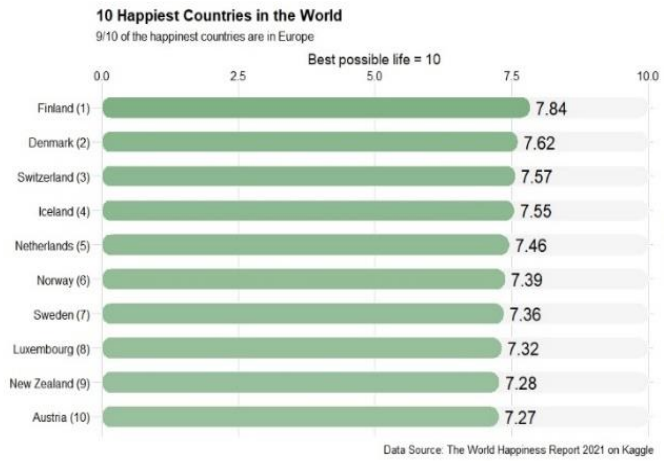

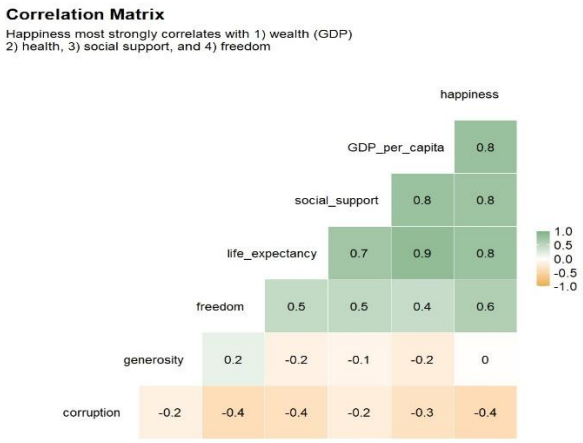

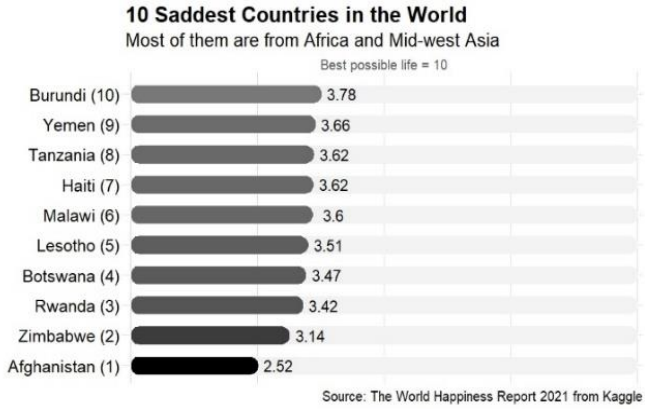

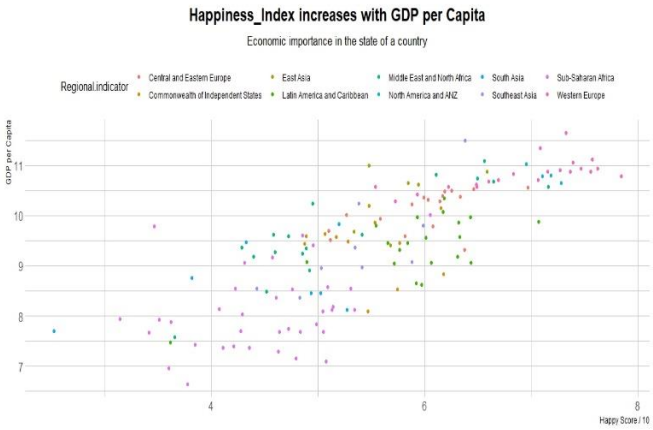

*The full-size visualization is on page #2

The data source for the static data visualization is the world happiness report for 2021 https://worldhappiness.report/faq/, and I got the dataset from Kaggle. This dataset gives the happiness rank and happiness score of 155 countries around the world based on seven factors including family, life expectancy, economy, generosity, trust in government, freedom, and dystopia residual. In total there are four graphs in my visualization: two bar plots to rank the top10 happiest and saddest countries in 2021, the correlation matrix between all variables like wealth, health, social support, etc., and the target variable happiness score and the scatter plot of happiness score and GDP per capita.

The first and second graphs are bar charts of the 10 happiest Counties and the saddest countries around the world. I added the caption and legend and put the citation below the graph. We can infer that 9 out of 10 happiest countries are in Europe and most of the saddest countries are from Africa and mid-east: places that suffered from war.

The correlation matrix gives us insights into which attributes are happiness strongly correlated with. I utilized contrasted colors: green to indicate a strong correlation and yellow to indicate a weak correlation. The four attributes that have the strongest correlation with happiness are wealth, health, social support, and freedom.

From the scatter plot we can infer that there is a clear relationship between a country's GDP and the happiness of its citizens: Regions with higher GDP_Per_Capita tend to have higher ladder_scores. Further investigation will be required to see if it is a causal relationship or just an association. And I used ggarrange() to place the four graph onto one deck.