

CSE587 - TERM PROJECT

COMMUNICATING THE RESULTS OF DATA ANALYTICS

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Analyzing terrorism data and deriving insights from the data.

What is done: For the purposes of this project we took Terrorism dataset from Kaggle which is hosted at the following URL: <https://www.kaggle.com/START-UMD/gtd>.

The dataset is also included with the submission. The dataset was used to create the workbook titled Terrorism Analytics.twbx. This workbook includes 4 graphs, a story and a dashboard all of which together satisfy the requirements of both, Activity 2 as well as Activity 3.

The Dashboard, Graphs and the Story is hosted on Tableau public on the following link https://public.tableau.com/views/TerrorismAnalytics_0/Dashboard1?:embed=y&:display_count=yes

Motivation: The prime motivation of picking and analyzing this dataset was the fact that terrorist activities are a global phenomenon. Almost all of the countries in the world focus on safeguarding themselves from terrorist activities and focus on preventing terrorism as a whole. Therefore, analyzing trends in terrorist activities for the purposes of forecasting terrorist events could help countries improve upon their strategies against terrorism.

In our project, we have focused mainly on 4 main graphs which analyze specific parts of terrorism, details of which are mentioned below.

Graph 1: Number of Terrorist Events Vs Year

In this graph, we analyze the number of terrorist events across the globe versus years. Terrorist activities can be filtered by regions. By default, all the regions are selected.

This graph also predicts the number of terrorist activities in the future. These predictions also vary from regions to regions. For example, Predictions of terrorist activities in the middle east is predicted to increase in the near future, however, terrorist activities in North America are predicted to go down.

Hence, the graph can be observed for various regions to derive meaningful insights from regarding the future.

Graph 2: Average Deaths Vs Year

In this graph, we analyze the Average number of deaths due to terrorist events across the globe versus years. Average number of deaths due to terrorist events can be filtered by regions. By default, all the regions are selected.

This graph also predicts the Average number of deaths due to terrorist activities in the future. These predictions also vary from regions to regions. Hence, the graph can be observed for various regions to derive meaningful insights from regarding the future.

Graph 3: Count of terrorist events across the globe

This graph aims to plot and show the various terrorist activities across the globe. The tooltip of the graph describes the count of terrorist events at that location. It also includes the motive of the attacker and the summary of the attack if it is available in the dataset.

The size of the dots on the plot is directly proportional to the number of terrorist events that happened in that area. Two filters have been applied on the plot. The plot can be filtered by region and also by years to only show events from a particular region, or from a particular year.

The graph can be used to visualize the terrorist events across the globe throughout the years for various regions.

Graph 4: Terrorist Attacks by Target

This graph aims to plot and show the targets which were targeted by the terrorists during their attacks. Two filters have been applied on the plot. The plot can be filtered by region and also by years to only show Terrorist targets from that region, or from a particular year.

From the plot, it is easy to visualize the targets and the motives of the terrorists from a particular region. It is observable that the targets of terrorists vary by region to region and thus the strategies to prevent terrorist attacks must also vary from region to region to prioritize safeguarding the prime target.

Story:

The aforementioned 4 graphs were bundled together to form a story from which insights can be derived.

Dashboard:

The aforementioned 4 graphs were bundled together to form a dashboard from which insights can be derived interactively. Applying a region filter provides insights related to that particular region only across all 4 graphs. Furthermore, year filter can also be used to derive insights from Graph 3 and Graph 4 respectively.

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

Project URL:

https://public.tableau.com/views/TerrorismAnalytics_0/Dashboard1?:embed=y&:display_count=yes