



# Global Happiness and Influencing Factors

PREDICTIVE ANALYSIS OF HAPPINESS SCORE USING ECONOMIC AND SOCIAL INDICATORS

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## INTRODUCTION

This report thoroughly examines the relationship between each country's happiness score and crucial economic and social metrics like GDP per capita, social support, healthy life expectancy, and perceptions of corruption. Our analysis aims to equip stakeholders with insights to promote policies that enhance well-being. Understanding these factors allows for targeted interventions to improve global happiness outcomes.

The coefficients in our model indicate the extent to which each indicator affects the happiness score. For instance, 'perceptions of corruption' have a remarkably high coefficient suggesting a strong inverse relationship with country's happiness levels. Furthermore, the analysis is quantified through metrics such as R-squared ( $R^2$ ), Mean Absolute Error (MAE), and Root Mean Square Error (RMSE), which help in evaluating the performance of our predictive model.

The term 'GDP per capita' refers to the average economic output per person and is a general measure of a nation's economic well-being. 'Social support' measures the extent of support individuals receive from their social network, which significantly impacts their emotional health. 'Healthy life expectancy' is the average number of healthy years a person is expected to live based on current health and healthcare trends, whereas 'perceptions of corruption' reflect how corrupt a country's public sector is perceived to be by its citizens and the international community.

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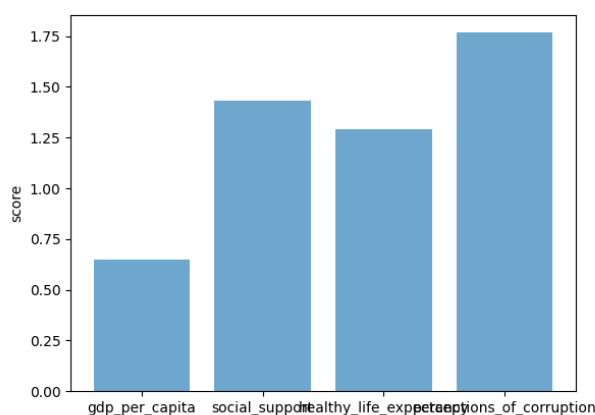
# Global Happiness and Influencing Factors

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## OVERVIEW OF ATTRIBUTES AND THEIR IMPACT ON SALES

### Impact of Different Media on Sales



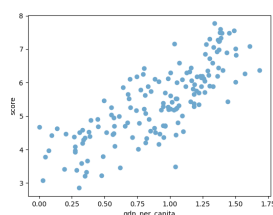
**GDP per Capita:** A coefficient of **0.650** implies that higher GDP is moderately associated with greater happiness.

**Social Support:** With a coefficient of **1.432**, this suggests that stronger social networks significantly boost happiness scores.

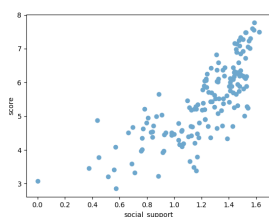
**Healthy Life Expectancy:** The coefficient of **1.291** highlights its strong positive impact on happiness.

**Perceptions of Corruption:** The highest coefficient of **1.767** suggests that lower corruption is strongly linked to higher happiness.

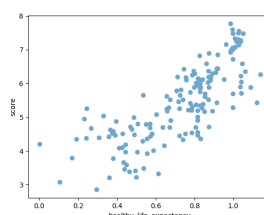
### Visual Insights



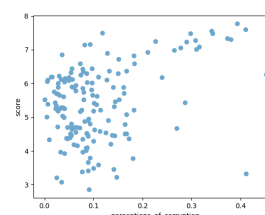
Bar graph showing coefficients of different factors influencing happiness scores, highlighting that perceptions of corruption have the highest impact.



Scatter plot displaying a positive trend between GDP per capita and happiness scores, showing variability in scores with increasing GDP.



Scatter plot illustrating a strong positive correlation between social support and happiness scores, indicating a cluster at higher values of both metrics.



Scatter plot demonstrating a positive correlation between healthy life expectancy and happiness scores, with data points clustered towards higher values.

### Model Performance Indicators

The predictive model shows good accuracy with an R-square of **0.722**, indicating approximately 72% of the variance in happiness scores is explained by our model. The Mean Absolute Error (MAE) is **0.405** which is quite low, showing that our predictions deviate from the actual scores by less than half a point on average. The Mean Squared Error (MSE) and Root Mean Squared Error (RMSE) are **0.270** and **0.520** respectively, underscoring the model's reliability in predicting happiness scores with minimal error.

#### AI WARNING

This document contains content that has been generated by an artificial intelligence model. While the information presented is based on data-driven analysis, it is important to exercise caution and critical thinking when interpreting the results. Human oversight and expert judgment are essential to ensure the accuracy and relevance of the insights provided.