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**Word Count:**

The Devastating Reach of Terrorism

URL: https://mwhi0023.github.io/Data\_Viz\_2\_Local/index.html

## Domain

The domain of my visualisation focuses on the global impact of terrorism.

## Why?

The rationale behind selecting the domain of global terrorism impact is to offer viewers a comprehensive perspective on the extent and repercussions of terror activities worldwide. By meticulously analysing global data and understanding the distribution of terror-induced casualties, the visualisation enables audiences to grasp the severity of the issue. Recognising the regions most affected by terrorism can be challenging, and this visualization aids in demystifying that. Individuals interested in global security and geopolitical issues will find this visualisation particularly enlightening as it endeavours to present an objective overview of the devastation caused by terrorism across nations.

## Who?

This visualization is specifically crafted for individuals and groups keenly interested in comprehending global terrorism trends. By diving deep into the data, viewers can gain insights into patterns and developments, providing a comprehensive perspective for those passionate about understanding the worldwide impact and spread of terrorism. What?

The primary dataset for my visualization was sourced from the Global Terrorism Database, managed by the University of Maryland. This extensive database contained vast amounts of information, necessitating significant cleaning to filter out irrelevant data. To streamline the data, I converted it into new CSV files and, for certain graph types, embedded the data directly into the JSON code. I focused on the period between 2011 and 2021 to maintain clarity and manageability given the volume of data available.

## Why and how?

The motivation behind my choice of visual components for the terrorism visualization was to vividly portray the global scale, trends, and intricacies of terrorism incidents over the years.

Starting with a comprehensive geographical representation in Figure 1, I used a choropleth map to demonstrate the scale of terrorism-related deaths by country. This color-coded approach allows users to quickly grasp the intensity and distribution of terrorism incidents globally, emphasizing areas with higher rates of terrorism-related fatalities.

In Figure 2, I employed a stacked area chart to illustrate the temporal dynamics of terrorism attacks by region. This choice provides a clear year-by-year depiction of the rise and fall of incidents, enabling users to discern regional patterns and variations over time.

For Figure 3, I employed a stacked bar chart to showcase the number of deaths resulting from various terrorism attack types spanning multiple years. This visualization aids users in identifying overarching patterns in terrorism-related fatalities while simultaneously pinpointing the specific methods of attack dominant in each year. The stacking of bars facilitates an effortless comparison of the relative frequency of various attack methods throughout distinct periods, shedding light on the shifting strategies employed by terrorist groups.

Figure 4, on the other hand, provides a complementary perspective using a pie chart to offer a comprehensive view of the proportion of various attack methods employed worldwide. While the stacked bar chart in Figure 3 highlights temporal trends and the evolution of attack methods, the pie chart in Figure 4 gives users a snapshot of the overall distribution of these methods in a single glance. Together, these two visualizations work hand in hand, with Figure 3 providing a deep dive into year-by-year changes, and Figure 4 encapsulating the overarching distribution of attack types.

For Figure 5, I utilized a radar graph to present a comparative analysis of the attack strategies employed by specific terrorist groups. This type of visualization is particularly adept at highlighting both the similarities and distinctions in the operational tactics of groups such as the Taliban and ISIS. The radar graph allows users to see immediately, the preferred methods of attack for each group, offering a clear understanding of their modus operandi in a consolidated format.

For Figure 6, I chose a horizontal bar chart to display and rank the most devastating terrorist events. This layout allows for easy readability of event names and offers a visual representation of the magnitude of each incident. The horizontal orientation emphasizes the differences in the scale of events, helping users to quickly identify and understand the severity of specific terrorist acts relative to others. To enrich the user's understanding, I've integrated unique interactive features such as drop-down menus for time selection and legends that explain the colour codes and symbols used. This interactivity ensures users have control over the data they view, allowing for tailored insights and preventing information overload.

Lastly, tooltips and annotations have been used throughout the visualization to provide supplementary information where necessary, ensuring clarity and enhancing user comprehension.

### Design

### A graph with text and a chart Description automatically generated with medium confidenceA map of the world Description automatically generated

A close-up of a graph

Description automatically generated

A screenshot of a computer

Description automatically generatedA diagram of a graph

Description automatically generated

### Layout

### The design features a two-column structure, save for the introductory choropleth map spanning the full width covering the visual centre. Graphs primarily fill the left column, while the right mostly contains text. The visualization is structured into distinct rows, each focusing on a different aspect: firstly, deaths from terrorism by country; secondly, attacks by region; thirdly, types of attacks; fourthly, terrorist organizations; and finally, significant events. The visualisation has clear sight lines.

### Colour

The best players are represented by colours on the graph. Given that there were more than 10 players who were considered amongst the best I used Tableau 20 and avoided a combination of the red and green colours to accommodate for people with colour blindness. Players who aren’t considered among the best in these graphs are coloured using a grey colour scheme to put less emphasis on them. The background colour scheme includes green and light blue, I chose green as I thought it was a colour that is quite representative of Australia and the blue works very well with ensuring a light background.

### Figure-ground

### I created a clear visual hierarchy in my design by strategically utilizing layout, colour, and text styles. This hierarchy is evident in the background colours, which progressively lighten for less critical sections. Titles and subtitles are given the highest emphasis with a bold dark green colour. Surrounding the graphs and framing the visualization itself, I employed a lighter green colour. The overall background colour framing the visualization is a gentle light blue. In terms of text, I established a hierarchy by varying the size and weight of the text.

### Typography

### For the main title, I opted for a distinctive typography called Radley Sans, a font commonly associated with sports-related content, which seemed fitting for the context of my domain. To maintain consistency, I used the same typeface, Tableau Book, for the remaining text.

Incorporating feedback from my tutor, I decided to place annotations directly within the graphs rather than positioning them beneath the graphs. This approach was suggested as a more visually appealing choice. To emphasize key points, I employed bold fonts within specific annotations.

### Storytelling

The data visualization is structured to guide the reader's natural left-to-right reading pattern. Every element within the visualization is aligned to the left, facilitating a smooth flow of information. The visualization is neatly divided into sections, allowing users to follow a sequence as they explore the content. Additionally, there are dedicated buttons for accessing the legend and how to interpret the visualizations. The annotations provided are crucial in clarifying the graphs and explaining why certain players are considered among the best.

## Reference List

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## Appendix