**Trend & Temporal Analysis**

1. **How did total cyber-attack percentages change over time globally?**
   * **Chart**: Line chart (monthly)
   * **Columns**: Attack-Date, all attack type columns (Spam, Ransomware, Local Infection, Exploit, Malicious Mail, Network Attack, On Demand Scan, Web Threat)
   * **Preprocessing**: Sum or average of all attack type percentages per month (grouped by Attack-Date)
2. **Which attack types show upward trends over the 14 months?**
   * **Chart**: Multi-line chart (one line per attack type)
   * **Columns**: Attack-Date, each attack type column
   * **Preprocessing**: Monthly average for each attack type
3. **Do certain attack types peak during specific months globally?**
   * **Chart**: Heatmap (Month × Attack Type)
   * **Columns**: Attack-Date, each attack type column
   * **Preprocessing**: Extract month from Attack-Date, compute average per month per attack type
4. **How does daily cyber threat activity vary across weekdays vs weekends?**
   * **Chart**: Box plot (Day of Week)
   * **Columns**: Attack-Date, all attack type columns
   * **Preprocessing**: Derive DayOfWeek from Attack-Date, group values by day of week

**Geospatial Insights**

1. **Which regions have the highest average cyber-attack percentage?**
   * **Chart**: Choropleth map
   * **Columns**: Country, all attack type columns
   * **Preprocessing**: Group by country, calculate average of all attack types
2. **How do attack types vary by region (e.g., Africa vs Asia)?**
   * **Chart**: Stacked bar chart (Region vs Attack Types)
   * **Columns**: Country, all attack type columns
   * **Preprocessing**: Map countries to regions, then group by region and average each attack type
3. **Which countries consistently rank in the top 10 across multiple attack types?**
   * **Chart**: Radar chart or heatmap of rankings
   * **Columns**: Rank Spam, Rank Ransomware, Rank Local Infection, Rank Exploit, Rank Malicious Mail, Rank Network Attack, Rank On-Demand Scan, Rank Web Threat
   * **Preprocessing**: For each country, calculate average rank or count how many times they appear in top 10

**Comparative & Cross-Dimensional Analysis**

1. **What is the correlation between different attack types?**
   * **Chart**: Correlation heatmap
   * **Columns**: All attack type columns
   * **Preprocessing**: Compute correlation matrix across all rows
2. **How does the total attack percentage relate to each country’s rank?**
   * **Chart**: Scatter plot
   * **Columns**: Total Attack % (sum of all attack types), Avg Rank (average of all rank columns)
   * **Preprocessing**: For each country, calculate total attack percentage and average rank
3. **Do countries with high spam attack percentages also have high malicious mail percentages?**
   * **Chart**: Scatter plot with trend line
   * **Columns**: Spam, Malicious Mail
   * **Preprocessing**: Direct comparison, possibly grouped by country
4. **What countries saw the sharpest increase or drop in attacks over time?**
   * **Chart**: Slope graph or area chart
   * **Columns**: Attack-Date, total attack %
   * **Preprocessing**: Group by country and month, calculate slope or delta of total attack %

**Anomaly Detection & Outliers**

1. **Are there any countries with extremely high attack percentages on specific days?**
   * **Chart**: Box plot (Country × Attack Type)
   * **Columns**: Country, each attack type column
   * **Preprocessing**: Analyze distribution of attack type percentages for outliers per country
2. **Which countries have the most volatile (high standard deviation) attack rates?**
   * **Chart**: Bar chart
   * **Columns**: Country, each attack type column
   * **Preprocessing**: Calculate standard deviation per country for each attack type
3. **Are there clusters of countries with similar attack profiles?**
   * **Chart**: K-means clustering + PCA plot
   * **Columns**: Each attack type column (grouped by country)
   * **Preprocessing**: Aggregate by country, normalize, apply clustering and PCA

**Temporal-Regional Interactions**

1. **Which regions showed an increase in ransomware attacks in 2023 compared to 2022?**
   * **Chart**: Side-by-side bar charts
   * **Columns**: Country, Attack-Date, Ransomware
   * **Preprocessing**: Add year column, group by region and year, compare averages
2. **How do countries in the same region differ in attack trends?**
   * **Chart**: Small multiples line charts (country within region)
   * **Columns**: Country, Attack-Date, attack types
   * **Preprocessing**: Group by country, compare trends over time

**Synthetic & Derived Metrics**

1. **What is the overall global average per attack type per month?**
   * **Chart**: Line chart
   * **Columns**: Attack-Date, attack type columns
   * **Preprocessing**: Group by month, compute global average per attack type
2. **Create a risk score based on a weighted sum of all attack types**
   * **Chart**: Bar chart or map
   * **Columns**: All attack type columns
   * **Preprocessing**: Create new column: Risk Score = w1\*Spam + w2\*Ransomware + ... using your chosen weights
3. **Which countries improved (moved down in ranks) the most over time?**
   * **Chart**: Step line chart (rank changes)
   * **Columns**: Attack-Date, rank fields
   * **Preprocessing**: Compare rank changes between two time points per country
4. **What is the distribution of attack types within a single country?**
   * **Chart**: Pie or bar chart
   * **Columns**: All attack type columns for a selected country
   * **Preprocessing**: Filter data for one country, average values per attack type