

Final Project Report Template

1. Introduction

1.1. Project overviews

- This project aims to analyze and potentially refine the concept of an "Index of Economic Freedom" by examining its constituent components, methodologies, and resulting rankings. We will explore the relationship between economic freedom and various indicators of prosperity, such as GDP growth, income inequality, innovation, and social development.

2.1. Objectives

- To critically assess the methodologies used in prominent economic freedom indices (e.g., those by The Heritage Foundation and the Fraser Institute).
- To identify the strengths and weaknesses of these indices, including potential biases in data and weighting.
- To analyze the validity and reliability of the indicators used to measure economic freedom.

2. Project Initialization and Planning Phase

2.1. Define Problem Statement

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	Indonesia	Rule of Law: Concerns persist regarding property rights, judicial effectiveness, and government integrity. Corruption remains a significant issue	There is room for improvement regarding investment freedom	Indonesia's large and diverse economy presents both opportunities and challenges. Ongoing government reforms play a crucial role in shaping economic landscape	Indonesia
PS-2	India	Rule of Law: Issues persist regarding property rights, judicial effectiveness, and government integrity. Corruption remains a significant challenge.	Government Size: There are concerns about the level of government intervention in the economy	Government Size: There are concerns about the level of government intervention in the economy. The informal economy plays a substantial role.	Regret
PS-3	Afghanistan	Compiling accurate and up-to-date economic data is a major hurdle. Many International sources have incomplete data on	This data scarcity makes it difficult to produce a precise and reliable economic freedom index	Afghanistan faces a serve humanitarian crisis, with widespread poverty,food,insecurity ,and limited access to basic services	Sad

		Afghanistan	score		
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2.2. Project Proposal (Proposed Solution)

Project Overview	
Objective	The project’s primary Objective is to measure how economic freedom influences prosperity in countries by evaluating factors like government regulations, trade policies , legal frameworks, and fiscal practices
Scope	The project will assess the economic freedom of nation worldwide ,categorizing and ranking them based on a variety of indicators
Problem Statement	
Description	An "Index of Economic Freedom" analysis project statement aims to measure and compare the economic freedom of different jurisdictions, using factors like trade freedom, tax burden, and judicial effectiveness to gauge the pulse of prosperity.
Impact	The Index of Economic Freedom, an annual publication by The Heritage Foundation and The Wall Street Journal, measures the degree of economic freedom in nations, aiming to demonstrate the positive relationship between liberty and prosperity.
Proposed Solution	
Approach	Identify the purpose of the analysis (e.g., understanding trends, comparing countries, assessing policy impact). Define key research questions (e.g., How does economic freedom correlate with GDP growth? Which regions have the most improvement?).
Key Features	An Index of Economic Freedom Analysis Project should focus on assessing the economic policies and conditions that influence economic freedom in different countries or regions. Define economic freedom and its key dimensions (e.g., rule of law, government size, regulatory efficiency, market openness).

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	Laptop	System

Memory	RAM specifications	8 GB
Storage	Disk space for data, models, and logs	476 GB
Software		
Frameworks	Python frameworks	Flask
Libraries	Additional libraries	scikit-learn, pandas, numpy
Development Environment	IDE, version control	Jupyter Notebook, Git
Data		
Data	format	Ms Excel

2.3. Initial Project Planning

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members	Sprint Start Date	Sprint End Date (Planned)
Sprint-1	Data collection	SCRUM-1	Downloading the datasets	2	High	P Sai Karthik	3-3-2025	5-3-2025
Sprint-2	Working with Dataset	SCRUM-3	Understand the Data	1	High	Shabhai Sumiya Sultana	5-3-2025	6-3-2025
Sprint-2	Working with Dataset	SCRUM-3	Import Dataset into Database and connect Tableau desktop to Database server	2	High	Shabhai Sumiya Sultana	6-3-2025	8-3-2025
Sprint-3	Data Visualization	SCRUM-6	2022 Economic Freedom score Top 40 Ranking countries in the index Bottom ranking countries in the index Index score based on unemployment rate Index score based on financial freedom Index score based on population	2	High	Shabhai Sumiya Sultana	8-3-2025	14-3-2025

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members	Sprint Start Date	Sprint End Date (Planned)
			Index score based on 5 year on GDP growth rate Inflation rate in different countries Co-relation between inflation and unemployment Co-relation between GDP(PPP) and monetary freedom Top 40 countries by GDP growth rate					
Sprint-4	Dashboard	SCRUM-18	Creating the dashboard	1	High	Shabhai Sumiya Sultana	14-3-2025	17-3-2025
Sprint-5	Story	SCRUM-20	Creating the story board	2	High	Shabhai Sumiya Sultana	17-3-2025	18-3-2025
Sprint-5	Publishing and Web integration	SCRUM-22	Publishing dashboard and report to tableau public Integrating with Web with Embed code	2	High	Teli Sameena Parveen Sakaray Vyshnavi	18-3-2025	21-3-2025

3.Data Collection and Preprocessing Phase

3.1. Data Collection Plan and Raw Data Sources Identified

Data Collection Plan Template

Section	Description
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Project Overview	<p>This project aims to develop a Tableau dashboard that provides in-depth analysis of economic freedom and prosperity across various countries. The dashboard will visualize key economic freedom indices, World Heritage Sites data, and other related indicators to uncover patterns that could help improve prosperity across nations.</p>
Data Collection Plan	<p>The data for this project will be sourced from a combination of publicly available datasets. The primary sources include:</p> <ul style="list-style-type: none">- UNESCO World Heritage Sites dataset- Economic Freedom Index dataset (published by organizations like the Heritage Foundation)- Global Prosperity Index data (from organizations like the Legatum Institute) <p>Data will be extracted in formats like CSV and Excel and will be connected directly to Tableau for visualization and analysis.</p>

3.2. Data Quality Report

Data Source	Data Quality Issue	Severity	Resolution Plan
Index of economic freedom	<p>Economic data is often reported with a delay, meaning that the index may not reflect the most current economic conditions.</p> <ul style="list-style-type: none">• The Index of Economic Freedom, published by The Heritage Foundation, assesses the degree to which countries' policies and institutions promote economic freedom. While the Index of Economic Freedom provides valuable insights, it's typically published annually, so it may not fully capture short-term fluctuations.	High	<p>Provides data on country risk, including risks related to property rights. Exploring the possibility of using dynamic weighting schemes that adjust the importance of different components based on changing economic conditions.</p> <ul style="list-style-type: none">• Integrating high-frequency data .• Utilizing data analytics tools to identify trends and potential risks.

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3.3. Data Exploration and Preprocessing

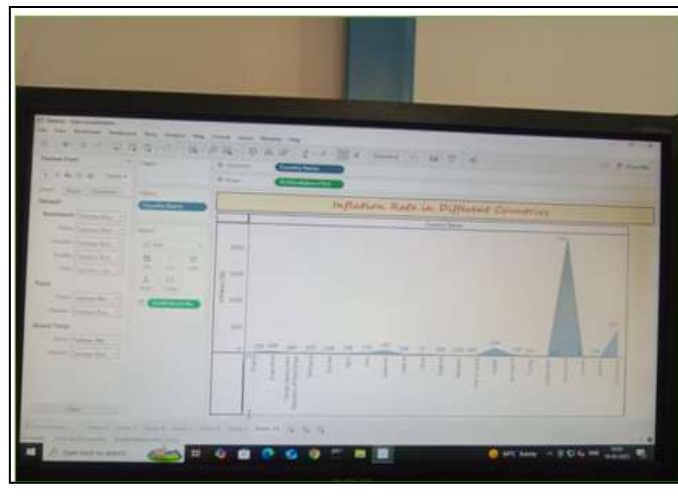
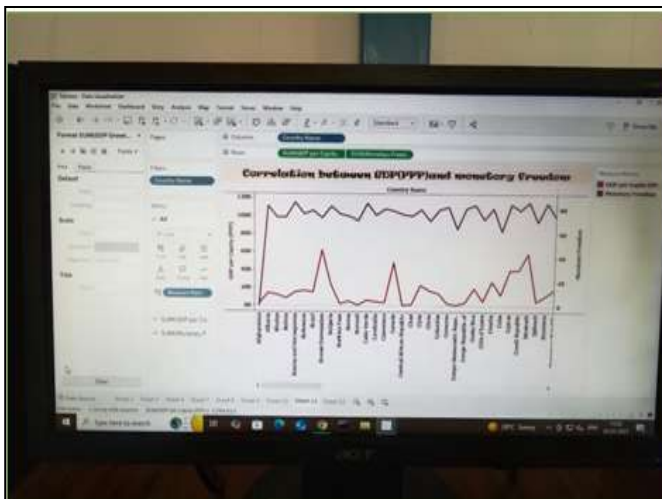
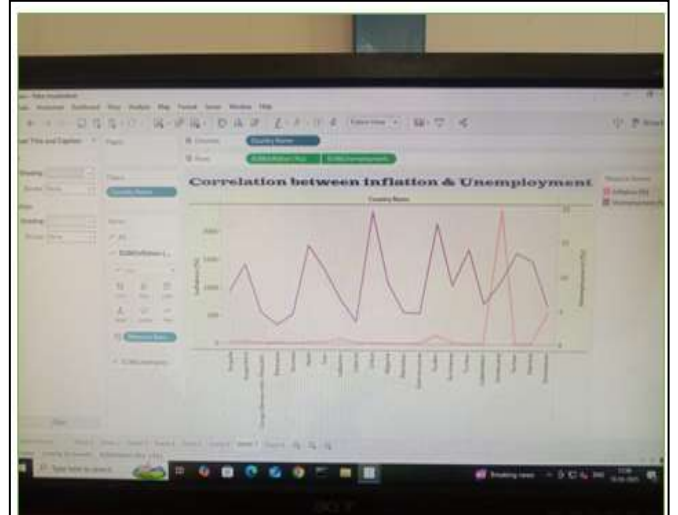
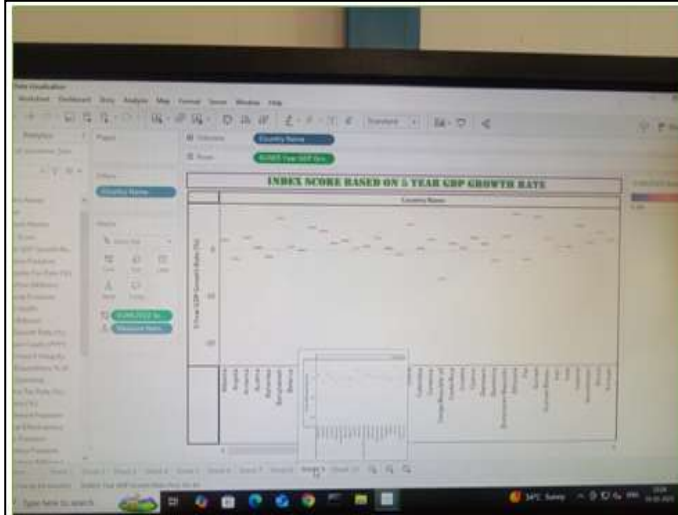
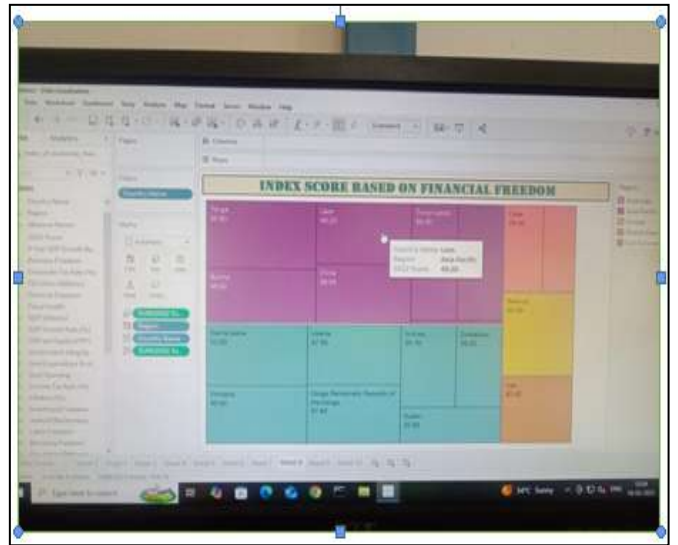
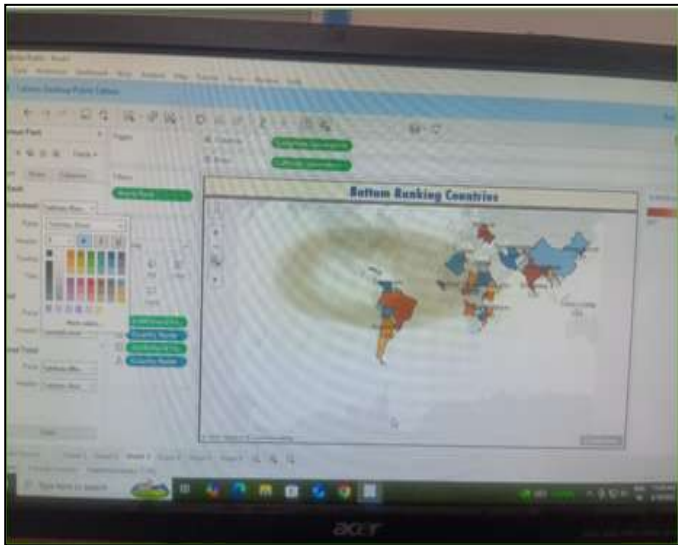
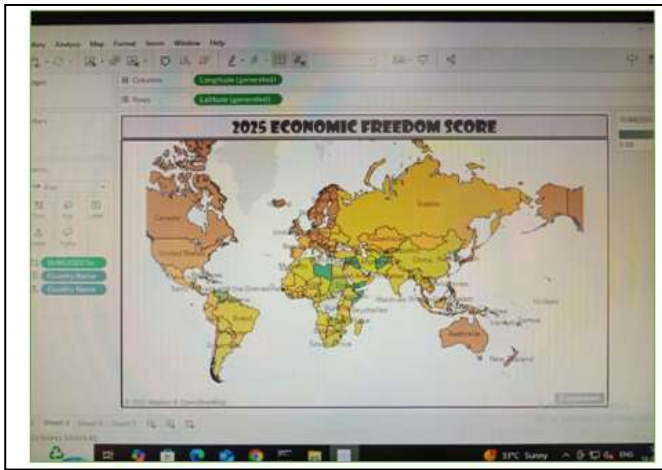
Section	Description
Data Overview	Short description about dataset
Data Cleaning	Handle missing values, duplicates, and correct errors.
Data Transformation	Use of filtering, sorting, pivoting, and creating calculated fields
Data Type Conversion	Rectifying Datatype
Column Splitting and Merging	Split or merge columns as needed.
Data Modeling	Define relationships between tables
Save Processed Data	Save the cleaned and processed data for future use.

4. Data Visualization

4.1. Framing Business Questions

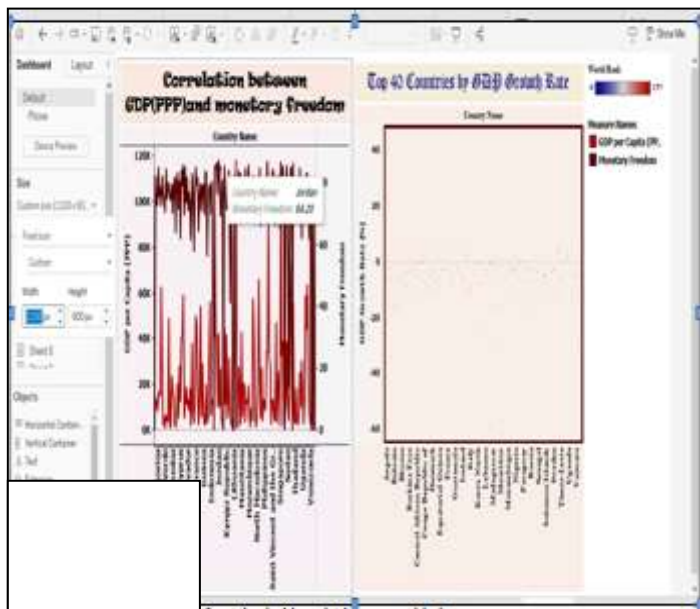
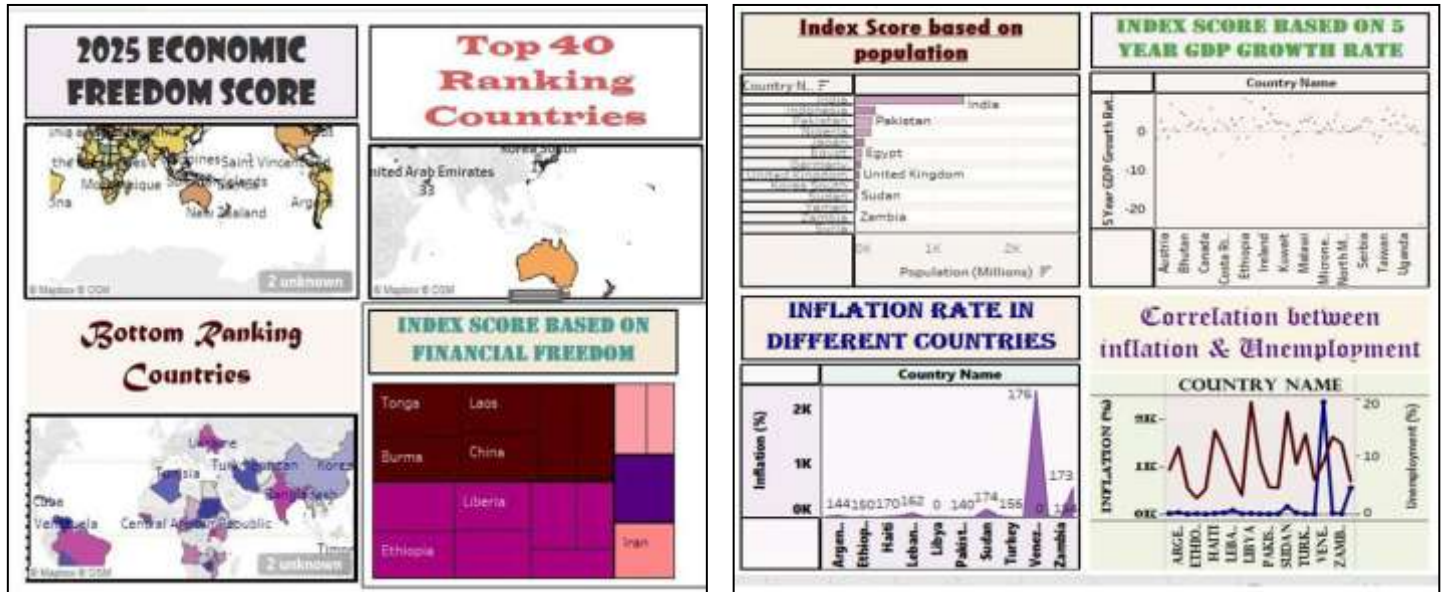
1. *What are the key policy recommendations that business can advocate for to improve economic freedom in specific countries or regions?*
2. Emerging Markets:" Are there any emerging markets within the top 40 ranked countries that we should prioritize for future investment or expansion, based on their current ranking and potential for growth?
3. How has the world ranking of these bottom-postforming countries time?
4. IS there a Correlation between financial freedom scores and GDP growth rates?
5. Index score based on 5 year GDP growth rate?
6. Correlation between inflation and unemployment?
7. Correlation between GDP (PPP) and Monetary freedom?
8. Inflation rate in different countries?

4.2. Developing Visualizations



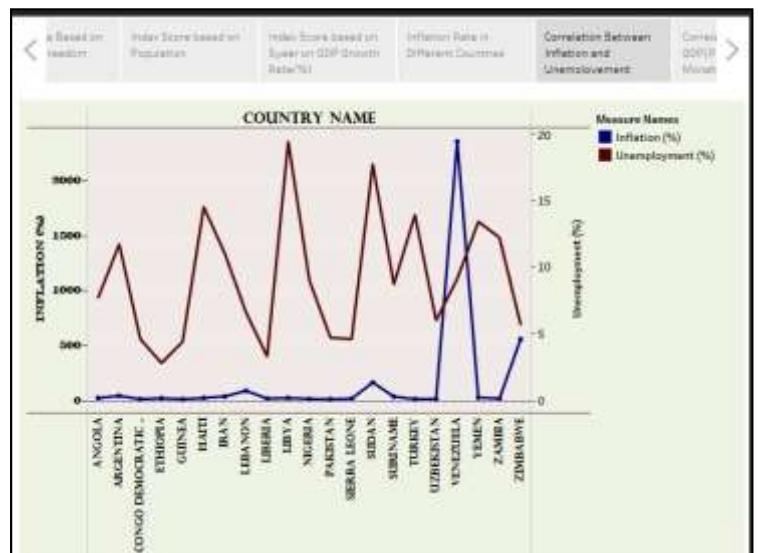
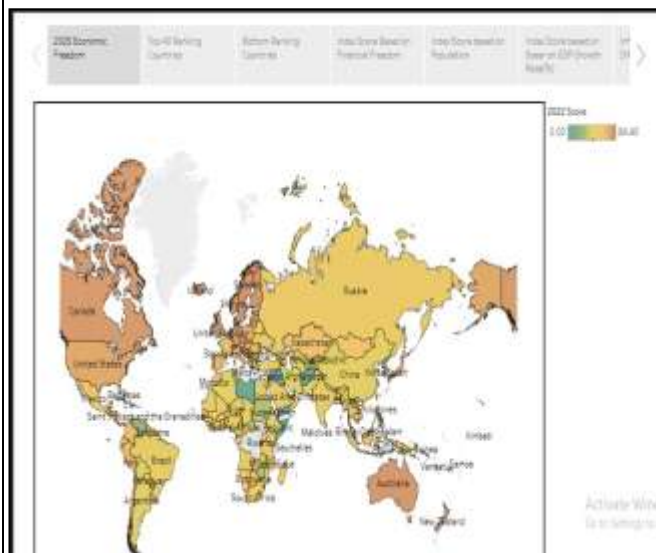
5. Dashboard

5.1. Dashboard Design File:



6. Report

6.1. Story Design File:



7. Performance Testing

7.1. Utilization of Data Filters

- World rank
- Country name
- 5 year GDP growth rate

7.2. No of calculation used

- We did not used any calculation

7.3 No of Visualization

- 2025 Economic Freedom Score
- Top 40 ranking countries in the index
- Index score based on financial freedom
- Bottom ranking countries
- Correlation between inflation and unemployment
- Index score based on population
- Index score based on 5 year on GDP rate(%)
- Inflation rate in different countries
- Top 40 countries by GDP growth rate
- Correlation between GDP (PPP) and Monetary freedom

8. Conclusion/Observation

Key Considerations:

- **Methodological Debates:**
 - It's important to acknowledge that there are ongoing debates about the methodology used to construct the index, including the weighting of different factors and the definition of economic freedom itself.
- **Correlation vs. Causation:**
 - While the index demonstrates a strong correlation between economic freedom and prosperity, it's crucial to remember that correlation does not equal causation. Other factors, such as cultural norms and historical circumstances, can also play a significant role.
- **Index Utility:**
 - The index provides a valuable tool for policy makers, investors and researchers to better understand the impacts of various economic policies.

In essence, the Index of Economic Freedom provides a compelling argument for the benefits of free markets and limited government intervention. However, it's essential to interpret the findings within the context of broader economic and social factors.

9.Future Scope

Potential Future Scope:

- **Increased Focus on Institutional Quality:**
 - Future iterations of the index may place greater emphasis on the quality of institutions, including the rule of law, government transparency, and regulatory efficiency.
- **Greater Regional Analysis:**

- Expanding regional analysis can provide more nuanced insights into the specific challenges and opportunities facing different parts of the world.
- **Integration with Other Indicators:**
 - Combining the index with other indicators of well-being, such as social progress and environmental sustainability, can offer a more comprehensive view of national development.
- **Educational Applications:**
 - The index can be increasingly used as an educational tool to promote understanding of the principles of economic freedom among students, policymakers, and the general public.

In conclusion, the Index of Economic Freedom has the potential to remain a valuable tool for analyzing and promoting economic liberty. By addressing methodological challenges and incorporating emerging factors, it can continue to provide crucial insights into the relationship between economic freedom and prosperity.

10.1. Source Code(if any)

10.2. GitHub & Project Demo Link

<https://github.com/SumiyaSultana/Measuring-the-Pulse-of-Prosperty-An-Index-of-Economic-Freedom-Analysis>