**3. Data Visualization**

**📘 Overview:**

**Data visualization** is the process of converting raw data into meaningful visual representations—such as **charts, graphs, maps**, and dashboards—to enhance understanding and discovery.

**🎯 Purpose:**

The primary goal of data visualization is to make **complex datasets**:

* More **accessible**
* Intuitive to **interpret**
* Easier to **analyze**

By transforming raw data into visual formats, we can:

* Quickly spot **trends**
* Identify **outliers**
* Understand **patterns** and relationships in data

**📈 In This Project:**

Using **Tableau**, multiple visualizations were created based on the UNESCO World Heritage Sites dataset. These visual elements supported the analysis of:

* Site distribution across countries
* The status of endangered sites
* Year-wise and region-wise inscription trends

Each visual was selected to best represent the type of insight being communicated.

**🧠 Benefits of Visualization in This Project:**

* Simplifies decision-making for stakeholders (e.g., cultural preservation bodies)
* Highlights **priority areas** (e.g., endangered sites)
* Reveals **regional and temporal trends** in heritage conservation efforts

**4. Number of Unique Visualizations**

**⏱️ Duration:**

**1 Hour**

**🧠 Skill Tags:**

* Tableau Charts
* Data Interpretation
* Visual Storytelling
* Insight Discovery

**📘 Overview:**

Using the provided dataset, a variety of **unique visualizations** were created in **Tableau** to explore and analyze key insights related to UNESCO World Heritage Sites.

Although the original content referred to health and nutrition data, in this context, visualizations are customized to reflect **heritage site analytics**.

**📌 Key Visualization Types Used in This Project:**

| **Chart Type** | **Purpose** |
| --- | --- |
| **Treemap** | To compare the number of heritage sites by country |
| **Pie Chart** | To show the proportion of sites categorized as “In Danger” vs “Not in Danger” |
| **Line Chart** | To track yearly site inscriptions segmented by region |
| **Bar Chart** | To compare the number of sites per category (Cultural, Natural, Mixed) |
| **Geographic Map** | To visualize site locations across the world by country and region |
| **Scatter Plot** | To explore relationships between inscription year and danger status |
| **Heat Map** | To identify site concentration across countries and regions |

**🎯 Outcome:**

A total of **6–7 unique visualizations** were implemented to:

* Compare heritage presence across regions
* Monitor inscription growth over time
* Highlight vulnerable or endangered sites
* Offer geographic and categorical insights

These visualizations help stakeholders, researchers, and cultural bodies make **informed, data-driven decisions** to promote preservation and awareness of heritage treasures.

<https://drive.google.com/file/d/1wZSY11xLTglUn50D9Isc6NU2CkEiBSQz/view?usp=sharing>