

Introduction

The work presented here forms part of tasks given by the Sparks foundation for intermediate levels. This task is targeted at interns working as data analysts. The task is to Perform 'Exploratory Data Analysis' on the dataset 'Global Terrorism' and be able to address some very vital questions. Further, to use images to create storyboards. In other words, Screen-record along with audio explaining the charts and interpretations.

Objectives

- As a security/defence analyst, try to find out the hot zone of terrorism.
- What all security issues and insights you can derive by EDA?

Methodology/Workflow:

Import the dataset into Power BI

Transform the dataset

Perform data cleaning removing null values and empty columns

Perform Exploratory data analysis and visualization

Analysis

- **Attacks per month**

As a defence analyst, one major goal when dealing with global terrorism attacks is to identify which attack type is more likely used by the terrorist. According to the analysis, it shows that the terrorist who prefer to use explosives as it constituted a total record of 48.8% per month, followed by firearms with a record of 46.5% and then the least preferred hijacking with a record of 3.1%. The analysis also shows that in a month, a sum of 154090 explosives is used. See the table and figure 1 below for more details.

Attack type	Sum per month
Bombing/Explosion	154090
Armed Assault	80765
Assassination	64010
Hostage Taking (Kidnapping)	12938
Facility/Infrastructure Attack	6126
Hostage Taking (Barricade Incident)	3534
Unarmed Assault	1577
Hijacking	1531

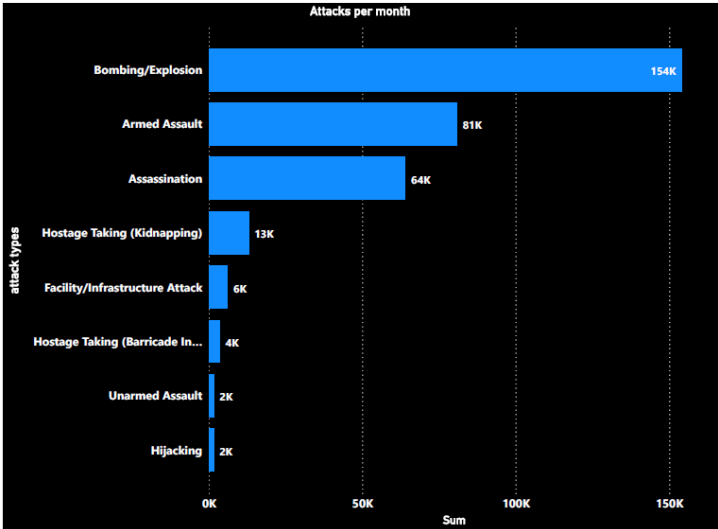


Figure 1: A stacked bar chart representation of the attacks typer per sum in the month

Table 1: Analysis of the attack types per total number in a month

Sum of property loss as a result of Attacks

It is vital to evaluate the amount of property loss as a result of terrorist attacks. The analysis indicates that the majority of properties worth more than 1 million dollars are more likely to be lost, while a sum of three attacks could cause a catastrophic property loss worth more than 1 billion dollars.

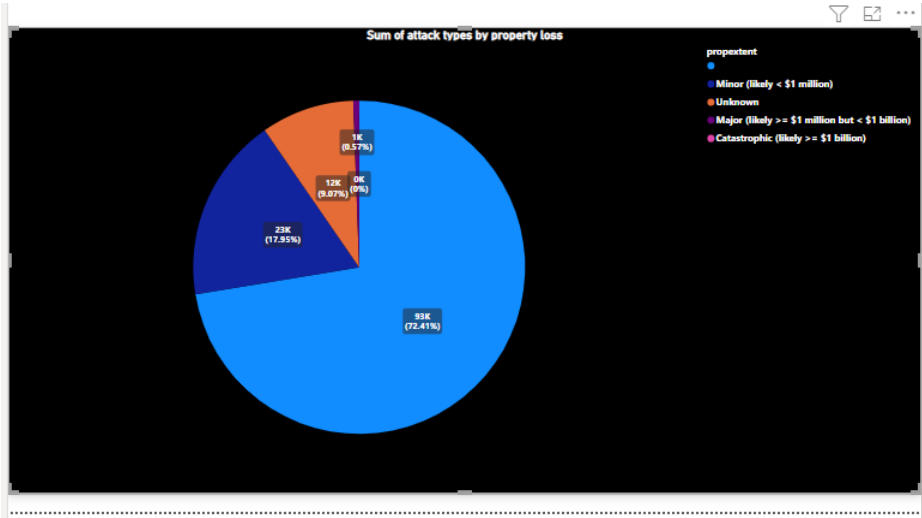


Figure 2: A pie chart showing the sum of property loss per attack

Sum of suicide by country

Another insight is to determine the number of suicide by country. It is indicated that Lebanon recorded the highest suicide with a sum of 25, followed by Sri Lanka with a record of 19 suicide. Conversely, some African countries such as Botswana, Burkina Faso, Cameroon, Central African Republic, Democratic Republic of the Congo, Gabon, Ghana, etc recorded 0 suicides. See the figure for more details.

Country	Sum of suicide
Lebanon	25
Sri Lanka	19
Iraq	18
Afghanistan	15
Israel	14
Pakistan	12
Syria	6
India	4
Somalia	4
United States	4
West Bank and Gaza Strip	4
Algeria	3
Argentina	2
Iran	2
Nigeria	2
Turkey	2
Yemen	2
Bangladesh	1
China	1
Croatia	1
France	1
Libya	1
Mali	1
Russia	1
South Africa	1
Ukraine	1
Albania	0
Angola	0
Armenia	0
Fiji	0

Table 2: Sum suicide per country

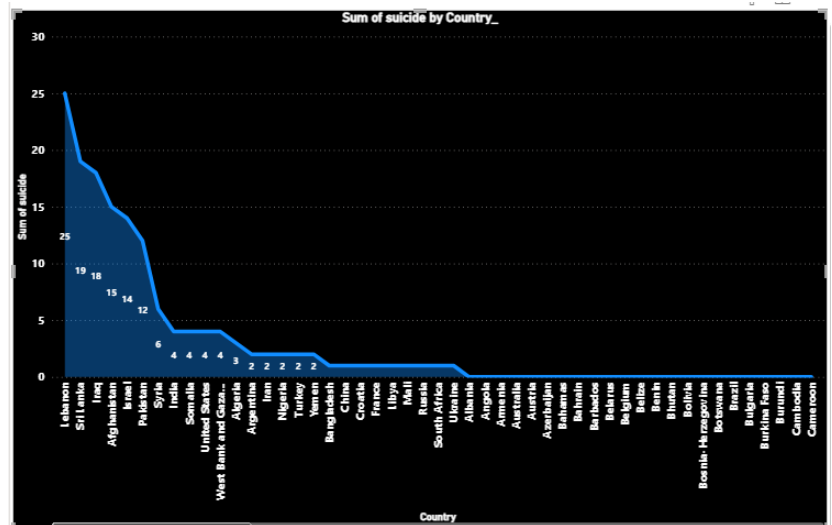


Figure 3: An area graph representation of the sum of suicide by country

Some Individuals per attack type

Another important security question to ask is how safe are the individuals and what sort of attacks does the terrorist used on individuals. To address this, an analysis of the sum of individuals per attack type was evaluated. As shown in the figure, it reports that a total number of 26 individuals suffered from bombing while 15 individuals are assassinated. Only 1 person is taken hostage, also known as kidnapped. The figure below gives a visualization explanation.

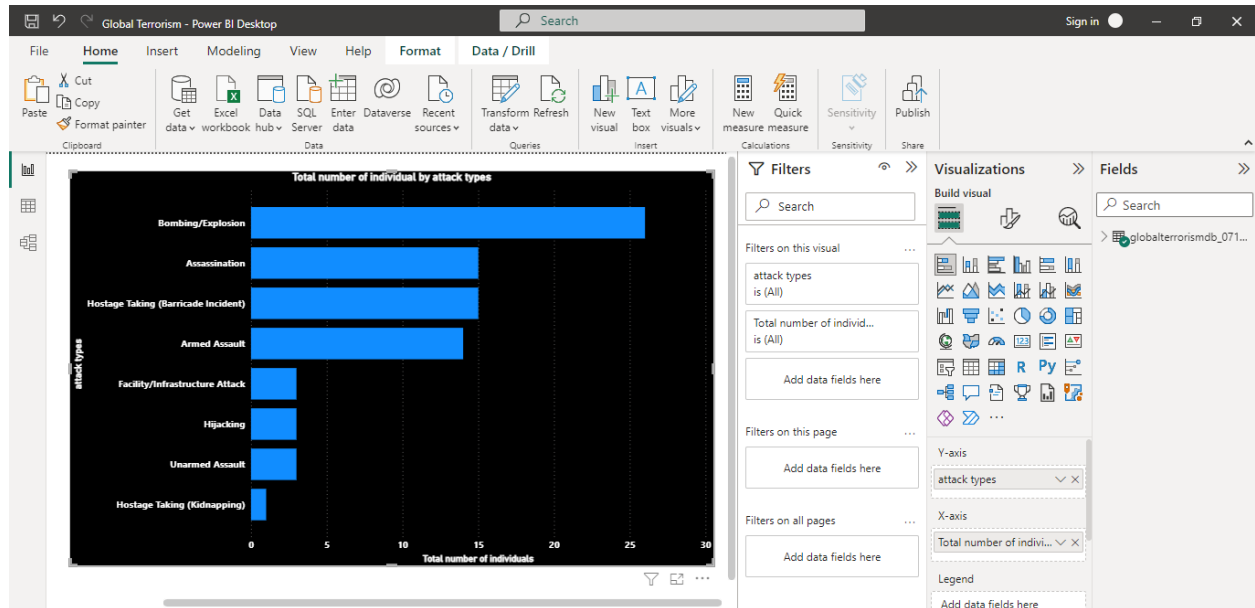


Figure 4: A graph-showing sum of individual attack types.

Sum of success by target/victims type

Another security concern is the terrorist target and the success rate of their target. In that case, analysis of the sum of success per target/victim type is evaluated. As shown in the figure below, the terrorist's main target is private citizens and property. Their next target is the military and then business. Comparably, their less preferred target is a violent political party. The sum of success is recorded as 528 as opposed to 8996 for private citizens and property.

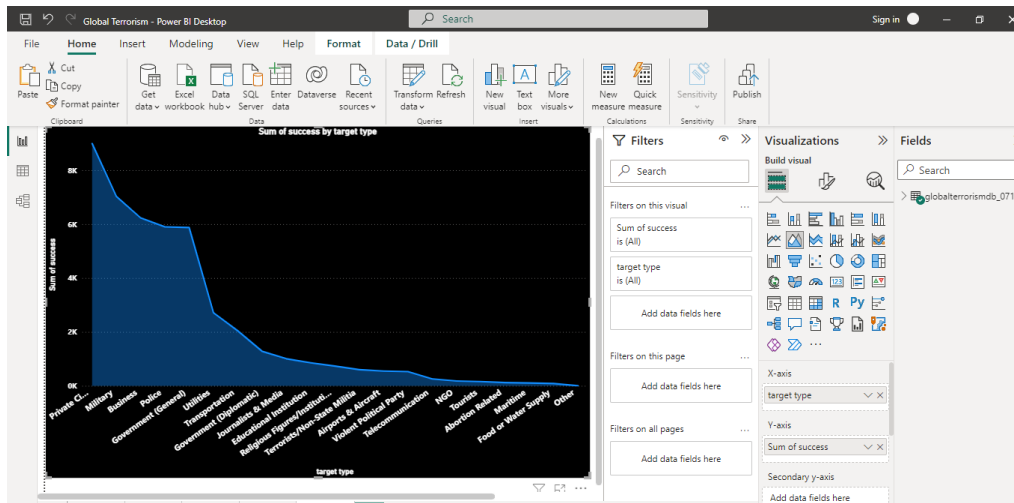


Figure 5: A chart showing the trend in success rate per sum of target type

Country and attack types

The different attacks type including Bombing/Explosion, Assassination, Armed Assault, Facility/Infrastructure Attack, Hijacking, Hostage Taking (Barricade Incident), and Hostage Taking (Kidnapping) are experienced in all countries. For example, Afghanistan experiences several attack types such as Armed Assault, Assassination, and Bombing/Explosion. Further analyses indicate that Peru experiences the highest number of Bombing/Explosion attacks with a sum of 7581, next is Columbia with a record of 5100 Bombing/Explosion. Other countries such as Ghana, Hungary, Ivory Coast, Lesotho, Latvia, Mali, Niger, Qatar, Lithuania, Swaziland, Saudi Arabia, Vatican, Singapore, Suriname, and Slovenia, suffered a single assassination attack.

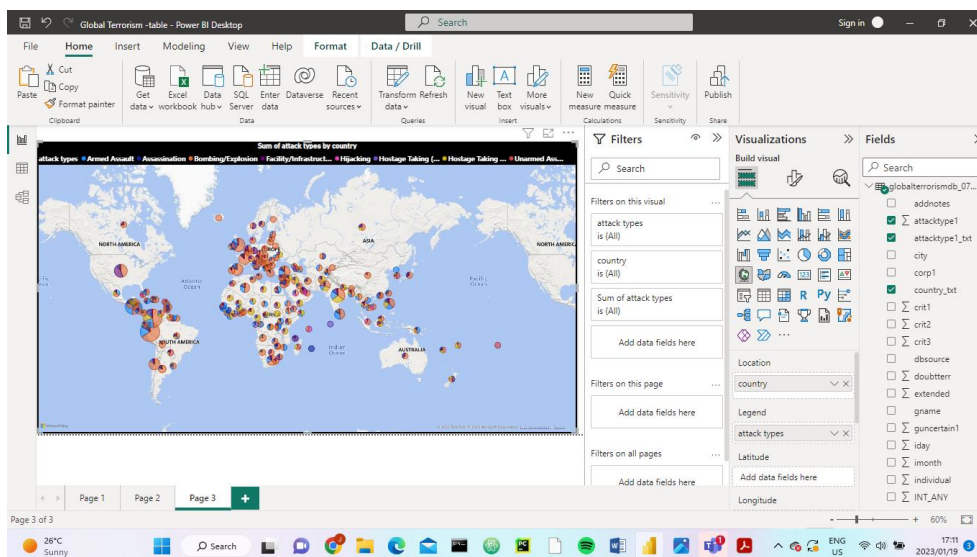


Figure 6: A map showing countries and the various attack types

Sum of weapon types

Analysis of the type of weapons used by this terrorist is presented in the figure below. It shows that they use several weapon types including Automatic or Semi-Automatic Rifle, which recorded a total of 61595, a total of 24155 handguns, 9540 Knife or Other Sharp Object, 3684 Dynamite/TNT, 2490 Rifle/Shotgun (non-automatic) and others. It is interesting to note that unknown explosive type recorded the highest number of 114558. See more details in the table.

weapon types	Sum of weapons
Unknown Explosive Type	114558
Automatic or Semi-Automatic Rifle	61595
Unknown Gun Type	27115
Handgun	24155
Knife or Other Sharp Object	9540
Projectile (rockets mortars	mortars
Grenade	5988
Vehicle	5790
Landmine	4176
Dynamite/TNT	3684
Blunt Object	3168
Rifle/Shotgun (non-automatic)	2490
Arson/Fire	2432
Molotov Cocktail/Petrol Bomb	2160
Gasoline or Alcohol	1656
poisoning	28
suffocation	27
Letter Bomb	1494

Weapon Types	Sum of weapons
Time Fuse	936
Other Explosive Type	858
Remote Trigger	726
Hands	Feet
Rope or Other Strangling Device	477
Suicide (carried bodily by a human being)	384
Pipe Bomb	342
Sticky Bomb	144
Unknown Weapon Type	72
Pressure Trigger	30
Other Gun Type	10
Explosive	4

Table 3: Sum of weapon types use in the global terrorism attacks.

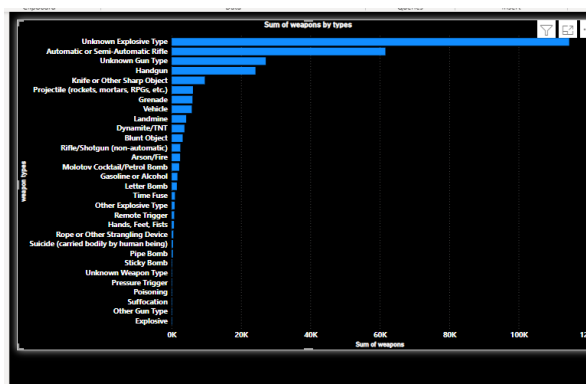


Figure 7: A chart showing the sum of weapon types used by the terrorist

