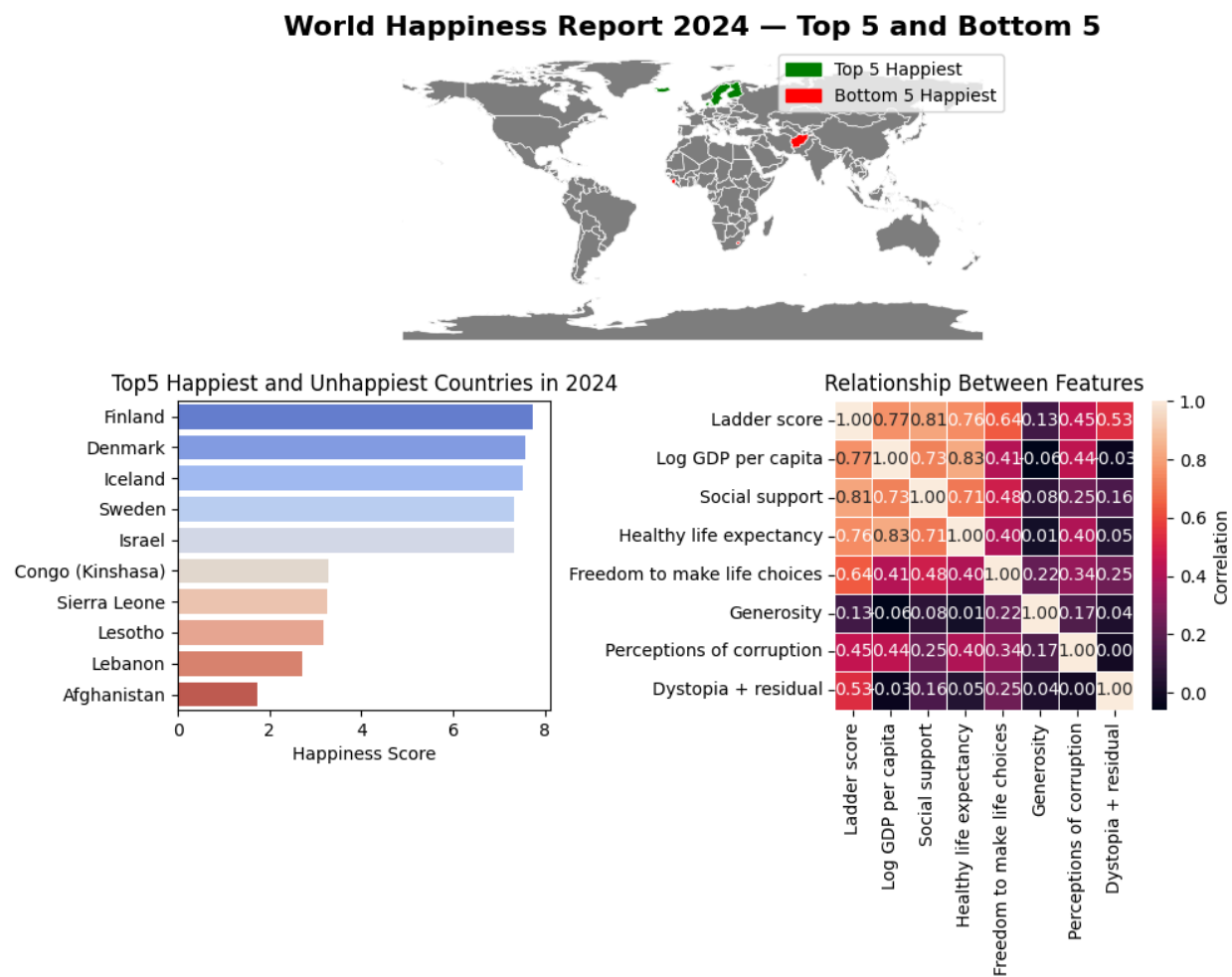# A World Of Happiness

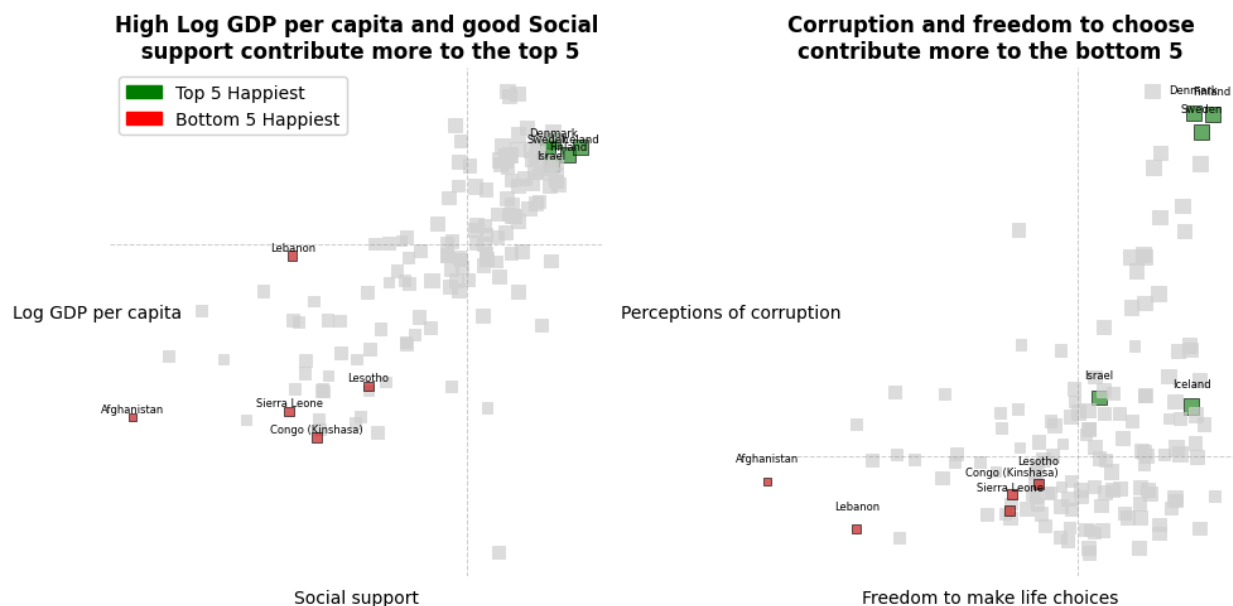A Visualization Analysis of World Happiness

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This project will explore the World Happiness Report 2024, and how different factors affect the happiness of a country. Numerous studies focus on the general picture and statistics. Unlike them, this report will focus on the top-5 happiest and unhappiest countries to showcase what makes them the extreme values.

The first graph will show the top-5 happiest and unhappiest countries in the world. By combining this with the ranking barplot and the correlation matrix, we can have a general idea of the tops and the bottoms.



World Happiness Report 2024 — Top 5 and Bottom 5

I started by finding the top 5 and bottom 5 countries in terms of their happiness scores. Then I highlighted them on the world map so it's easy to see their geometric distributions. Apparently most of the top 5 are located in Northern Europe and most of the bottom 5 are located in the Middle East. The barplot clearly shows their names and the scores. Finally the heatmap using the correlation matrix unveils the two features that are most important to happiness: Social support and Log GDP per capita.

Using the features above, I created the bubble plots to showcase the clustering effects. The size of the squares represents the happiness score. The larger the square, the higher the score. I plotted them according to the value of Social support and Log GDP per capita to see if the correlation was actually telling the right story. Apparently, it only tells half the story: we see a nice cluster for the top 5, meaning both GDP and social support have a positive effect on the happiness score. However, the bottom 5 are scattered around the figure, meaning these features are not the main causes of why people were unhappy in these countries. So I switched the features based on correlation analysis on only the bottom 5. Now we can see that bad corruption is something the bottom 5 have in common. This figure shows us how results can differ if we choose to see them from a different perspective.



Data source:
https://www.kaggle.com/datasets/jainaru/world-happiness-report-2024-yearly-updated/data

Github: https://github.com/JamesLLLL/A-World-of-Happiness-