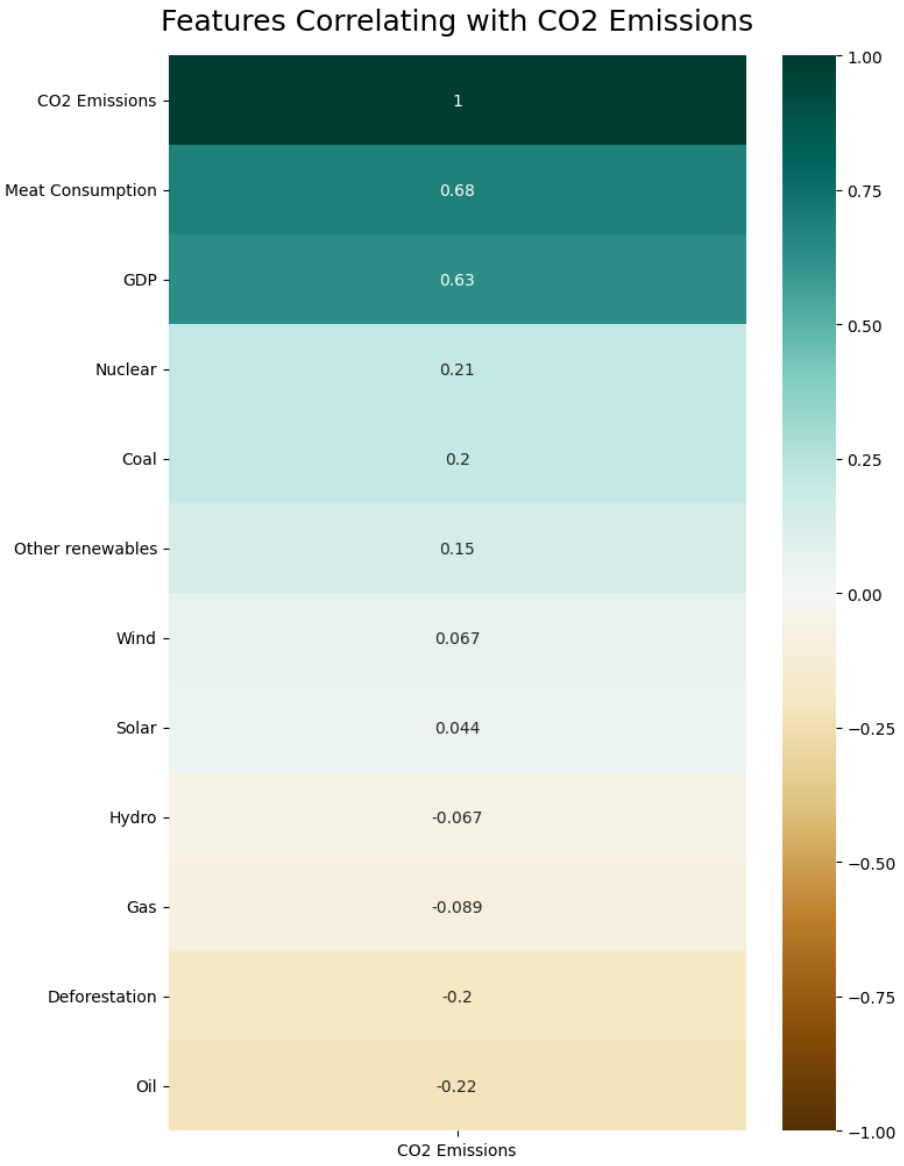
CO2 emissions

February 22nd, 2024

https://github.com/Dvdbijl/CO2-Emissions---Final-Assignment/blob/main/CO2_Emissions_Final_Project.ipynb

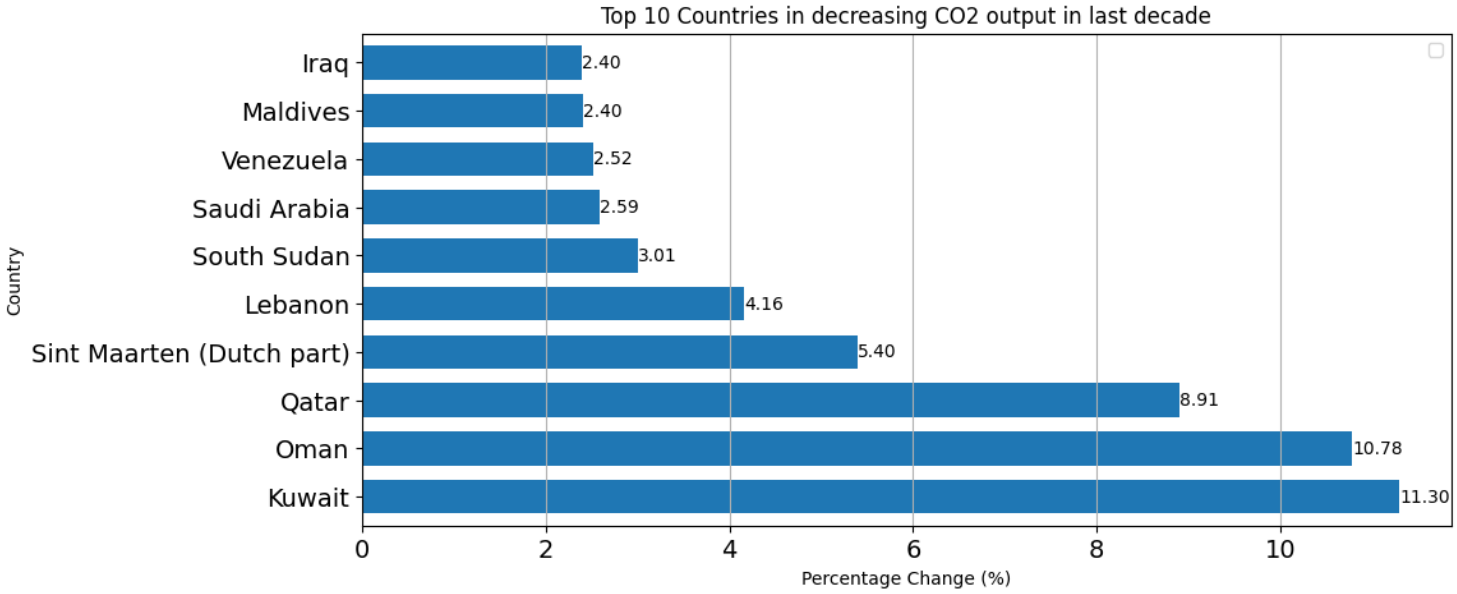
(1) What is the biggest predictor of a large CO2 output per capita of a country?

The analysis conducted using the Pearson correlation method reveals that both meat consumption and GDP are significant predictors of large CO2 output per capita in a country. However, the correlation coefficient indicates that meat consumption (0.68) exhibits a slightly stronger relationship with CO2 emissions compared to GDP (0.63). This suggests that higher meat consumption levels tend to be associated with greater CO2 emissions per capita. Nonetheless, both factors play crucial roles in shaping a nation's carbon footprint.



(2) Which countries are making the biggest strides in decreasing CO2 output?

The examination brings attention to several countries making significant strides in decreasing CO2 output in the last ten years, acknowledging that countries may also experience growing or shrinking populations, which can impact emissions trends. Leading the reduction efforts are Kuwait, Oman, and Qatar, with reductions of -11.29%, -10.78%, and -8.90% respectively. While population dynamics can influence emissions trends, the consistent commitment of these nations to mitigate CO2 emissions suggests proactive measures such as policy initiatives, technological advancements, or transitions to renewable energy sources. This collective effort underscores a global recognition of the imperative to address climate change and pursue sustainability despite demographic fluctuations.



(3) Which non-fossil fuel energy technology will have the best price in the future?

Utilising linear regression analysis across different non-fossil fuel energy technologies, the findings suggest that solar photovoltaic (PV) is poised to offer the most competitive pricing in the future. However, it's essential to note that while the analysis may project a favourable trend for solar PV prices, it's improbable for prices to reach negative values. This indicates that solar PV technology holds promise for becoming increasingly cost-effective, potentially emerging as a leading choice for sustainable energy solutions in the future.