

Exploring the Insights within the Global Happiness Index

Toh Shao Ern, Kuick Si Qi, Wong Khin Foong, Sebastian Fernandez, Yu Haotong (Group 12)

I. INTRODUCTION

i. Global Happiness Score

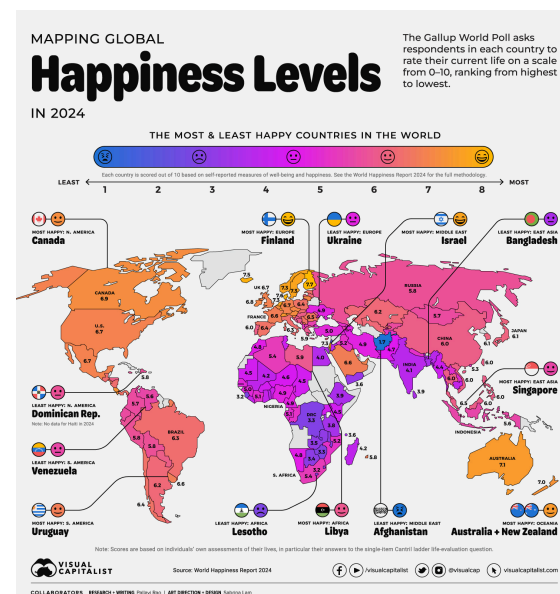
The Life Ladder score, also known as the World Happiness Score, is derived from the Gallup World Poll data. The score is typically calculated based on several key variables that reflect the well-being and quality of life in different countries. Here's a general outline of the formula and components involved in calculating the World Happiness Score:

Component	Description
Life Evaluations (Ladder Question)	Respondents rate their current life from 0 (worst) to 10 (best).
GDP per Capita	Natural logarithm of GDP per capita (PPP terms).
Social Support	Binary response to: "Do you have relatives or friends you can count on for help if needed?"
Healthy Life Expectancy	Life expectancy at birth.
Freedom to Make Life Choices	Binary response to: "Are you satisfied with your freedom to choose what you do with your life?"
Generosity	Donations to charity in the past month, adjusted for GDP per capita
Perceptions of Corruption	Perceived corruption in government and business.
Positive and Negative Affect	Average responses to questions about recent experiences of positive and negative emotions (e.g., laughter, enjoyment, sadness, and anger).

The World Happiness Score is calculated using a regression model that combines these variables to predict the happiness score for each country.

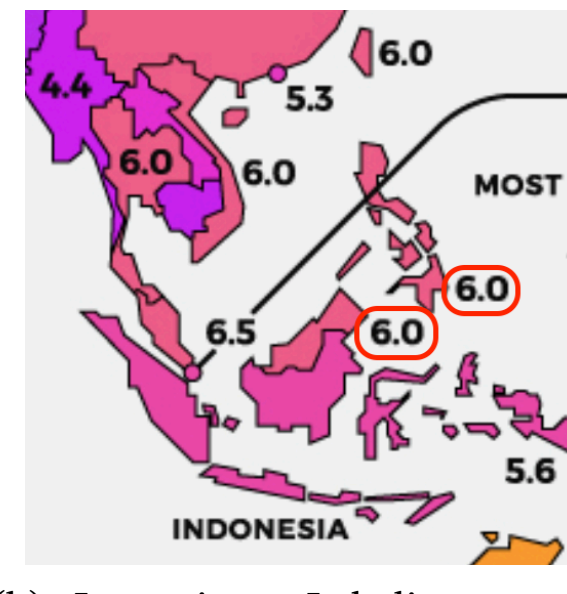
ii. Visualcapitalist's Global Happiness Levels Previous Visualisation

The following Figure 1 from Visualcapitalist presents the global happiness levels in 2024, as reported in the World Happiness Report (WHR). The static world map provides a visual representation of the happiness scores across different countries, with the color gradient indicating the relative happiness levels. The visualization aims to highlight the disparities in happiness levels worldwide and the factors that contribute to these variations. However, through our critical analysis, we identified several strengths and weakn the original visualization that we aim to improve as detailed below.



(a): Global Overview World map of Happiness Levels in 2024

Figure 1: Visualcapitalist Global Happiness Levels Report



(b): Inconsistent Labeling example

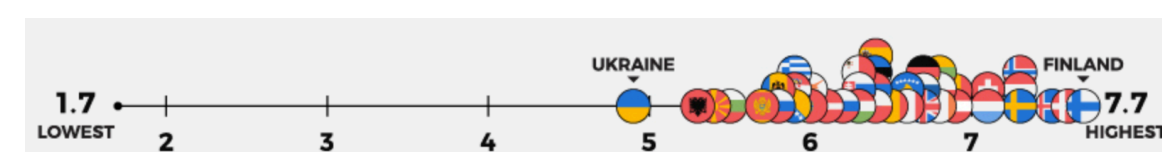


Figure 2: Linear scale of Happiness score of each country by region

II. METHODS

i. Data Understanding and Cleaning

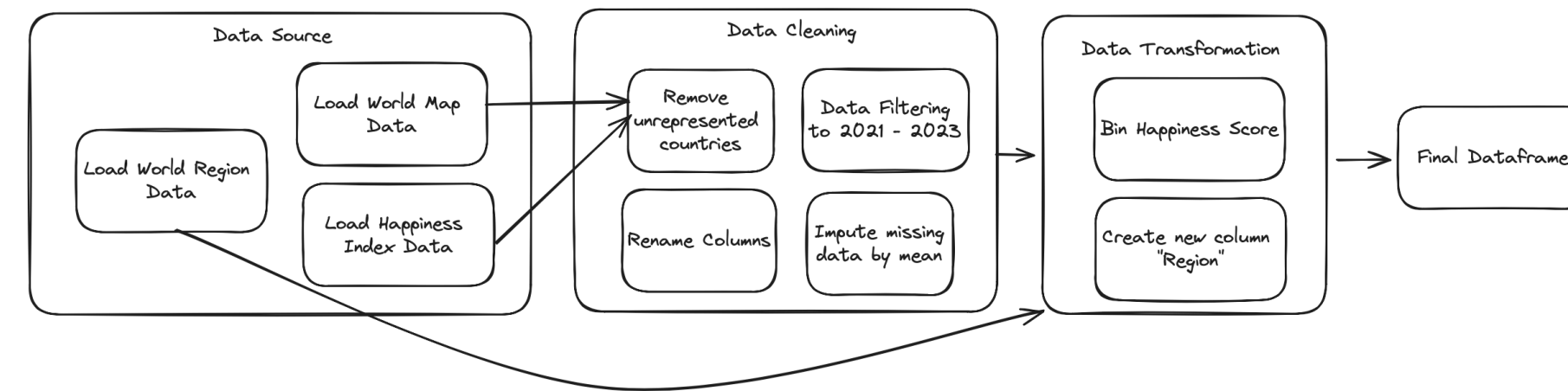


Figure 3: Data Prep Pipeline

ii. Create violin plot

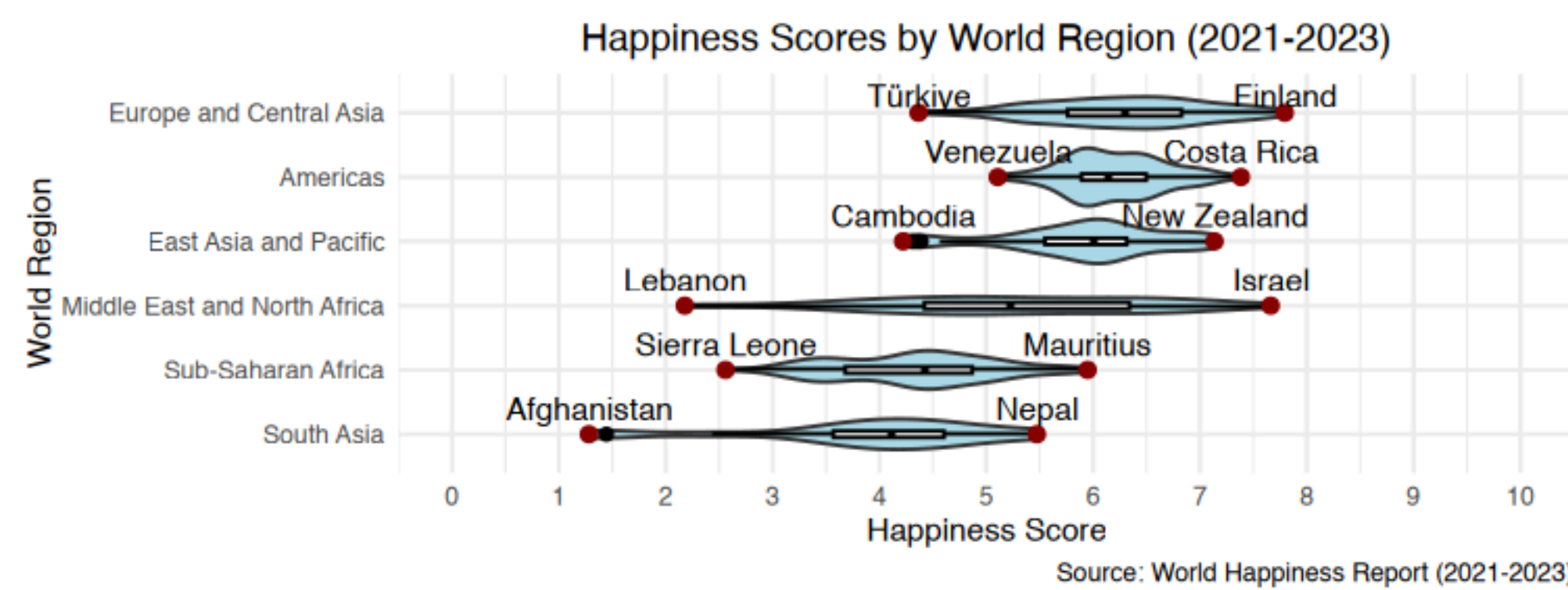


Figure 4: Violin Plot of Average Happiness Levels by World Region (2021-2023)

iii. World Map

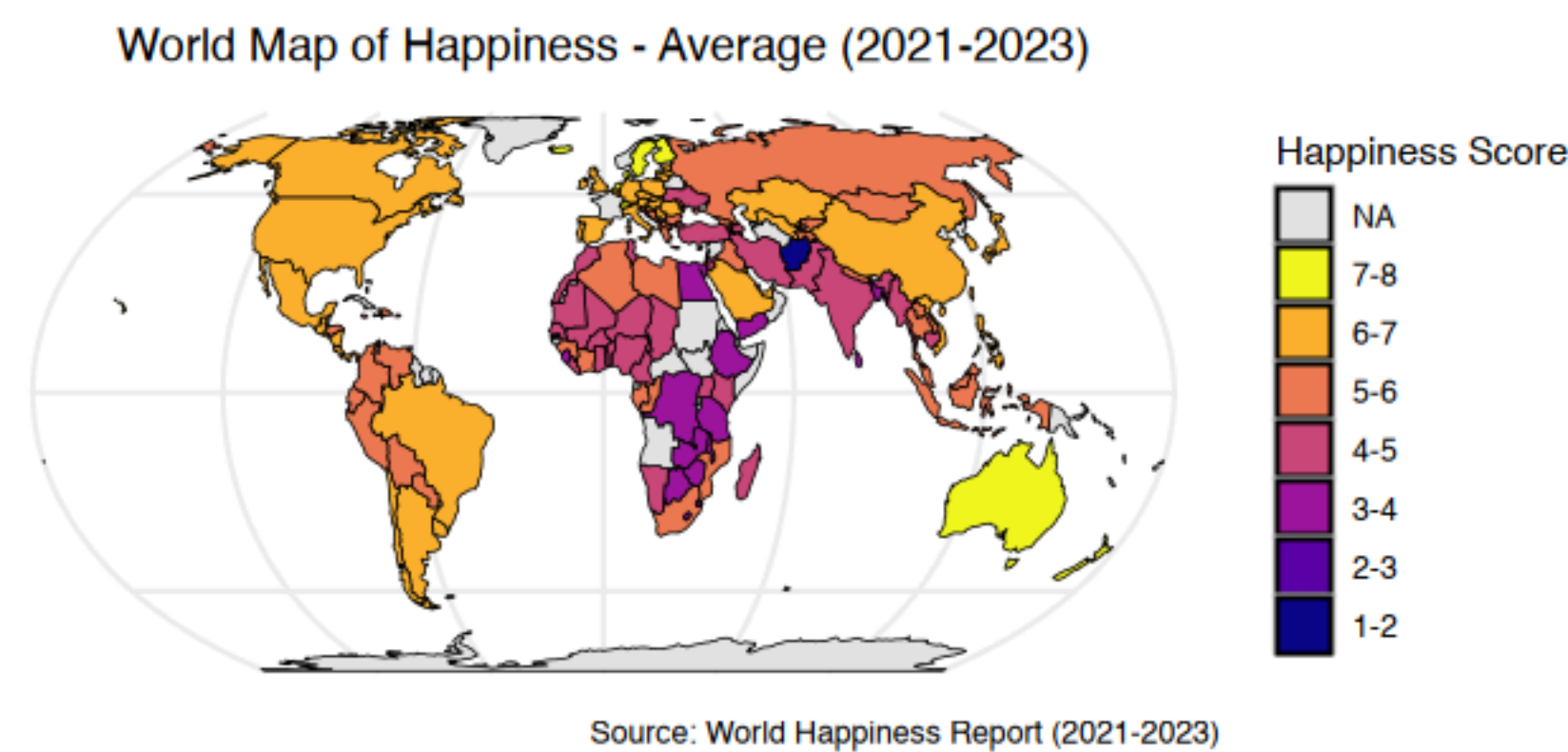


Figure 5: World Map of Average Happiness Levels (2021-2023)

iv. Distribution Chart of Scores

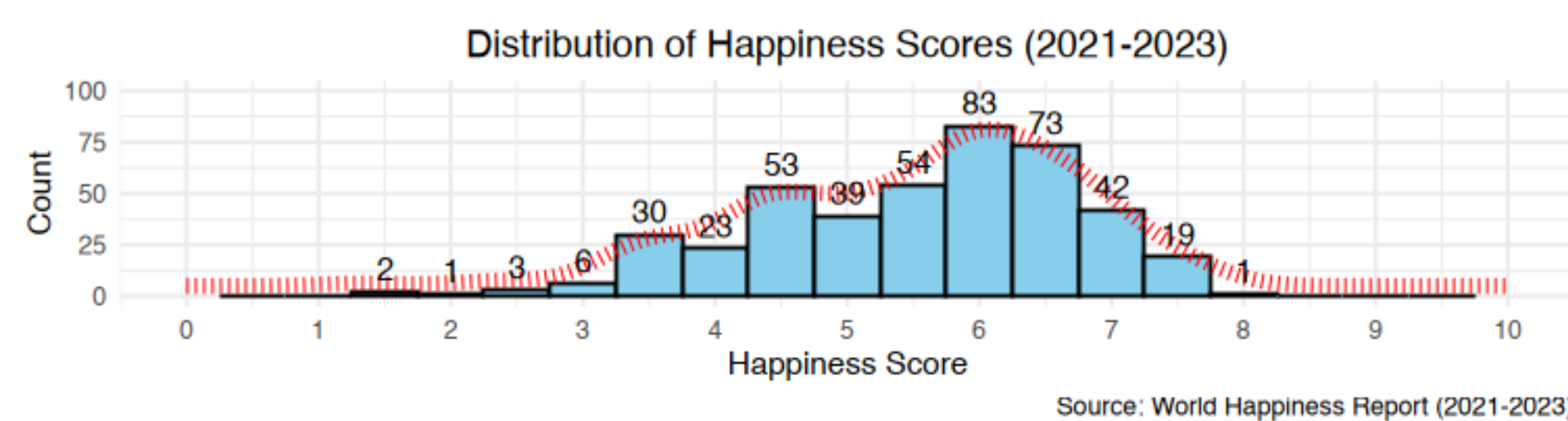


Figure 6: Distribution Histogram of Average Happiness Levels (2021-2023)

III. FINDINGS

IV. CONCLUSION

V. ACKNOWLEDGEMENT