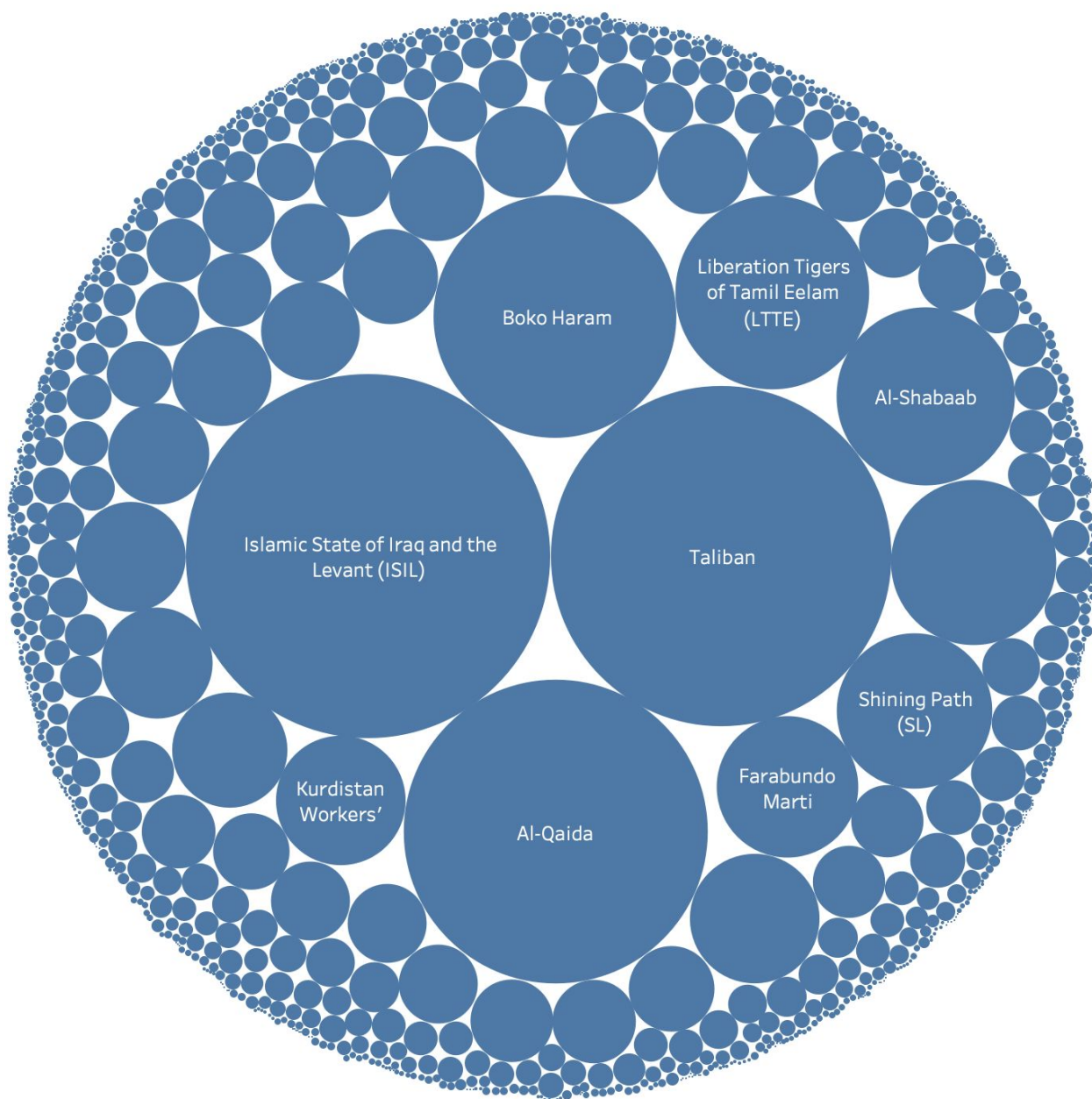
- 1) Finding the most prevalent terrorist groups.
- 2) The geographical areas where the attacks took place.
- 3) The impact of the conflicts between these groups, on the areas they focus on terrorizing.

Trend of attacks in most affected countries



The trend of sum of Number of Records for lyear. Color shows details about Country Txt. The view is filtered on lyear and Country Txt. The lyear filter ranges from 1992 to 2017. The Country Txt filter keeps 10 of 205 members.

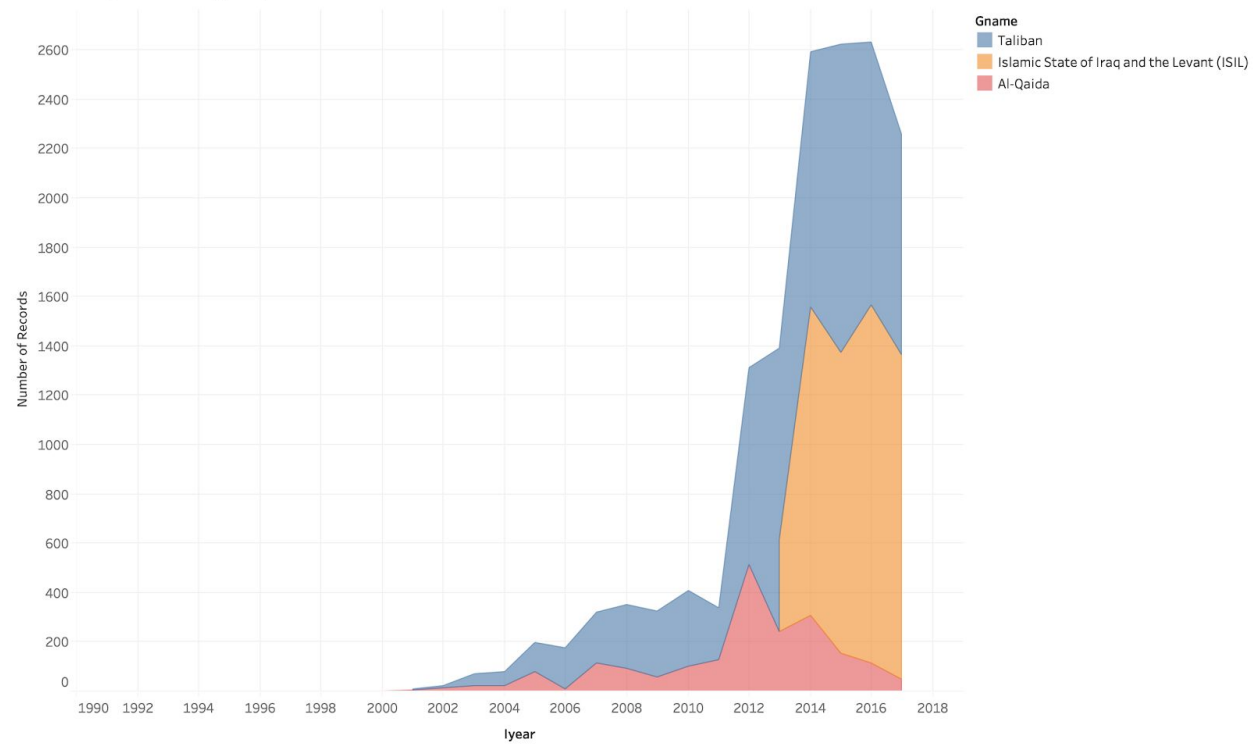
Dominance of Terrorist groups



Gname. Size shows Casualties. The marks are labeled by Gname. The view is filtered on Gname and Casualties. The Gname filter excludes Unknown. The Casualties filter keeps non-Null values only.

This graph shows the intensity of the attacks by terrorist groups. Intensity is defined by the number of casualties by the circle size.

Attacks by terrorist groups



The plot of sum of Number of Records for lyear. Color shows details about Gname. The view is filtered on Gname, which keeps Al-Qaida, Islamic State of Iraq and the Levant (ISIL) and Taliban.

This graph is related to the story we are trying to create. It shows the attacks by the 3 terrorist groups over the years.

UPDATES

We are following our original description and dataset.

Updated storyboarding: We started off this project with our focus on global terrorism and its impact. As we are moving along the project we thought to narrow down our focus on the major terrorist groups and their impact on the world. We try to find a relationship between terrorist organizations and the attacks by plotting the graphs.

Insights: We find that terrorist groups such as Al-Qaeda, ISIS and Taliban are the major organizations from the bubble graph which have made the maximum number of attacks. We can see that maximum number of attacks made by the Taliban across the past few years particularly 2000s.

We analyzed the number of attacks plotted by these three groups and the impact that they have caused across the world. We also mapped the attacks on the world map over the years.

Implementation:

Repo Link - <https://github.com/NYU-VIS-FALL2018/storytelling-group-10>

Demo Link - <https://nyu-vis-fall2018.github.io/Terrorism/>