

# Intern Career

## Data Analyst

### Task 2

#### Steps:

##### *Step 1: Data Preparation*

###### 1.1 Import the Dataset

Open Power BI Desktop.

Click on "Get Data" from the Home ribbon.

Select the appropriate data source (e.g., CSV, Excel, SQL database).

Locate your Terrorism Database file and click "Open."

Once the data is loaded, it will appear in the Power Query Editor.

###### 1.2 Data Cleaning

Handling Missing Values:

In the Power Query Editor, look for columns with null or missing values.

Right-click on the column header and select "Remove Rows" > "Remove Blank Rows" if necessary.

Alternatively, fill missing values with the previous value or a default value by right-clicking the column header and selecting "Fill" > "Down/Up."

Dealing with Outliers:

Identify numeric columns (like casualties) and use filters or visuals (e.g., box plots) to detect outliers.

You can either remove outliers by applying filters in Power Query or transform the data to reduce their impact (e.g., using logarithmic scales).

###### 1.3 Ensure Correct Data Types

Check each column's data type by selecting the column in the Power Query Editor.

Ensure that:

Dates are formatted as Date/Time.

Numeric data (e.g., number of casualties) is set as a Whole Number or Decimal Number.

Categorical data (e.g., attack type, country) is set as Text.

Once the data is cleaned and correctly typed, click on "Close & Apply" to load the data into Power BI.

## *Step 2: Data Visualization*

### 2.1 Number of Terrorist Attacks Over Time

Go to the "Report" view in Power BI.

Drag the "Date" field to the X-axis of a Line Chart.

Drag a measure like "Count of Attacks" (you might need to create this measure if not already present) to the Y-axis.

Format the chart to show trends over time, adjusting the granularity (e.g., year, month) as needed.

### 2.2 Attack Locations on a Map

Insert a Map or Filled Map visual from the Visualizations pane.

Drag the "Location" or "Country" field to the Location well.

Drag the "Count of Attacks" to the Size well to adjust bubble sizes according to attack frequency.

Adjust the map settings (e.g., zoom level) for better visualization.

### 2.3 Trends in Attack Types and Weapons Used

Create a Bar or Pie Chart for Attack Types:

Drag the "Attack Type" field to the Axis.

Drag "Count of Attacks" to Values.

Repeat similar steps for "Weapons Used":

Drag the "Weapons Type" field to the Axis.

Drag "Count of Attacks" to Values.

Use a stacked bar chart if you want to compare attack types or weapons used over time by adding the "Date" field to the Legend or Axis.

### 2.4 Casualties by Region or Year

Create a Stacked Bar Chart or a Heatmap:

For regions, drag the "Country" field to the Axis and "Number of Casualties" to Values.

For year-wise analysis, drag the "Date" field to the Axis and "Number of Casualties" to Values.

Format the visual to compare casualties effectively across different regions or years.

## *Step 3: Interactive Dashboard*

### 3.1 Adding Slicers

Insert a Slicer from the Visualizations pane.

Drag fields like "Date," "Country," "Attack Type," or "Weapons Type" into the slicer.

Place the slicers on the dashboard where they are easily accessible for filtering the data.

### 3.2 Drill-Through Options

Select a visual and go to the "Drill-through" option in the Visualizations pane.

Add relevant fields like "Country" or "Year" to enable drill-through.

Create a detailed page that shows in-depth information when a user drills through (e.g., attacks in a specific country).

### 3.3 Highlighting Insights

Use Conditional Formatting:

Select a visual (e.g., bar chart).

Go to the "Format" pane and choose "Data Colors."

Set rules to highlight bars based on value thresholds (e.g., red for high casualty rates).

## Step 4: Narrative and Insights

### *4.1 Key Findings*

Insert a Text Box on the dashboard.

Write a summary of key findings, such as major trends, peaks in attack numbers, or regions most affected by terrorism.

### 4.2 Global Terrorism Trends

Provide insights into the evolution of terrorism globally. Mention any noticeable shifts, such as changes in the most common attack types or the emergence of new terrorist groups.

### 4.3 Summary of Affected Regions

Add a dedicated section or visual that highlights the regions most affected by terrorism over time, discussing the impact on these regions.

## *Step 5: User-Friendly Design*

### 5.1 Intuitive Layout

Arrange visuals logically, starting with global overviews and narrowing down to specific trends and insights.

Ensure that related visuals are grouped together for coherence.

### 5.2 Color Scheme

Choose a consistent and professional color scheme.

Use contrasting colors to highlight key data points while ensuring the dashboard remains visually appealing.

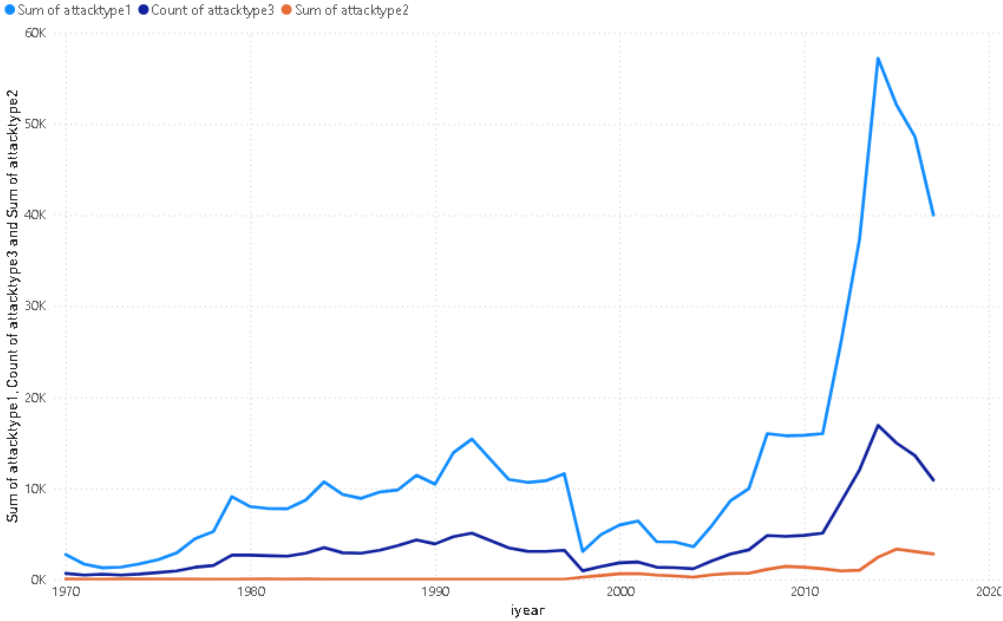
### 5.3 Clarity

Label all visuals clearly, providing context with titles and subtitles.

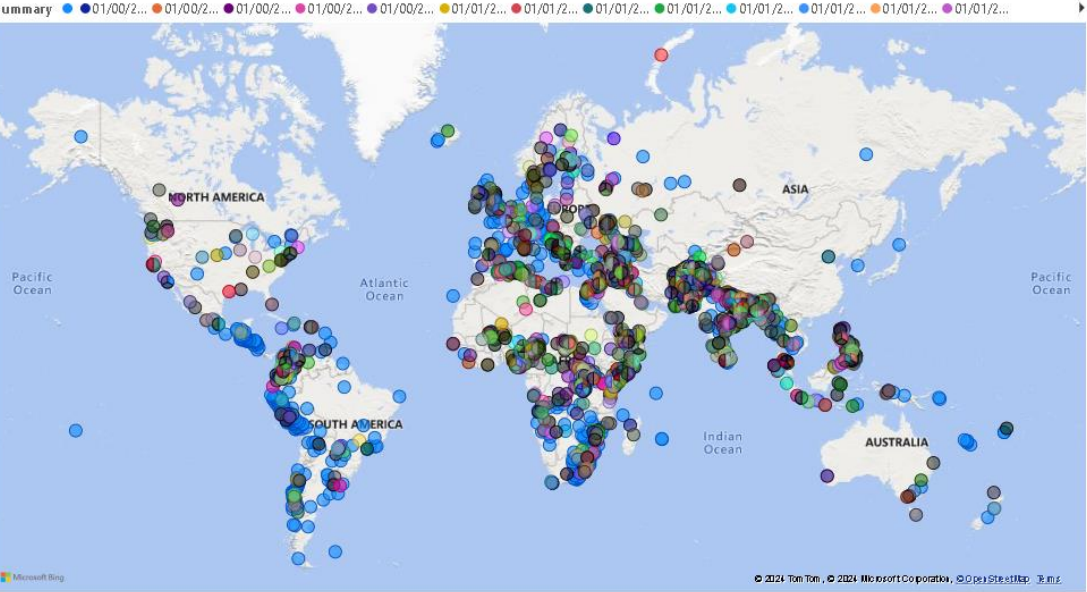
Avoid overcrowding; ensure that the dashboard remains clean and easy to navigate.

## **Output:**

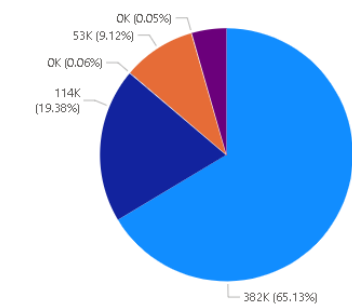
Sum of attacktype1, Count of attacktype3 and Sum of attacktype2 by iyear



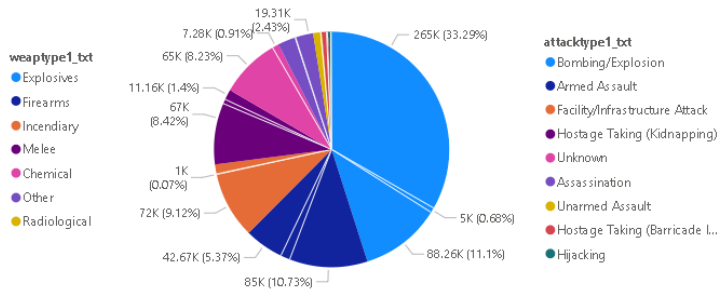
summary, latitude and longitude



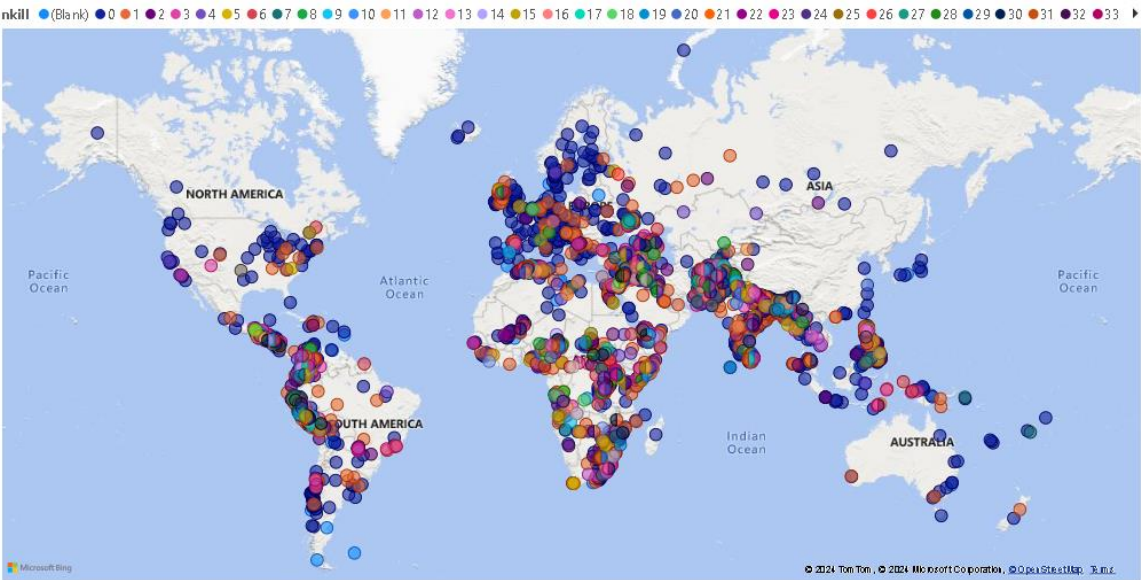
Sum of weapsubtype1 by weaptype1\_txt and weapdetail



Sum of attacktype1, Sum of attacktype2 and Count of attacktype3 by attacktype1\_txt



nkill, latitude and longitude



└─  
..

iyear, country\_txt, attacktype1\_txt, weaptype1\_txt

^ ☐ 1970

^ ☐ Argentina

✓ ☐ Armed Assault

^ ☐ Assassination

☐ Firearms

☐ Unknown

✓ ☐ Bombing/Explosion

✓ ☐ Facility/Infrastructure Attack

✓ ☐ Hostage Taking (Kidnapping)

✓ ☐ Australia

✓ ☐ Belgium

✓ ☐ Bolivia

✓ ☐ Brazil

✓ ☐ Canada

✓ ☐ Colombia

✓ ☐ Dominican Republic

✓ ☐ East Germany (GDR)

✓ ☐ Egypt

✓ ☐ Ethiopia

✓ ☐ Greece

✓ ☐ Guatemala