World Happiness Report: A Four-Graphic Narrative Arc (2005–2023)
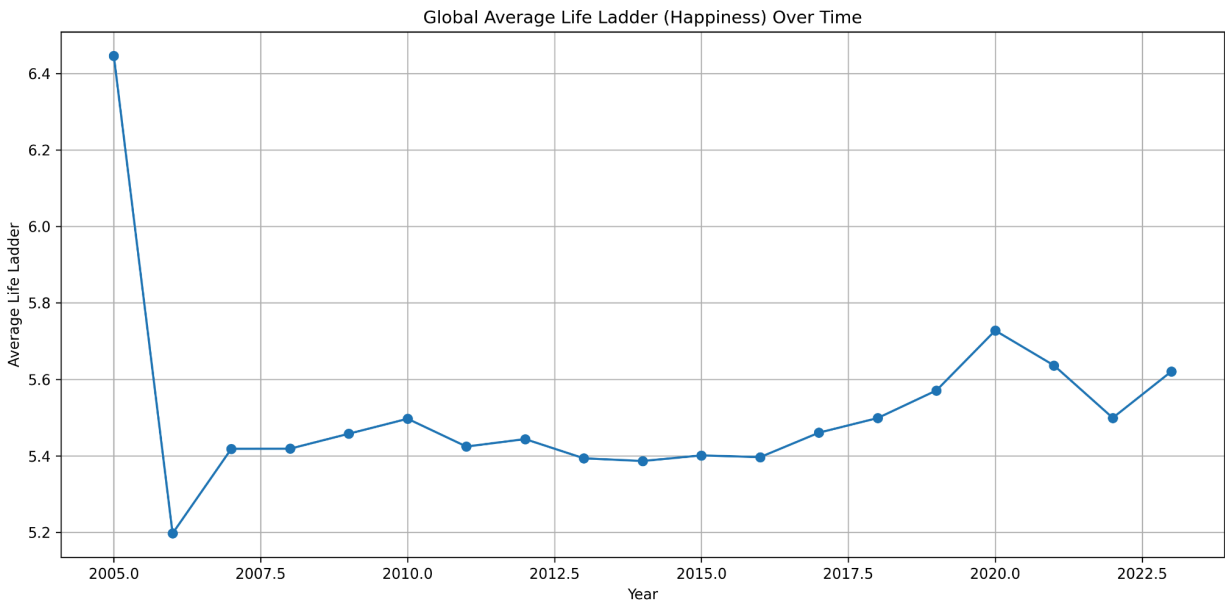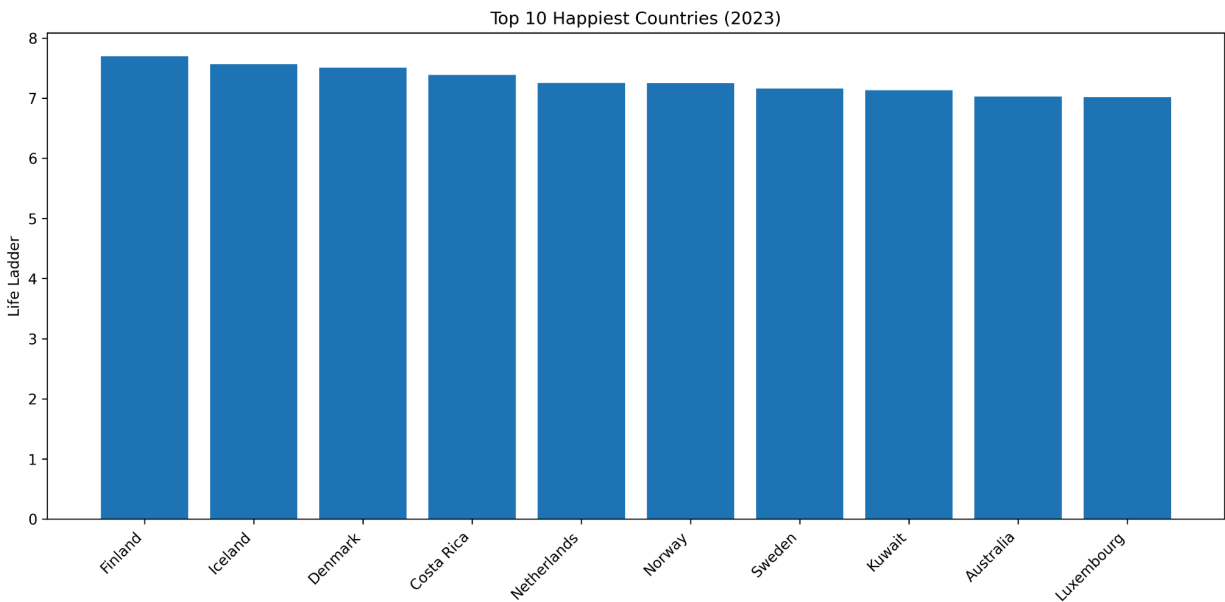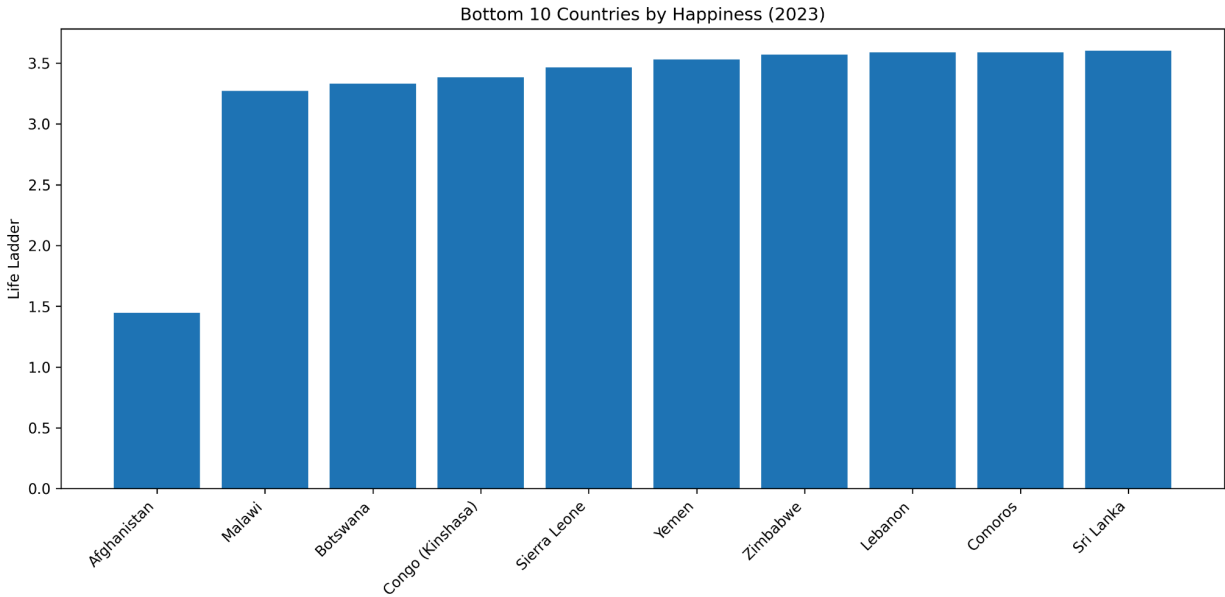
This project uses four original, independently generated graphics to tell a clear and cohesive narrative about global well-being from 2005 to 2023. The visuals were created from scratch using Python and the World Happiness Report dataset. Together, they illustrate how global happiness has shifted, which countries dominate the rankings, which nations have experienced the most dramatic changes, and which factors are most strongly linked to happiness. The graphics build one storyline: **the world has grown less happy, but patterns in the data reveal why and where.**

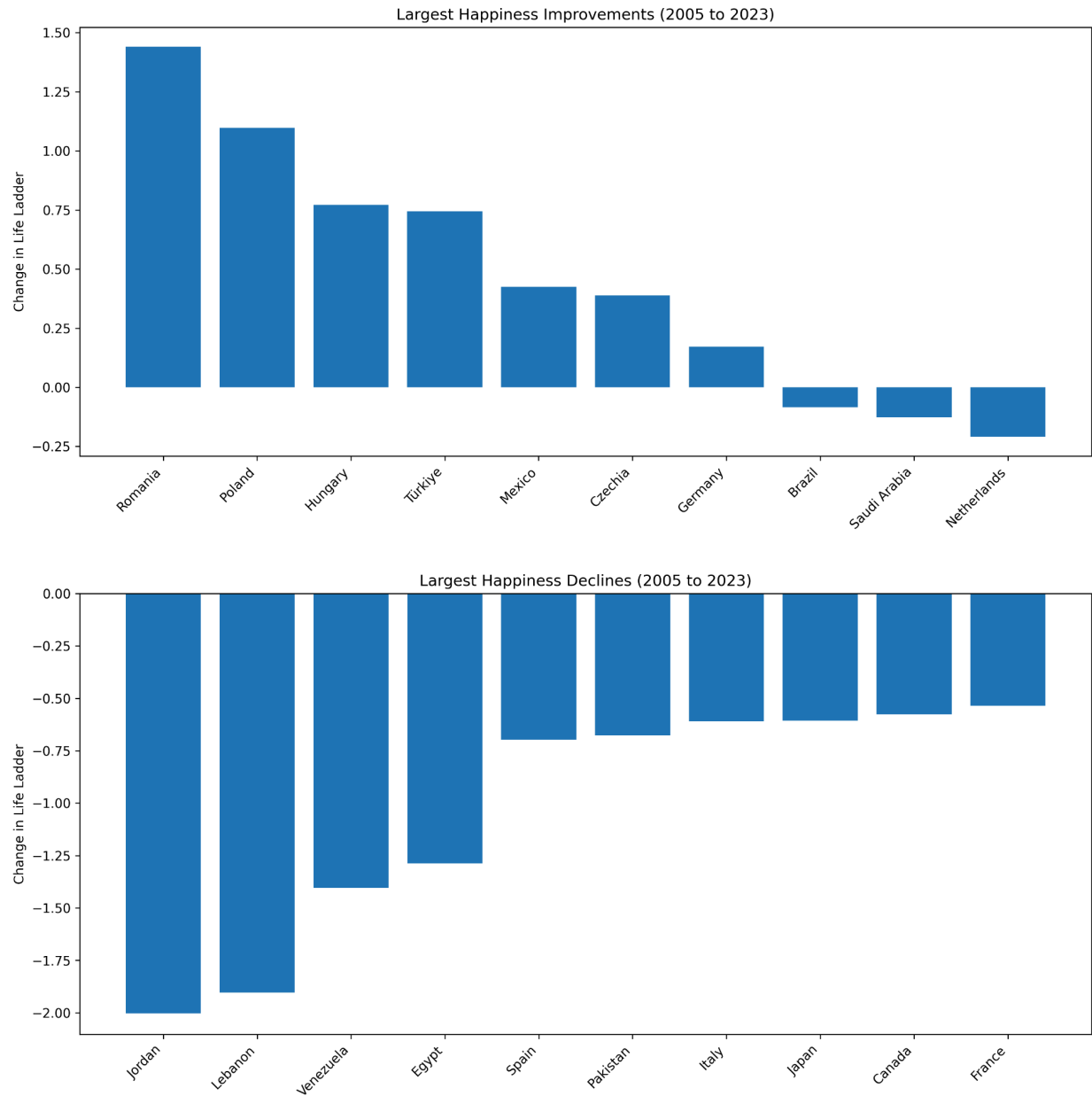**Graphic 1: Global Happiness Trend (2005–2023)**

This first graphic establishes the foundation of the narrative. It shows that the global average Life Ladder score steadily declined from 6.45 in 2005 to 5.62 in 2023. This provides the context for the entire project: worldwide well-being has dropped over time. This downward trend sets up the need to explore which countries are driving it and what underlying factors influence the shift.

Graphic 2: Top 10 and Bottom 10 Countries in 2023

Bottom 10 Countries by Happiness (2023)

Top 10 Happiest Countries (2023)

The second graphic shows the contrast between the happiest and least happy countries in 2023. Finland leads the world with a Life Ladder score of 7.70, while Afghanistan ranks at the bottom with 1.45. This large gap illustrates the inequality in global well-being. It also highlights the stability of high-performing countries (Finland, Iceland, Denmark) compared to nations facing conflict or economic hardship. These visuals deepen the narrative by showing the current landscape of happiness and identifying extreme outliers.

Graphic 3: Countries with the Largest Changes (2005–2023)

Largest Happiness Improvements (2005 to 2023)

Largest Happiness Declines (2005 to 2023)

The third graphic shows which countries changed the most over the past two decades. Romania (+1.44), Poland (+1.10), and Hungary (+0.77) represent countries with improving living conditions, strengthening economies, and growing social stability. On the other hand, Jordan (-2.00), Lebanon (-1.90), and Venezuela (-1.41) experienced sharp declines often tied to economic crises, conflict, and political upheaval. This graphic adds the "movement" part of the story: happiness is not static, and major rises and falls reveal deeper national shifts.

Graphic 4: Correlations Between Happiness and Key Factors

Correlation Heatmap: World Happiness Factors

The final graphic explains *why* the patterns in the first three charts occur. The correlation heatmap shows that happiness is strongly associated with economic prosperity (log GDP per capita, 0.78), social support (0.72), and healthy life expectancy (0.71). These relationships reveal the structural foundations of well-being. Negative correlations with perceptions of corruption show that institutional trust also plays a major role. This graphic provides the analytical "answer" that ties the entire narrative together.