**Dataset Description -World Happiness Report [WHR]**

* This dataset contains information from the World Happiness Report, which ranks countries based on their overall happiness scores.
* The scores are calculated using survey responses and a set of socio-economic and health indicators.
* Each row represents a country or region, with corresponding metrics that contribute to its overall happiness ranking.

**Columns:**

* **Overall Rank:** Position of the country in the happiness ranking, like finland is in first rank and Denmark is in second rank and so on..
* **Country or Region**: Name of the country or region.
* **Score:** The overall happiness score (0–10 scale) for example-Finland having score of 7.73
* **Log GDP per capita:** Economic measure representing income and standard of living.
* Log GDP per capita in the World Happiness Report is basically the natural logarithm of GDP per person (GDP per capita).
* Formula—Log GDP per capita =ln(GDP/population)

Where as:

**GDP** = Gross Domestic Product of the country (usually in USD).

**Population** = Total population of that country.

**ln** = natural logarithm (log base e).

* **Social Support**: Level of social support perceived by individuals in the country. Social support is measured by asking people a question like:  
  “If you were in trouble, do you have relatives or friends you can count on to help you whenever you need them, or not?” The responses are aggregated and converted into a score (typically between **0 and 1.8** in the dataset you shared).
* **Healthy Life Expectancy**: Expected years of healthy life at birth.
* **Freedom to Make Life Choice**s: Extent to which individuals feel free to make life decisions.
* **Generosity:** Measure of charitable behavior in the society.

**How "Generosity" is Calculated**

* **Generosity** is derived from **survey data** collected by Gallup World Poll.
* It measures how much people donate to charity and help others.
* Specifically, it’s based on the **responses to the question**:  
  *“Have you donated money to a charity in the past month?”*
* The raw responses are then **adjusted using GDP per capita** to control for differences in income levels between countries.
* Formula: Generosity Index=f(Donations to charity,Adjusted by GDP per capita)
* Example: If in Country A, 50% of respondents say they donated last month, and income levels are average → Generosity score might be **0.2**.
* If in Country B, only 10% donated, even if it’s a rich country → Generosity score might be **0.05**.
* **Perceptions of Corruption**: Indicator of how widespread corruption is perceived to be.
* **“Dystopia + Residual”** column in the World Happiness Report (WHR): It using six key factors
* GDP per capita
* Social support
* Healthy life expectancy
* Freedom to make life choices
* Generosity
* Perceptions of corruption

But these six don’t always explain **100% of the happiness score**. To make sure every country’s score is covered, researchers add a **baseline + residual** value.That’s called **“Dystopia + Residual.”**

* *Dystopia* is a hypothetical country where all six factors are the world’s lowest values.
* It serves as a baseline or reference point.
* The **residual** is the part of the happiness score **not explained by the six variables**.
* It captures other factors (like culture, history, environment, policies) that the dataset doesn’t measure directly.

**Usage:**  
This dataset can be used to:

* Compare happiness levels across countries and regions.
* Analyze the relationship between GDP, social support, life expectancy, and happiness.
* Create dashboards and visualizations for global well-being.
* Study correlations between socio-economic factors and subjective well-being.