

Project Proposal

Submitted By:
Cadet, Marckenrold
Burkhart, Alexander

In Partial Fulfillment of the
Requirements for
Data Science

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I. Background of the Study

The pursuit of societal well-being has become a paramount concern for policymakers, researchers, and stakeholders worldwide. Understanding the complex interplay between national happiness, suicide rates, economic indicators, and bankruptcies is crucial for developing effective interventions to promote mental health and economic stability. This project seeks to delve deep into these relationships using multidimensional datasets and advanced analytical techniques.

II. Requirements Analysis

1. Identify the key variables and datasets required for the analysis, including suicide rates, happiness scores, economic indicators, and bankruptcy rates.
2. Determine the scope and objectives of the project, including the exploration of correlations, identification of trends, and development of predictive models.

III. Proposed Solution

1. Employ Data Exploratory Analysis (DEA) methods to analyze the efficiency of countries in terms of happiness, suicide rates, and economic factors.
2. Utilize statistical modeling techniques, such as regression analysis and machine learning algorithms, to uncover complex relationships and patterns within the datasets.
3. Develop interactive visualizations using Tableau to present the findings in an intuitive and compelling manner.

IV. Visualization with Dashboard

1. Home Page/ Basic Search: Provides a simple interface for users to access basic information about the project.
2. Home Page/ Advanced Search: Offers advanced search options for users to explore the data using customizable filters and parameters.
3. About Us Page: Provides background information about the research team, project goals, and methodology.
4. Links Page: Curates relevant resources, publications, and references related to the project topic for further exploration.

V. Exploration Analysis

1. Merge the different data sets together to create one unique data set
2. Conduct preliminary exploratory data analysis to understand the distribution, variability, and characteristics of the datasets.
3. Identify outliers, missing values, and data inconsistencies for preprocessing and cleaning.
4. Visualize key relationships and trends using descriptive statistics, scatter plots, heatmaps, and other graphical representations.

VI. Data Sets

Suicides risk factors. Data available for years 2000-2019

Source:

<https://www.kaggle.com/datasets/willianoliveiragibin/suicides-risk-factors/data>

World Happiness Report. Data available for years 2012, 2015-2023

Source: <https://worldhappiness.report/data/>

Word Economy - GDP - Data available for years 1960 - 2022

Source:

<https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?end=2022&start=1960&view=chart>

Bankruptcies per country. Data available 2011-2019

Source: <https://stats.oecd.org/Index.aspx?QueryId=74180>

VII.Expected Outcomes

1. Gain insights into the multifaceted relationships between national happiness, suicide rates, economic factors, and bankruptcies.
2. Identify key drivers and determinants of societal well-being, informing evidence-based policy recommendations and interventions.
3. Develop interactive visualizations and reports to communicate the findings effectively to diverse stakeholders and the general public.

VIII. Conclusion

Through a comprehensive exploration of the complex interconnections between happiness, suicide rates, economic factors, and bankruptcies, this project aims to contribute valuable insights to the fields of public health, economics, and social policy. By leveraging advanced analytical techniques and interactive visualization tools, we seek to advance our understanding of societal well-being and inform strategies for building happier, healthier, and more resilient communities.