**Terrorism Data Visualization in Tableau**

**Overview**

This document provides instructions for creating a series of visualizations in Tableau using terrorism data. Each visualization serves a specific purpose to analyze patterns, groups, and impacts of global terrorism, allowing for better insight into the dataset.

**1. Global Terrorism Heatmap**

**Objective:**

Create a world map that visualizes the intensity of terrorist incidents by country, allowing users to filter by year to observe trends over time.

**Instructions:**

1. **Data Preparation**:
   * Ensure you have a clean dataset with columns country, country\_txt, iyear, and eventid.
2. **Map Creation**:
   * Drag country\_txt to **Colors** in the Marks card to plot each country.
   * Drag Latitude field on row and Longitude field on Column
   * Set Event Count (using COUNT(eventid)) on **Details** in the Marks card.
   * Add Nkill,Nwound,Gname,Summary into Tooltip in Marks Card
3. **Apply Color Gradient**:
   * Use a **diverging color gradient** to represent the frequency of attacks, with darker colors indicating higher intensity.
4. **Year Filter**:
   * Drag iyear to the **Filters** shelf and set it as a **slider** filter to allow users to explore incidents by year.

**A map of the world

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**2. Top 10 Terrorist Groups Over Time**

**Objective:**

Display the top 10 terrorist groups’ activity trends over time, using a stacked area chart to highlight each group's contribution by year.

**Instructions:**

1. **Data Preparation**:
   * Filter data to only include the top 10 most active terrorist groups based on the count of eventid for each group in gname.
2. **Stacked Area Chart Creation**:
   * Drag iyear to **Columns** and Event Count (AGG(eventid)) to **Rows**.
   * Add gname to **Color** in the Marks card, setting the chart type to **Area**.
3. **Sort and Filter for Top 10**:
   * In gname, select the top 10 by the count of eventid.
4. **Legend**:
   * Ensure a **color legend** is visible to identify each group.

A screenshot of a graph

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**3. Attack Types and Casualties**

**Objective:**

Visualize the relationship between the number of people killed and wounded in terrorist incidents, categorized by attack type and with point size representing total casualties.

**Instructions:**

1. **Scatter Plot Setup**:
   * Drag nkill to **Columns** and nwound to **Rows**.
2. **Categorization by Attack Type**:
   * Add attacktype1\_txt to **Color** in the Marks card to differentiate by attack type.
3. **Size Points by Total Casualties**:
   * Calculate total casualties as nkill + nwound and add this measure to **Size** in the Marks card.
4. **Tooltip Information**:
   * Configure the **Tooltip** to display details, including nkill, nwound, and attacktype1\_txt.

A screenshot of a computer screen

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**4. Monthly Trend Analysis Dashboard**

**Objective:**

Create an interactive dashboard to analyze trends in incidents per month, most common attack types, and most affected countries, with cross-filtering enabled between elements.

**Instructions:**

1. **Line Chart (Incidents per Month)**:
   * Create a line chart with calculated field (Iyear,Imonth) on **Columns** and COUNT(eventid) on **Rows** to show incidents per month.
2. **Bar Chart (Attack Types)**:
   * Create a bar chart with attacktype1\_txt on **Columns** and COUNT(eventid) on **Rows** to show the frequency of each attack type.
3. **Top Countries Table**:
   * Create a text table showing the top 5 countries affected, with country\_txt and COUNT(eventid) sorted in descending order.
4. **Dashboard Assembly**:
   * Add each chart to the dashboard.
   * Enable **Cross-Filtering** in the **Dashboard** menu to allow interactions between charts.

A screenshot of a computer

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