

WORLD HAPPINESS

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What makes you happy?

"How does migration impact happiness? For many, the search for a better life goes beyond economics —it's about finding well-being, freedom & family.

The background features a central brain illustration with a rainbow gradient. Three butterflies are positioned around it: one red butterfly on the left, one purple butterfly at the bottom, and one blue butterfly on the right. There are also some small pink dots scattered around the brain.

Introduction

We use data on six factors (GDP, Social Support, Healthy Life Expectancy, Freedom, Generosity, and Corruption) to explain life satisfaction across countries.

Our happiness rankings are based on individuals' personal life evaluations using the Cantril ladder.

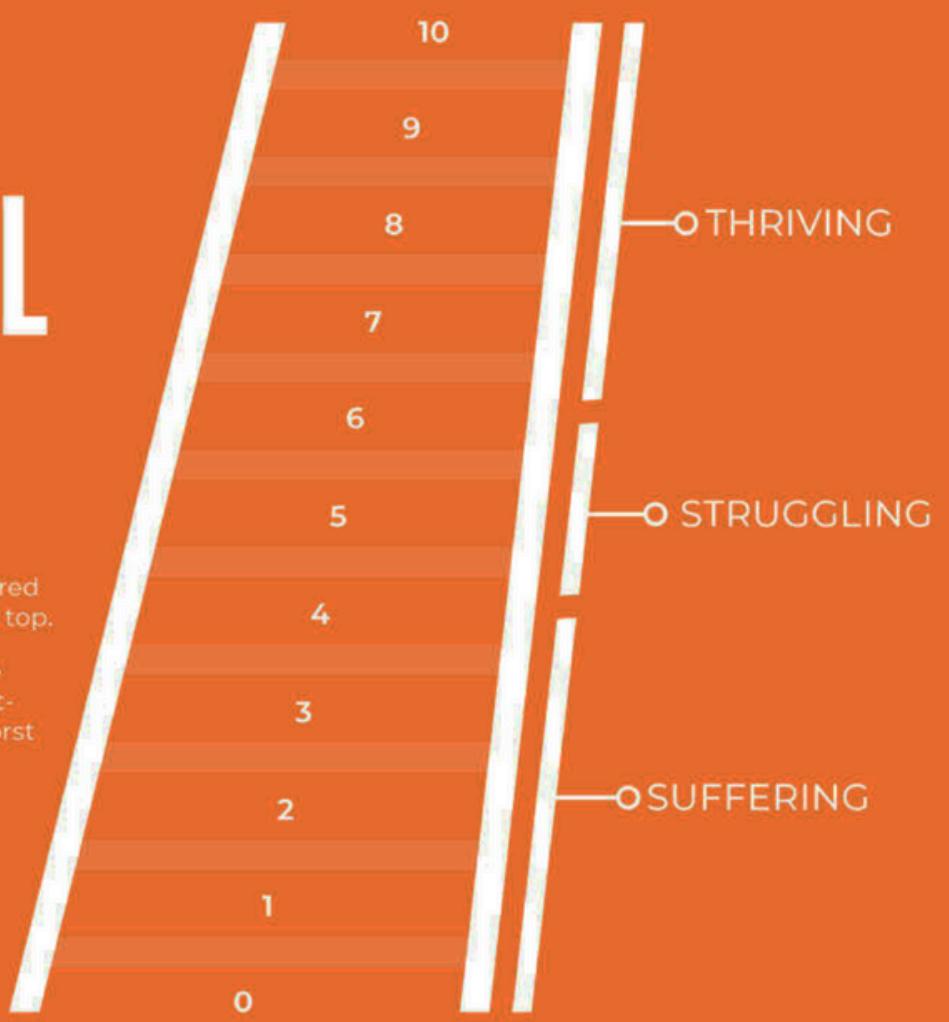
THE CANTRIL LADDER

Imagine a ladder with steps numbered from zero at the bottom to 10 at the top.

The top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you.

On which step of the ladder would you say you personally feel you stand at this time?

On which step do you think you will stand about five years from now?



The Cantril Ladder is a tool used to measure subjective well-being or life satisfaction.

It asks individuals to rate their life on a scale from 0 to 10, where:

- 0 represents the worst possible life,
- 10 represents the best possible life.

— Hadley Cantril

Problem statement and research question

- The WHR reflects a worldwide demand for more attention to happiness and well-being as criteria for government policy.
- It shows how the science of happiness explains personal and national variations in happiness.

In the happiness equation:

(GDP per capita + Social support + Healthy + Freedom + Generosity + Corruption)

Which factor is more important?



Hypotheses

1. Healthy life expectancy has a greater impact on our happiness than GDP.
2. Freedom to make choices has a greater impact on our happiness than GDP.
3. Social support has a greater impact on our happiness than GDP.
4. Generosity has a greater impact on our happiness than GDP.

Data

Acquisition

Kaggle datasets
2018 - 2022

Cleaning

Python:
Create Dystopia, Create Year, Delete
columns, Change data types,
Concatenating the tables, Removing
null values

SQL

ERD, Creating the
database, Loading
clean data,
Summarization

Analysis

Analyzed factors influencing
happiness across countries, such as
GDP, social support, freedom, and
health. Using SQL, we aggregated
data to identify patterns.

Visualization

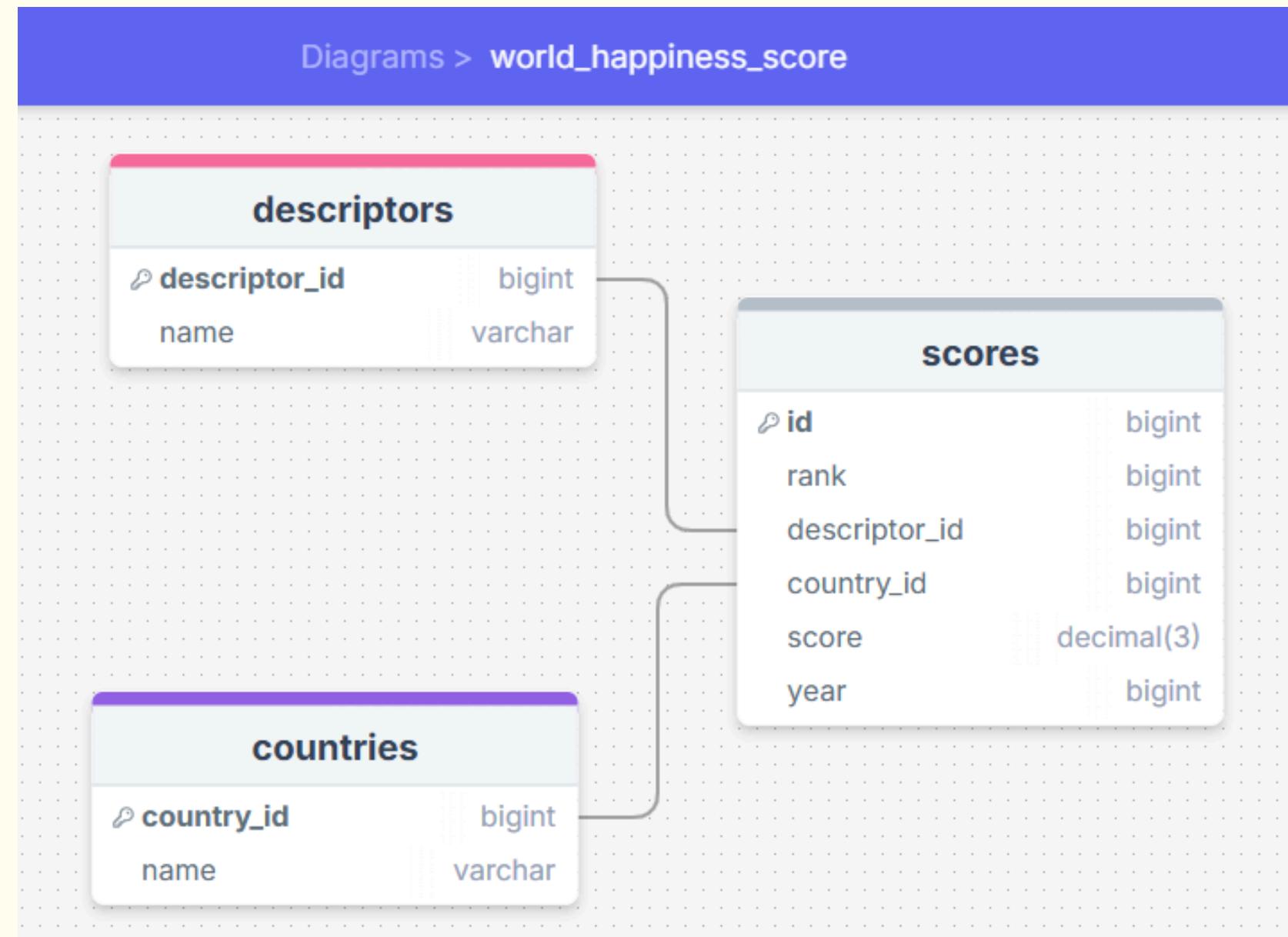
We then created visualizations (bar
charts, heatmaps, and scatter plots)
to clearly present the data, making it
easier to interpret and communicate
insight

Insights

Deeper understanding of the factors
that contribute to well-being



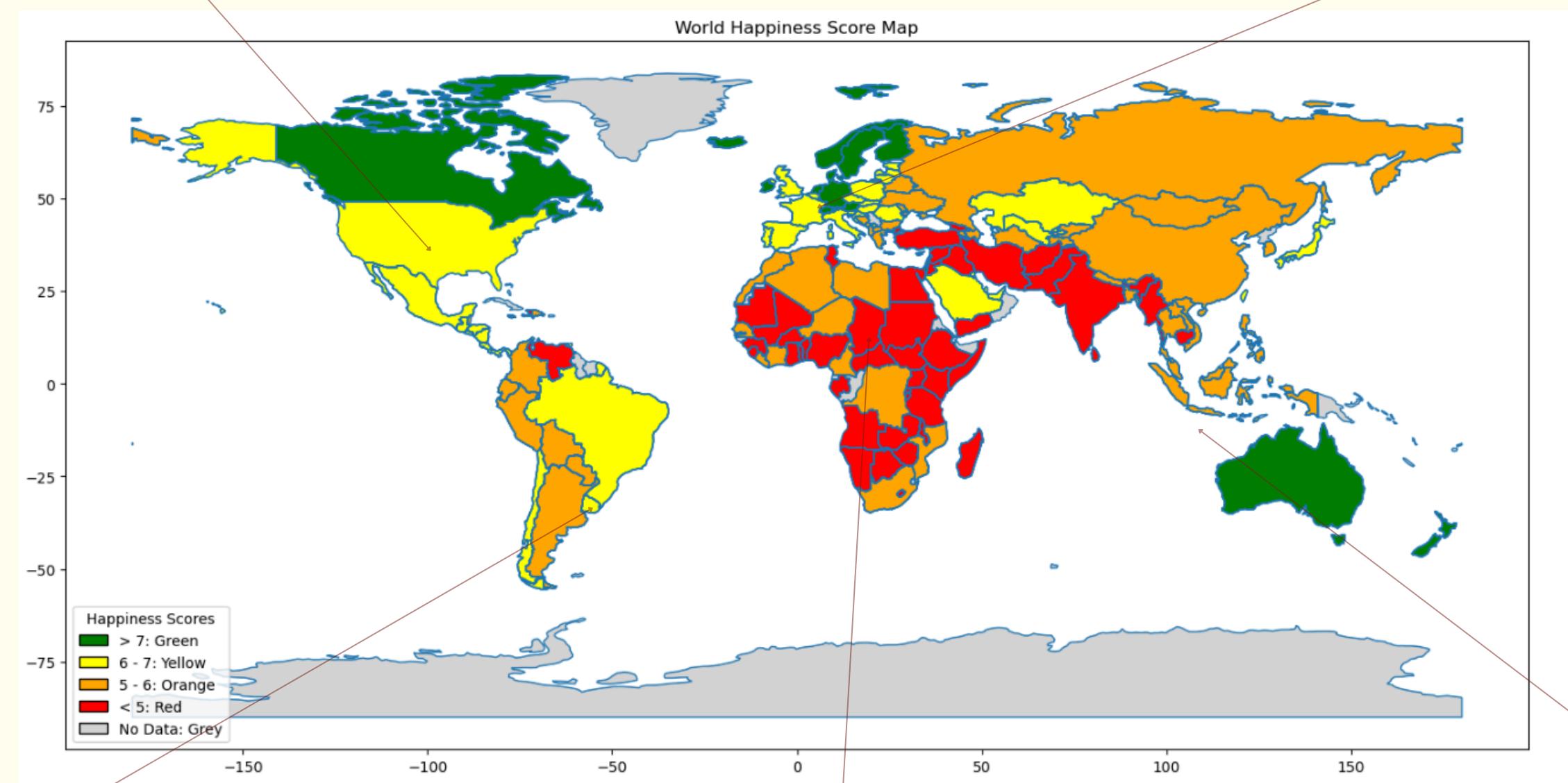
Entity-Relational-Model (ERM)



Happiness around the world

North America

Europe

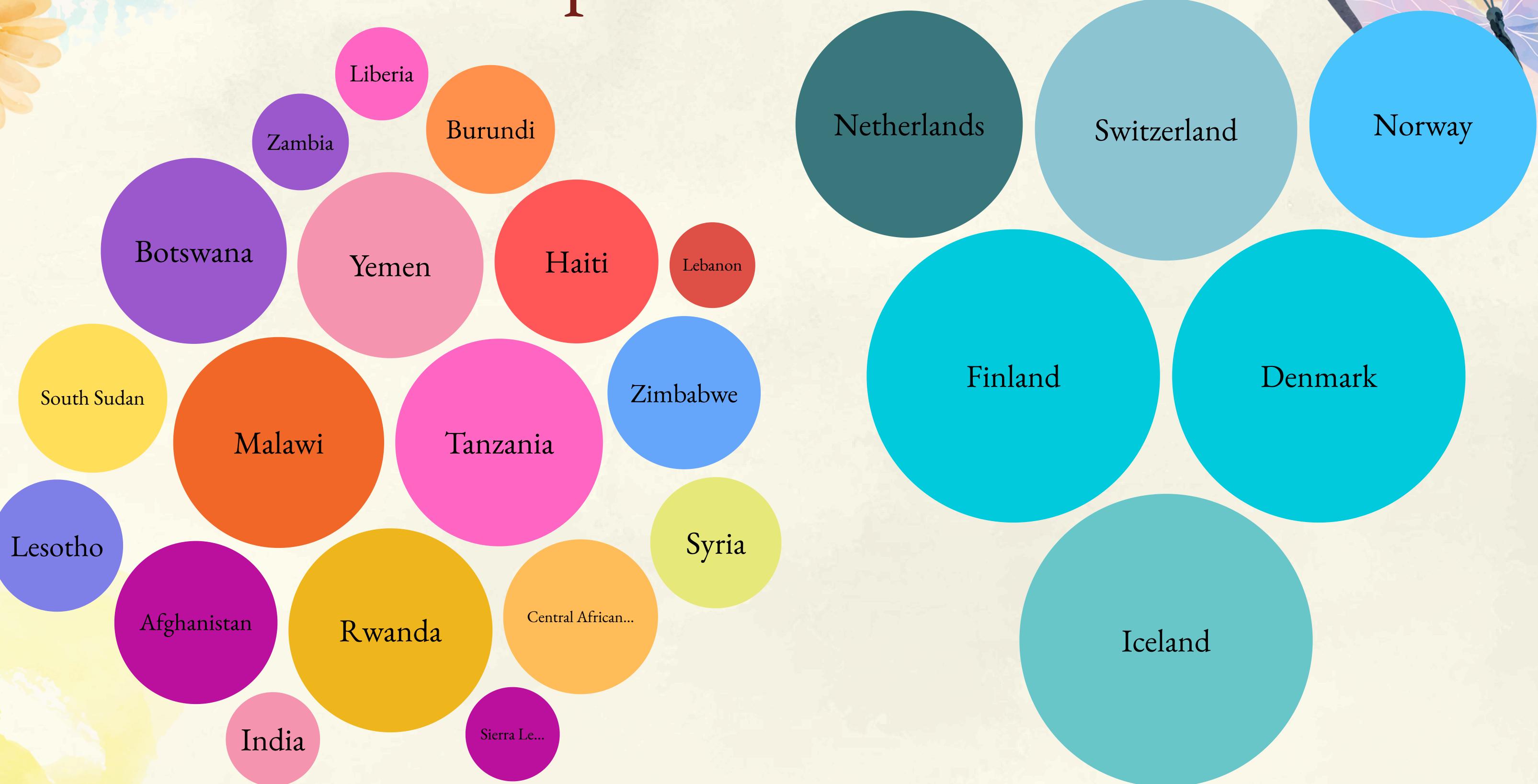


South America

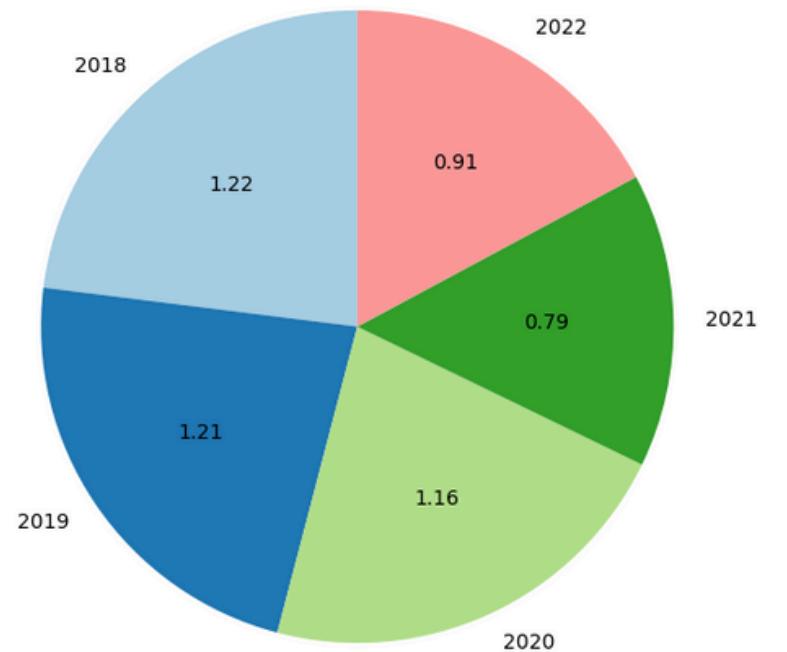
Africa

Asia

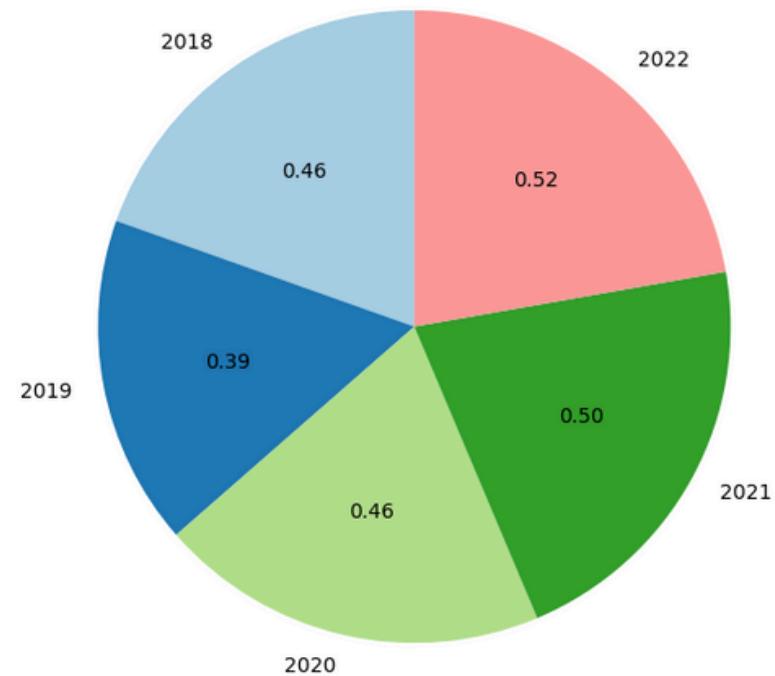
Bottom 10 vs top 5 countries



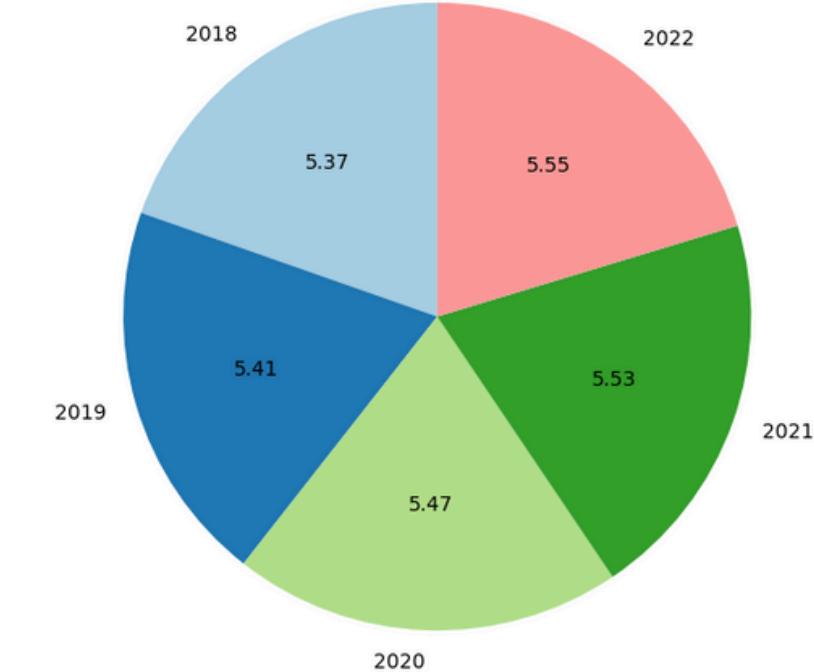
Mean Values of social_support by Year



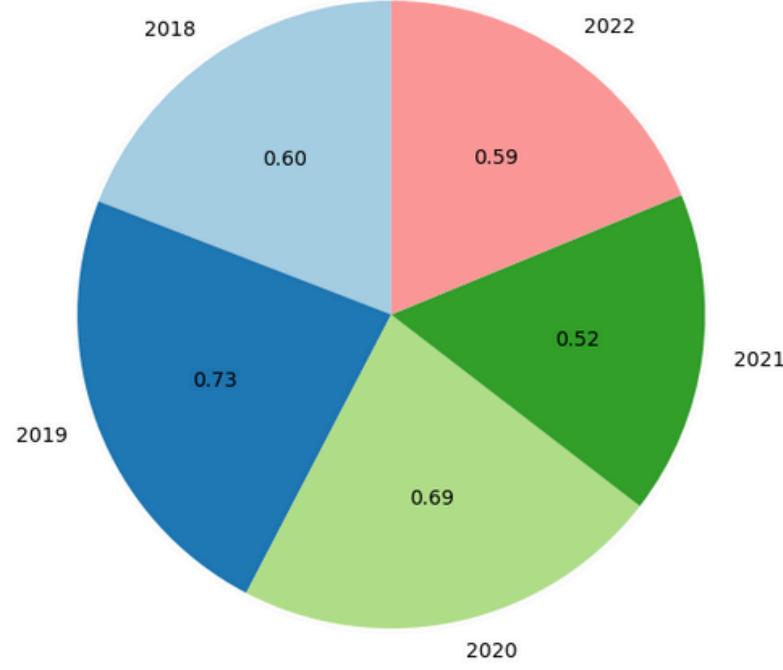
Mean Values of freedom by Year



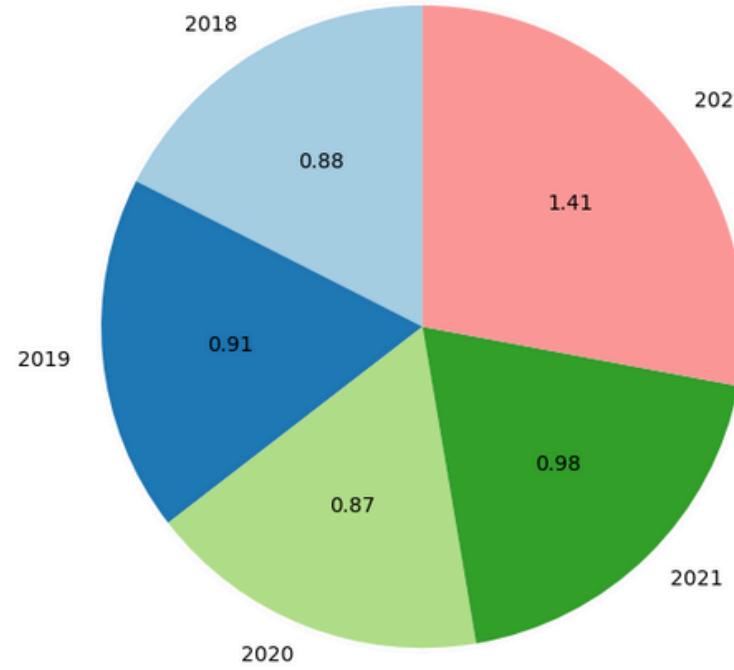
Mean Values of happiness by Year



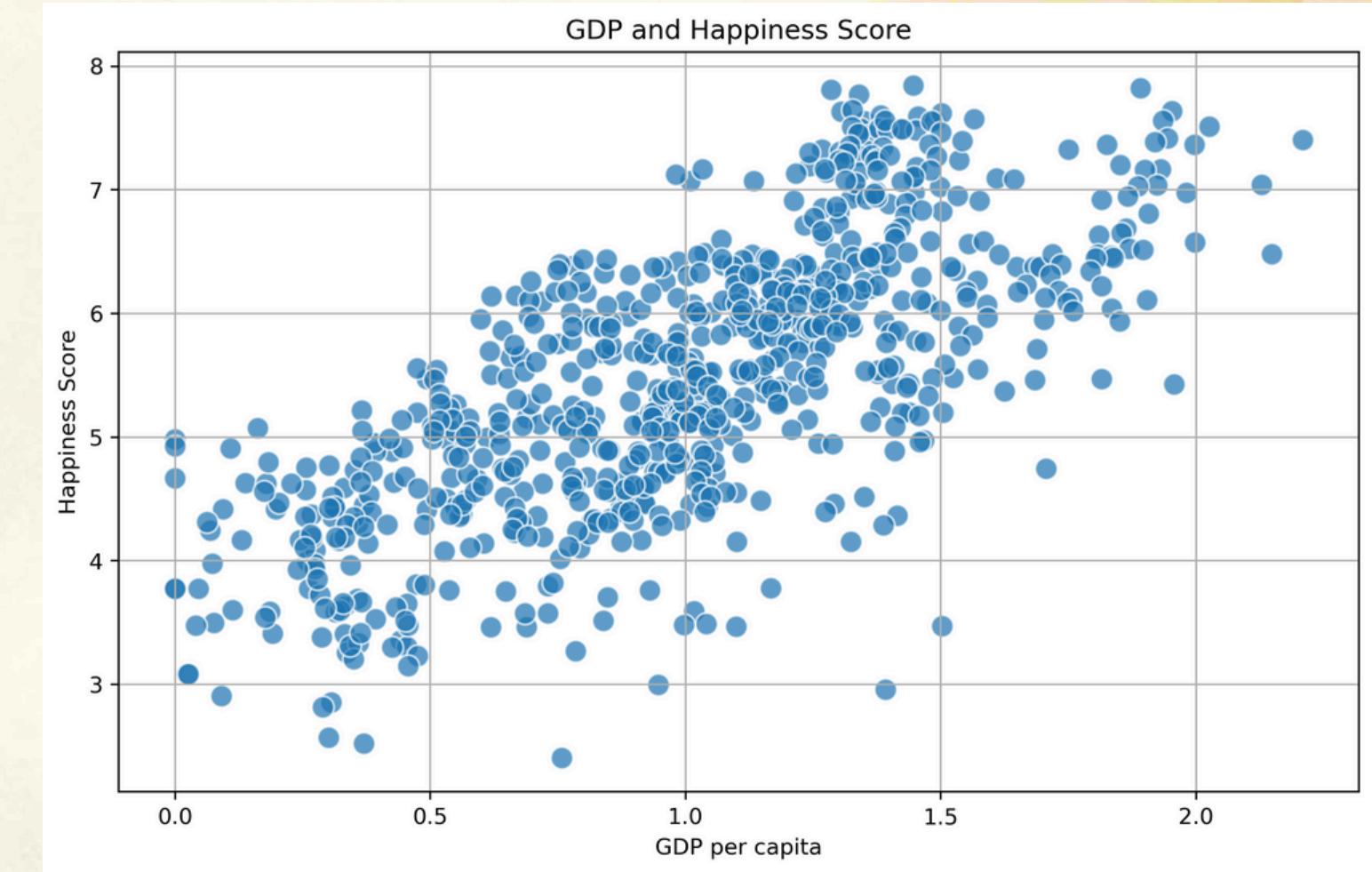
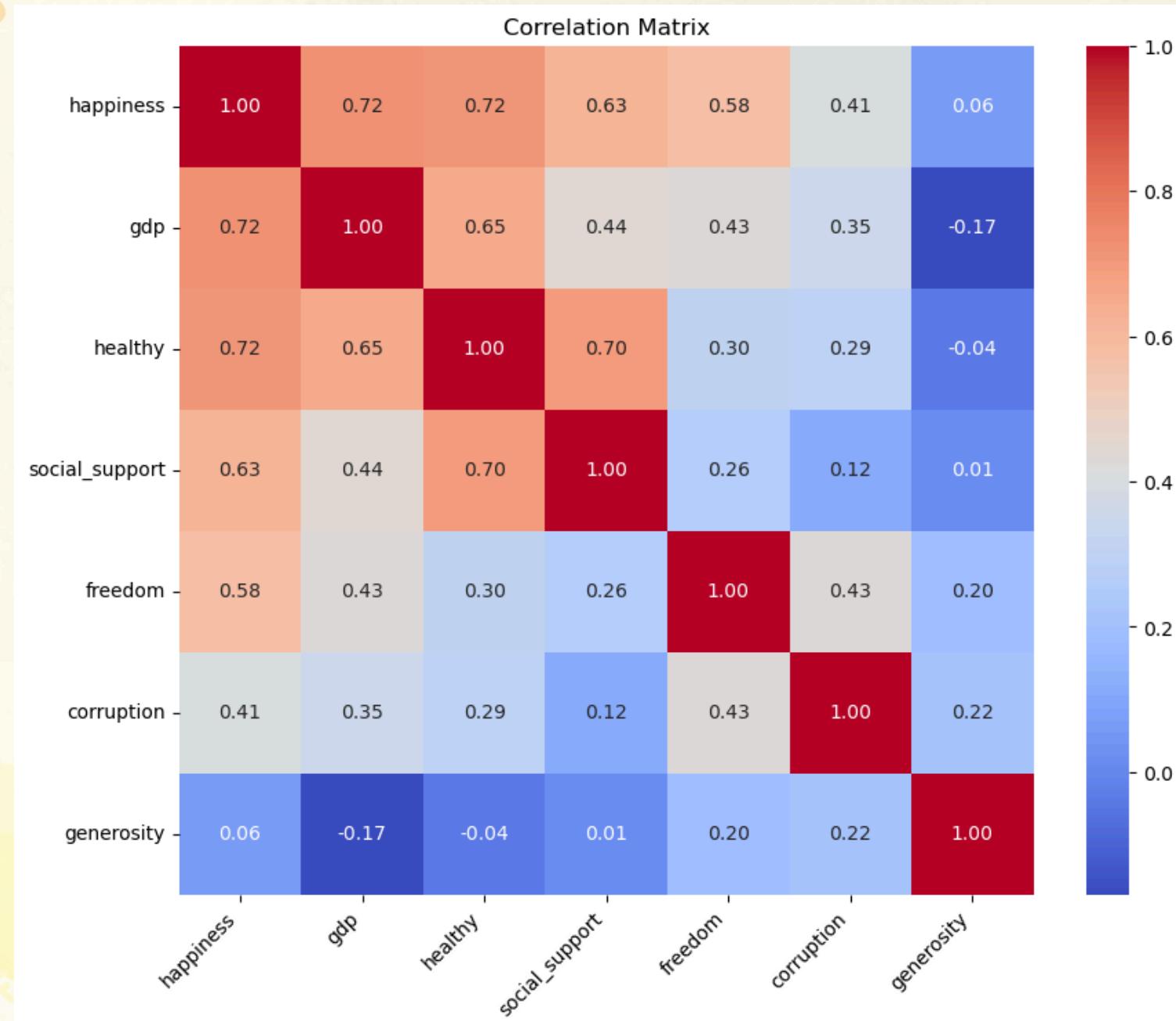
Mean Values of healthy by Year



Mean Values of gdp by Year



Results



Conclusion

OLS Regression Results						
Dep. Variable:	happiness	R-squared:	0.729			
Model:	OLS	Adj. R-squared:	0.728			
Method:	Least Squares	F-statistic:	508.2			
Date:	Thu, 14 Nov 2024	Prob (F-statistic):	2.59e-212			
Time:	17:46:38	Log-Likelihood:	-653.16			
No. Observations:	759	AIC:	1316.			
Df Residuals:	754	BIC:	1339.			
Df Model:	4					
Covariance Type:	nonrobust					
	coef	std err	t	P> t	[0.025	0.975]
const	2.1205	0.085	25.075	0.000	1.954	2.286
gdp	0.8026	0.066	12.202	0.000	0.673	0.932
social_support	0.7700	0.088	8.792	0.000	0.598	0.942
healthy	1.1431	0.144	7.946	0.000	0.861	1.426
freedom	2.1680	0.153	14.215	0.000	1.869	2.467
Omnibus:	28.928	Durbin-Watson:	1.334			
Prob(Omnibus):	0.000	Jarque-Bera (JB):	31.326			
Skew:	-0.471	Prob(JB):	1.58e-07			
Kurtosis:	3.319	Cond. No.	15.6			
Notes:						
[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.						

Freedom to make choices and
Healthy life expectancy have a
greater impact on Happiness
than GDP.

Challenges

- SQL queries may be unsuitable to use for data cleaning or Python might be more suitable, whilst the point of the project is to use SQL
- Choosing and creating effective visualizations to represent complex data.
- Collaboration and communication can be challenging, especially when working with unfamiliar tools.
- Technical issues (VCS) can disrupt progress.
- Time management is critical in a fast-paced setting.

Learnings

- Gained hands-on experience in importing and cleaning data.
- Created insightful visualizations (scatter plots, geo pandas) to display happiness scores across countries, making complex data easy to interpret.
- Statistical Techniques: Used correlation and regression methods to identify key drivers of happiness, linking economic and social factors to life satisfaction.
- Collaboration & Project Management: Worked in a team using Git for version control and Slack for task management, ensuring smooth project execution.
- Task division is key when having about 8 hours for the week

**THANK YOU
DON'T WORRY, BE HAPPY!**



Alvaro, Ceci, Fabian, Lorena

