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Sabancı University

# Faculty of Engineering and Natural Sciences

## Computer Science

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### CS 306 Step 4 Report

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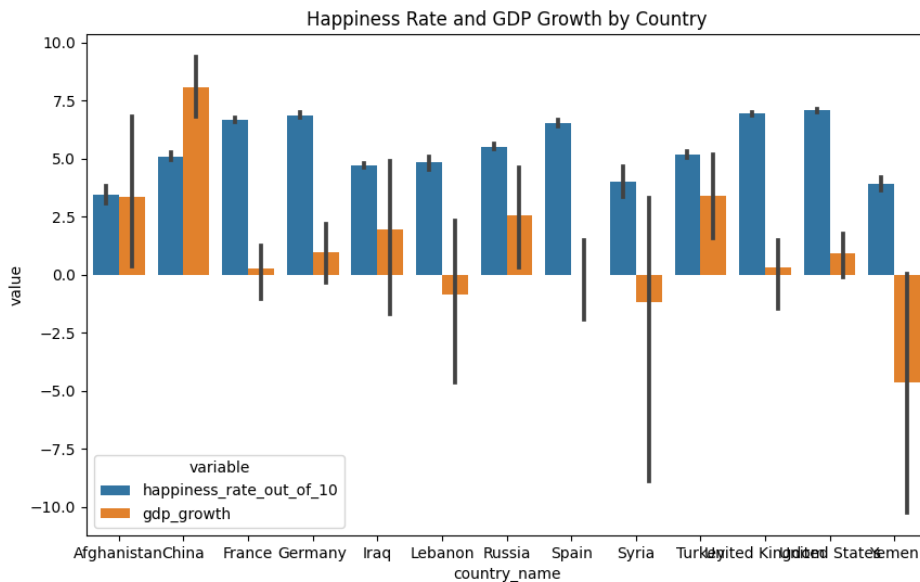
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# 1 Data Visualization

In this step, we've created a python notebook and connected our MySQL database to that notebook. After that, we created around 10 different graphs and took the 4 best-looking ones for this report. The Python code can be accessed from the GitHub Repository here under the folder Step 4.

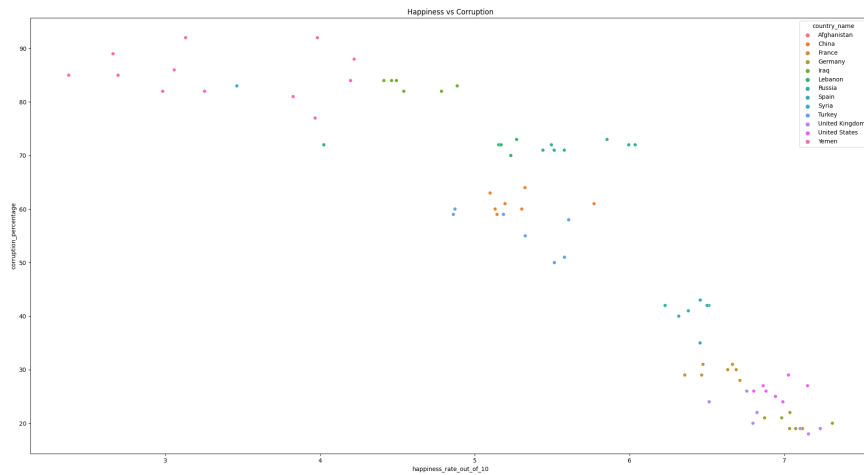
## 1.1 View 1: GDP vs. Happiness

We wanted to see if there was any sort of correlation between a country's level of happiness and their GDP growth for a given year. While some countries exhibited significant differences in terms of happiness levels when compared across extreme cases, overall, it does not appear that economic prosperity is necessarily linked with how content a nation's citizens are.



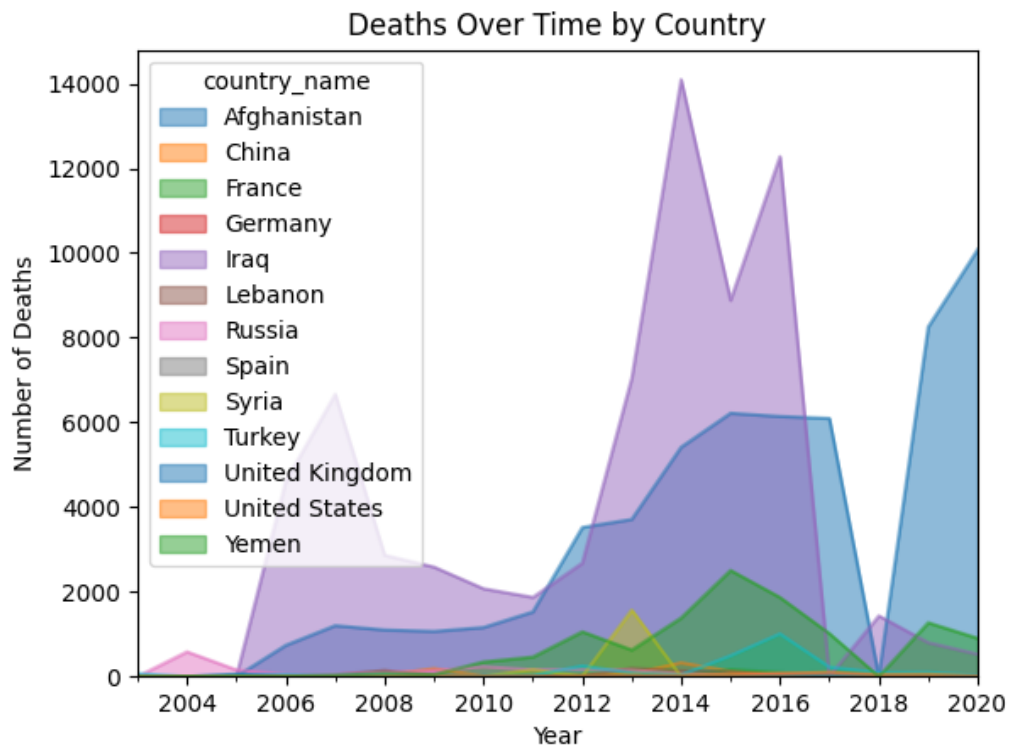
## 1.2 View 2: Corruption vs. Happiness

It is evident from our data that corruption does have an adverse impact on the overall happiness of a nation. The graph reveals that countries with higher levels of corruption tend to score lower in terms of satisfaction, although it isn't completely obvious if this is exclusively responsible for the variance in happiness scores across nations. Nonetheless, it certainly appears that corrupt governments play some role in diminishing the joy and contentment felt by their citizens.



### 1.3 View 3: Number Of Deaths By Country

It appears that the majority of fatalities have occurred in Middle Eastern countries, with France being the only exception. The graph illustrates a significant disparity between these nations and other places worldwide, indicating there may be multiple explanations for this phenomenon - ranging from their level of development to geopolitical factors. It is difficult to pinpoint exactly why so many deaths are concentrated in this region; however, it can be safely assumed that it is an area prone to high levels of danger and violence.



## 1.4 View 4: Armed Personnel Share of Population by Country

The chart reveals that Turkey, Russia and Lebanon are the countries with the highest priority given to military service. This is highlighted by their large portion of their population in reserve for army duty relative to other nations. While this data paints an interesting picture, it does not accurately show the size of each nation's armed forces - China may have one of the smallest portions assigned to reserve duty yet still has a much larger army than many countries on this list due to its greater overall population.

