



# **Exploratory Data Analysis of World Happiness Report 2021**

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**Cool as Code**

MITS GWALIOR

Hackathon 2022

# Introduction

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\*The World Happiness Report is a milestone review of the condition of worldwide joy. The report keeps on acquiring worldwide acknowledgment as governments, associations, and common society progressively uses bliss markers to advise their strategy deciding.”

\*The reports survey the mindset of satisfaction on the planet today and show how the new study of joy clarifies individual and public varieties in joy.



# Questions to answer

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01. How happy are people today?

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02. Were people more comfortable in the past?

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03. How satisfied with their lives are people in different societies?

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04. How do our living conditions affect all of this ?

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05. What is that one factor which makes country Happy?



# Features Analyzed

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## GDP

GDP per capita is a measure of a country's economic output that accounts for its number of people.

## Social Support

Social support means having friends and other people, including family, turning to in times of need or crisis to give you a broader focus and positive self-image.

## Health life expectancy

Healthy Life Expectancy is the average number of years that a newborn can expect to live in “full health”

## Freedom to make life choices

Freedom of choice describes an individual's opportunity and autonomy to perform an action

## Generosity

It is defined as the residual of regressing the national average of responses to the question

## Corruption perception

The Corruption Perceptions Index (CPI) is an index published annually by Transparency International since 1995

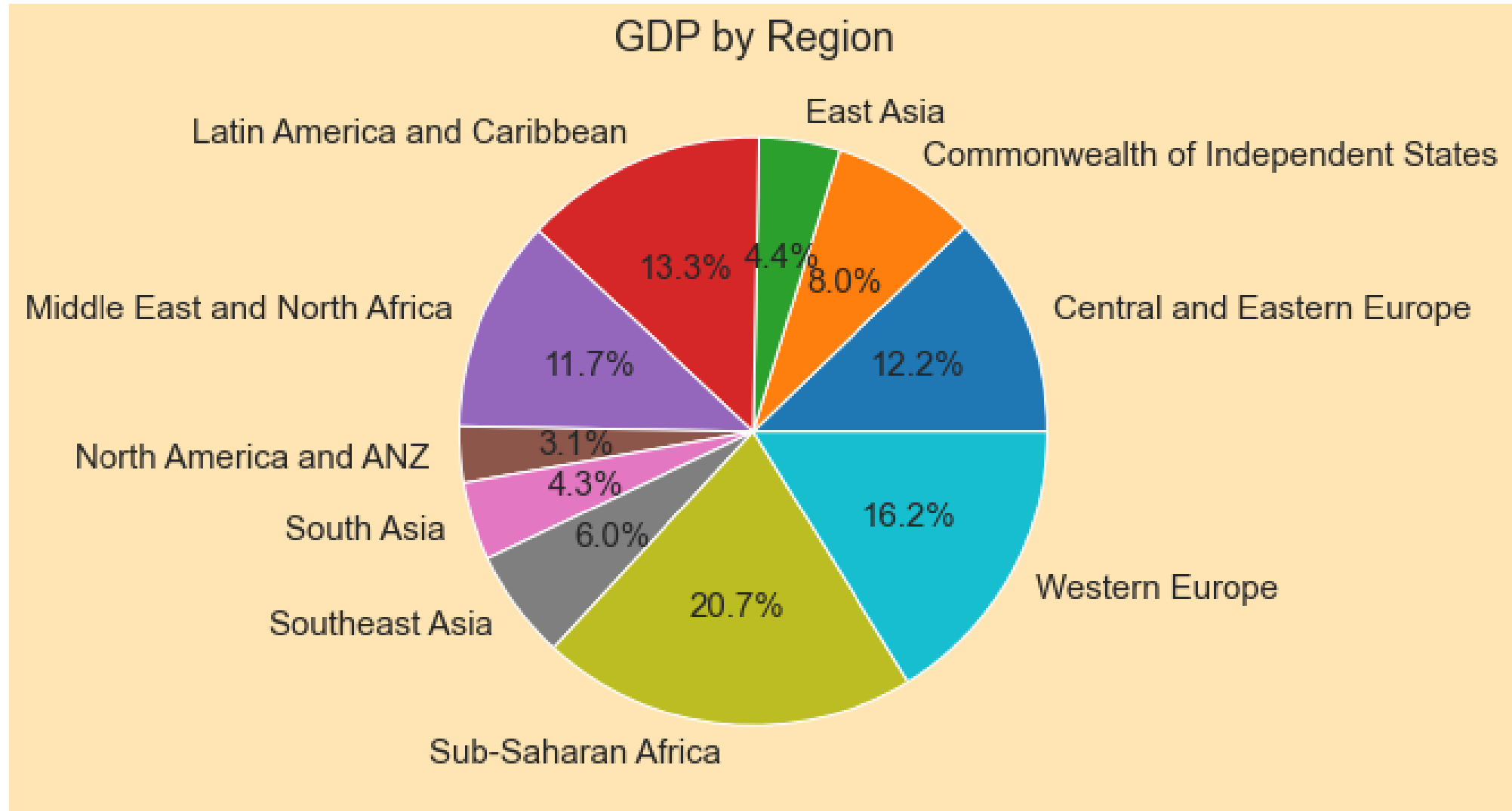
# Effect of GDP on Happiness



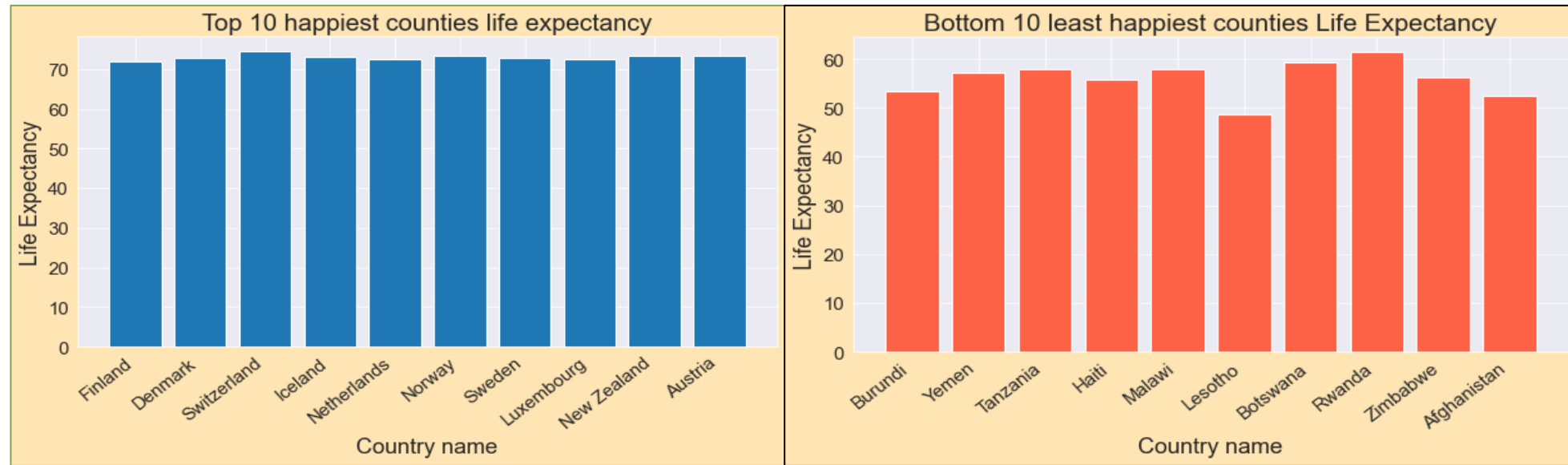
## Observation

- Here it is very easy to see a strong positive correlation between the Logged GDP per capita and the score of happiness between countries.
- The relationship between GDP per capita (Economy of the country) has a strong positive correlation with Happiness Score, that is, if the GDP per capita of a country is higher than the Happiness Score of that country, it is also more likely to be high.

# GDP by Region

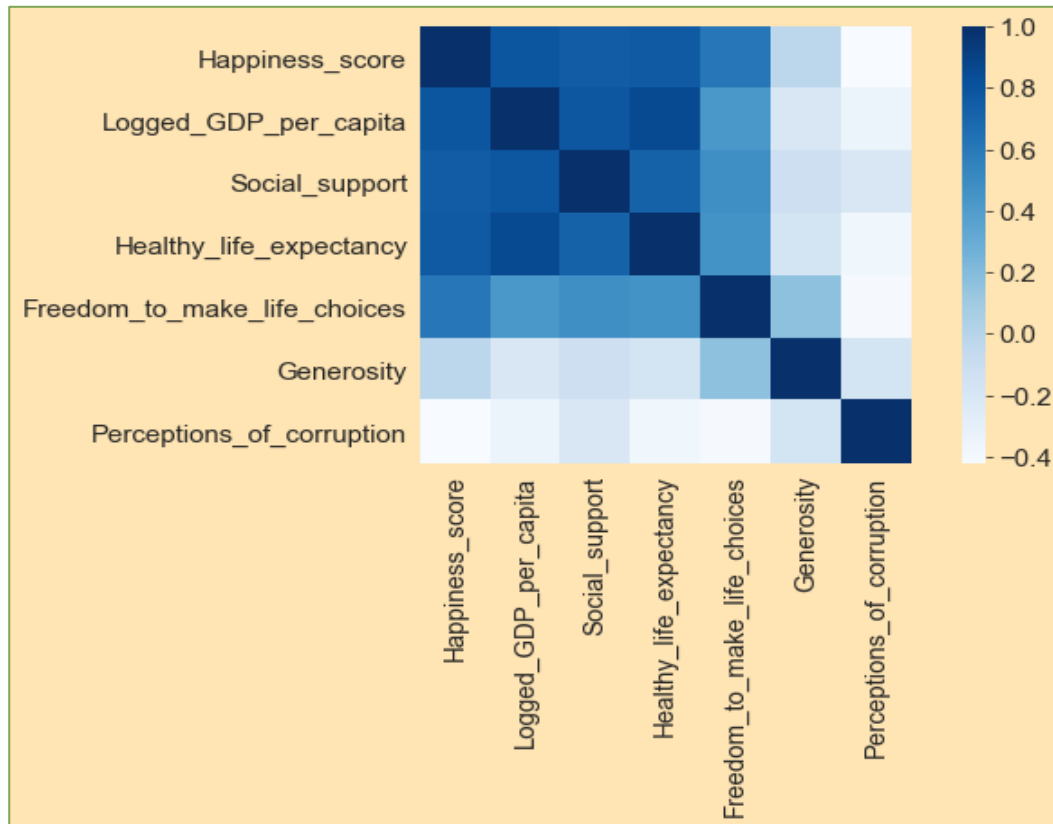


# Life expectancies Impact on Happiness



- A healthy life expectancy has a strong and positive relationship with the Happiness Score.
- If the country has a High Life Expectancy, it can also have a high Happiness Score.
- Being happy doesn't just improve the quality of a person's life. It may increase the quantity of our life as well.
- So the counties with high Life Expectancies are more Happier then less Life Expectancies.

# Effects of various features on happiness score

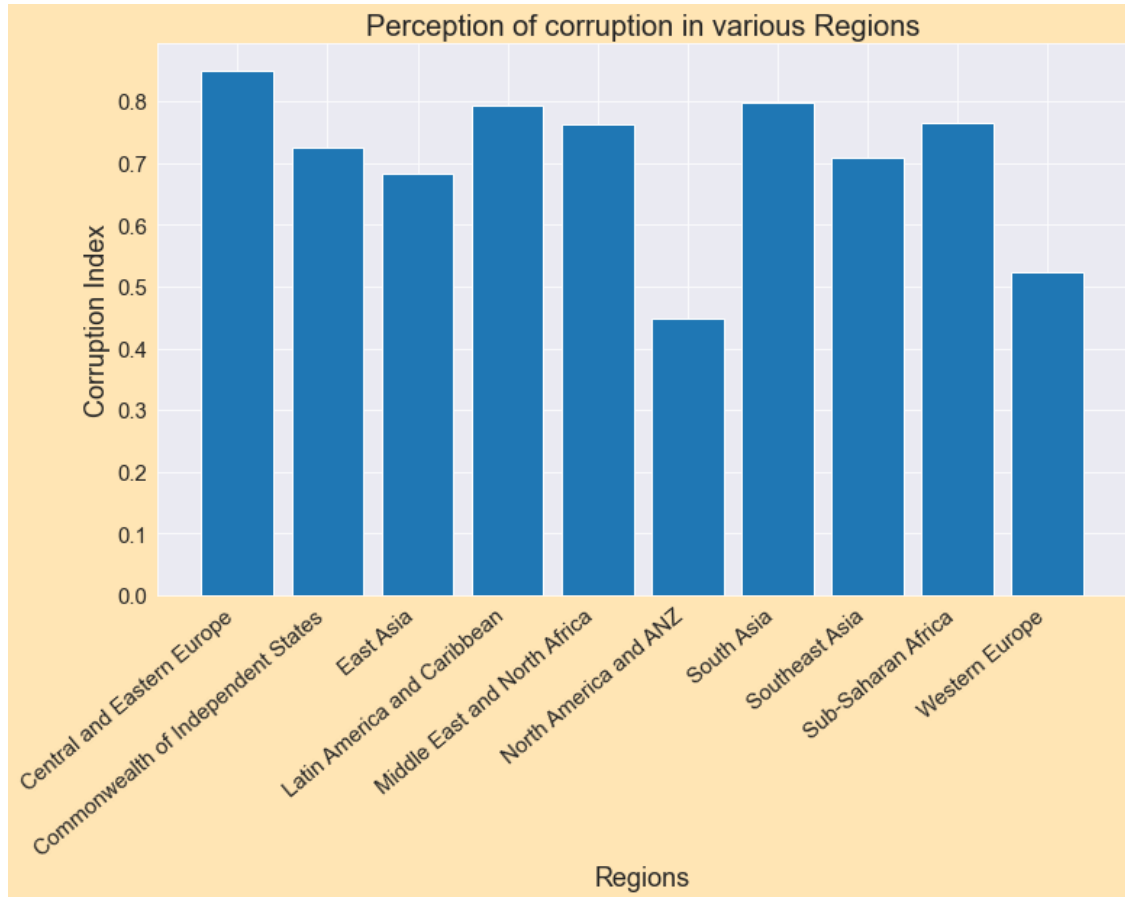


## Observation

- The high correlation between logged GDP per capita and Happiness score.
- The high correlation between healthy life expectancy and social support.
- Weak correlation between ladder score and generosity.
- Our GDP variable has the strongest correlation with our happiness variable, after that comes life expectancy and social support. The generosity felt within a country variable has the lowest correlation.



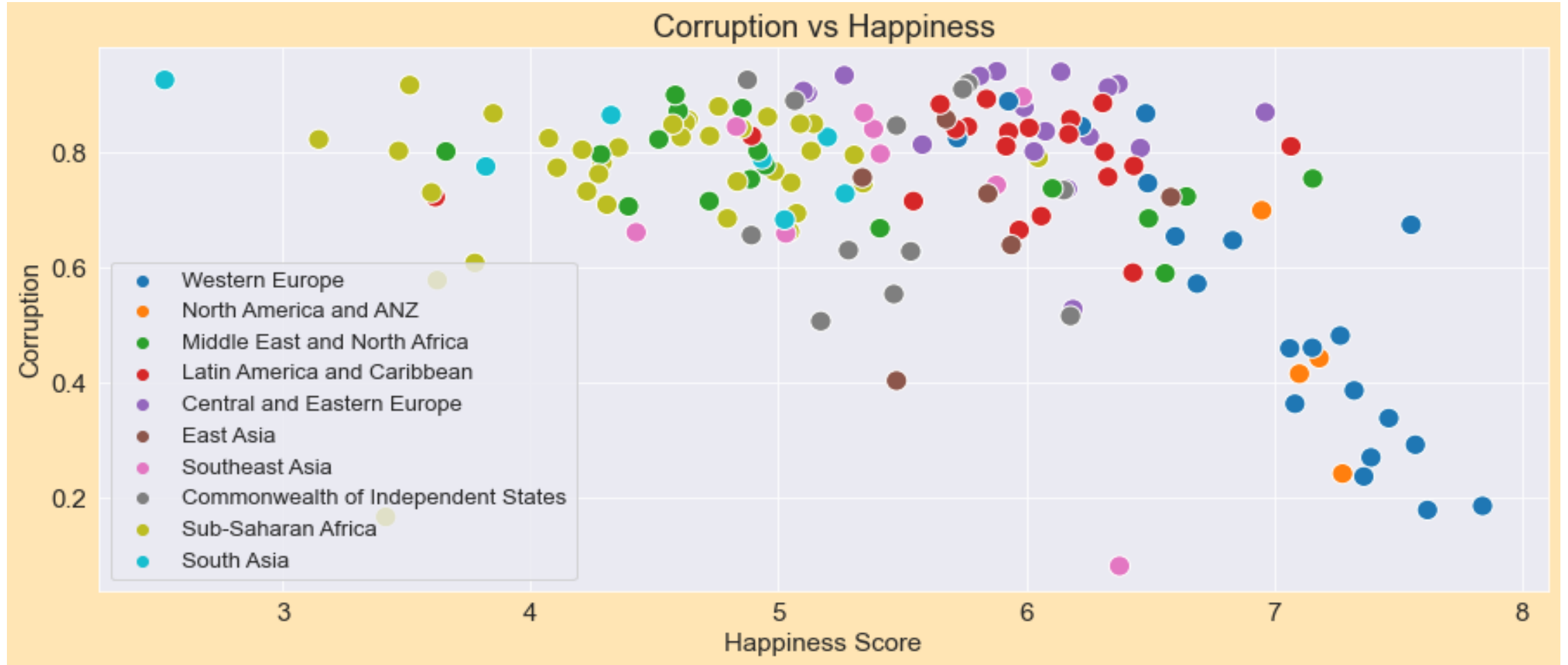
# Perception of corruption in various Regions



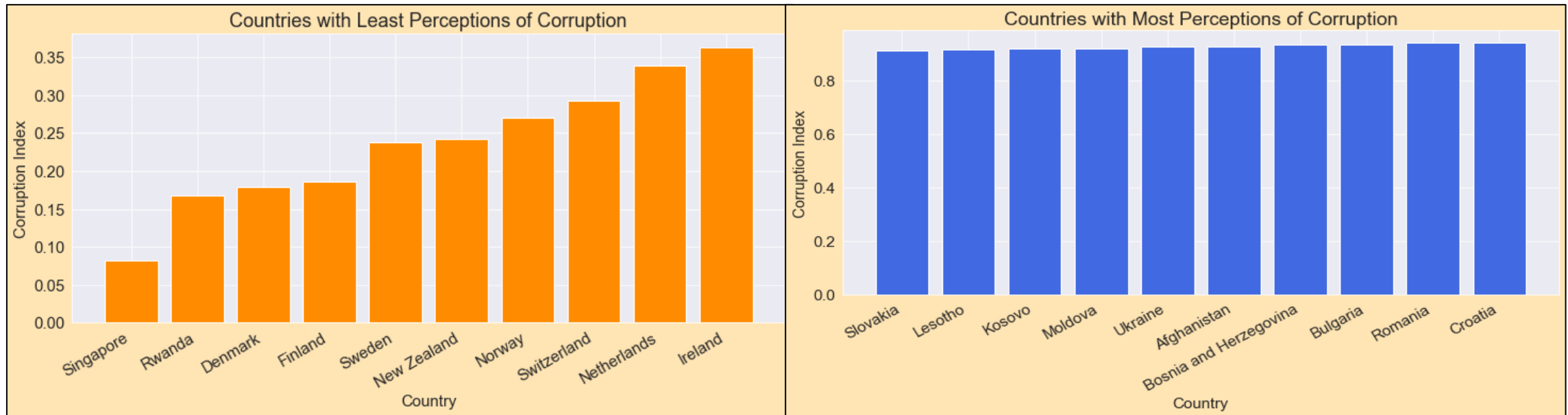
## Observation

- Interestingly most countries do believe (or should I say are very confident) that their country is corrupt.
- Distribution of Perceptions of corruption rightly skewed that means very less number of the country has high perceptions of corruption. That means most of the country has corruption problems.

# How Corruption impact on Happiness Score

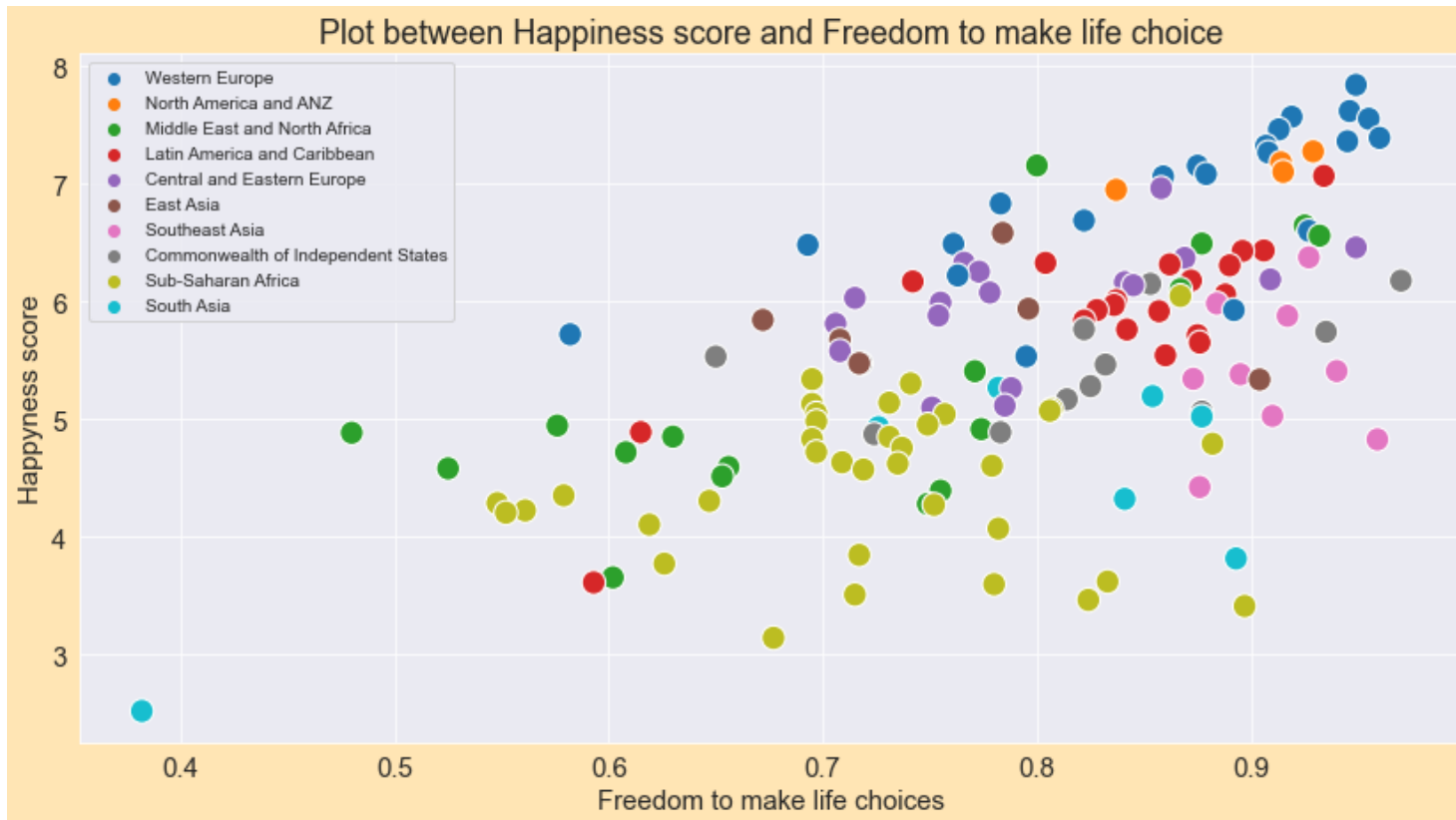


# Effect of Perception of Corruption on Happiness



- Perceptions of corruption data have highly skewed no wonder why the data has a weak linear relationship.
- Still, as we can see in the scatter plot, most of the data points are on the upper right side, and most of the countries with high perceptions of corruption have a Happiness Score between 4 to 6.
- Countries with low perception scores have a high Happiness Score.

# Effect of Freedom to make life choice on Happiness



## Observation

- Freedom to make life choices has a positive relationship with Happiness Score.
- Choice and autonomy are more directly related to happiness than having lots of money. It gives us options to pursue meaning in our life, finding activities that stimulate and excite us. This is an essential aspect of feeling happy.



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To wrap things up, this was an exploratory data analysis into which some countries are considered “happier” than others.


We found that GDP per capita is the most important factor, which would make sense because money allows countries to afford luxuries along with basic resources.

Despite all this, however, there are many, many more things that affect a country’s happiness and I doubt there are models sophisticated enough to accurately measure this.

# Answer to our questions

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- Do high GDP make you happy? We spend 1 month to analyze why people are not satisfied or don't live fulfilling lives. I cared about the "why." After finished analyzing the data, it raises a question: how can we chase happiness?
- At the end of the day thinking, "Is happiness achievable? What's next in this endless pursuit of happiness?"
- Well, we realize we are chasing something random that we believe makes us happy.

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- The dot is finally connected. Happiness can't be a goal in itself. It is merely a byproduct of usefulness.
  - What makes me happy is when I'm useful. Ok, but how? It can be anything, like painting, creating a product, supporting your family and friends, anything you feel like doing. Please don't take it too seriously. And the most important, don't overthink it. Just do something useful. Anything.
  - Stay safe and healthy!



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The data we used is from  
<https://worldhappiness.report/ed/2021> and  
we used Pandas, Matplotlib, and Seaborn for  
data analysis.

### **Code Link**

<https://drive.google.com/drive/folders/1PokxP3NSaQDbI1js3vlyynJeSDrJIRFu?usp=sharing>



# Our team – Cool as code

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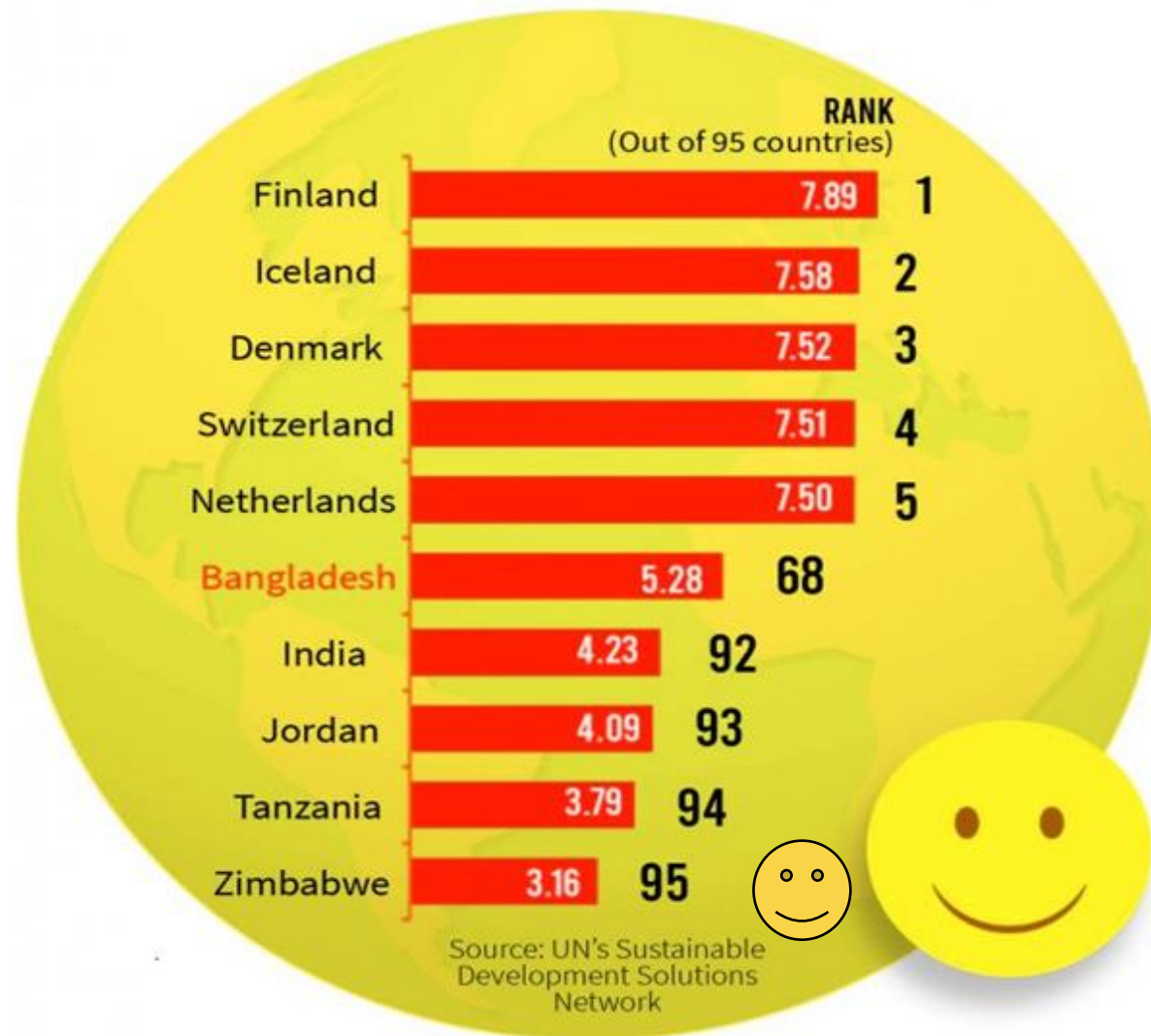
**Utkarsh Tiwari**

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# WORLD HAPPINESS REPORT 2021

Ranking of happiness based on 2020 survey

Score out of 10



## Thank you

We look forward to work together.