The World Happiness Score Data Analysis

# Proposal

In an interconnected world where the economy, health, and happiness are deeply intertwined, exploring the relationships between these elements is both fascinating and vital. Our dataset, comprising global statistics on GDP, life expectancy, happiness scores, and freedom indices, offers a unique lens to investigate these crucial connections. We hypothesize that higher GDP is associated with increased life expectancy and greater happiness, while higher happiness scores correlate with greater perceptions of freedom. By conducting a thorough analysis, we aim to uncover the intricate web of factors contributing to overall well-being and societal prosperity. Our findings could shed light on how economic growth and individual freedoms impact the quality of life, guiding policymakers toward more effective strategies for enhancing global happiness and health.

# Hypothesis

**Hypothesis 1:**

Correlation between economy (GDP) and health life expectancy.

* **Question**: Are countries with higher GDP have a longer life expectancy?

**Null Hypothesis (H₀):**  
There is no correlation between a country's Gross Domestic Product (GDP) and its health life expectancy. In other words, the GDP of a country does not have a significant impact on the life expectancy of its population.

There is a positive correlation between a country's Gross Domestic Product (GDP) and its health life expectancy. In other words, countries with higher GDP tend to have a longer life expectancy.

**Hypothesis 2:**

Correlation between a country's GDP and the happiness scores of its citizens.

* **Question**: Is higher GDP in a country is associated with higher happiness scores among its citizens?

**Null Hypothesis (H₀):**  
There is no correlation between a country's Gross Domestic Product (GDP) and the happiness scores of its citizens. In other words, the GDP of a country does not have a significant impact on the happiness scores.

**Alternate Hypothesis (H₁):**  
There is a positive correlation between a country's Gross Domestic Product (GDP) and the happiness scores of its citizens. In other words, countries with higher GDP tend to have higher happiness scores among their citizens.

**Hypothesis 3:**

Correlation between happiness scores and perceptions of freedom in a country.

* **Question**: Is higher happiness scores are positively correlated with greater perceptions of freedom in a country?

# **Null Hypothesis (H₀):** There is no correlation between happiness scores and perceptions of freedom in a country. In other words, the perceptions of freedom in a country do not have a significant impact on the happiness scores of its citizens.

**Alternate Hypothesis (H₁):  
There is a positive correlation between happiness scores and perceptions of freedom in a country. In other words, higher happiness scores are associated with greater perceptions of freedom in a country.**

Research questions

1. **GDP and Life Expectancy:**
   * What is the nature of the relationship between a country's GDP and life expectancy?
   * Can a higher GDP predict a longer life expectancy in a country?
2. **GDP and Happiness Score:**
   * How does a country's GDP relate to the happiness scores of its citizens?
   * Can a higher GDP predict greater happiness among citizens?
3. **Happiness Score and Freedom**:
   * How do happiness scores vary with perceptions of freedom in different countries?
   * Are higher happiness scores associated with greater perceptions of freedom?