Measuring the Pulse of Prosperity: An Index of Economic Freedom Analysis

INTRODUCTION

1.1 Project Overview

This project aims to analyze the **Index of Economic Freedom (IEF)**, a comprehensive metric evaluating countries based on factors like trade openness, regulatory efficiency, rule of law, and market freedom. By leveraging data analytics and visualization techniques, we assess how economic freedom correlates with prosperity metrics such as GDP, unemployment rates, and human development indices.

1.2 Purpose

The primary objectives of this project are:

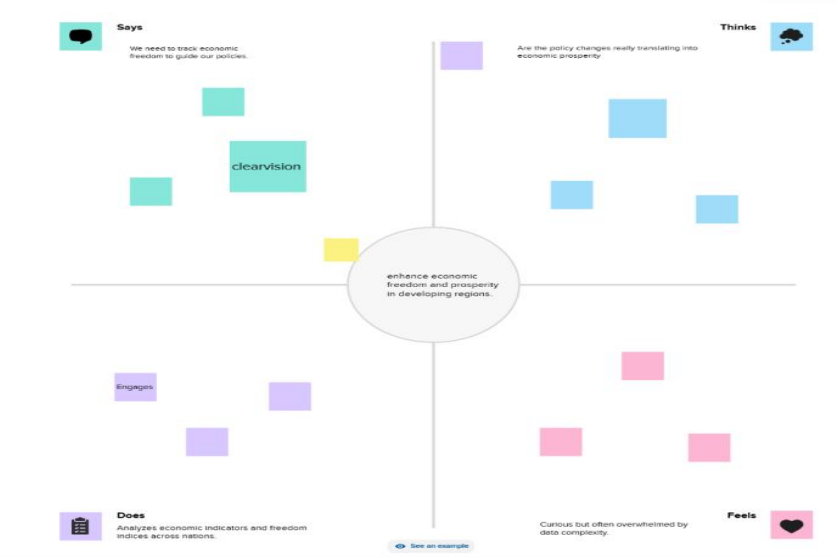
- To explore the relationship between economic freedom and prosperity.
- To identify key factors influencing economic freedom scores.
- To provide actionable insights for policymakers and economists.

2. IDEATION PHASE

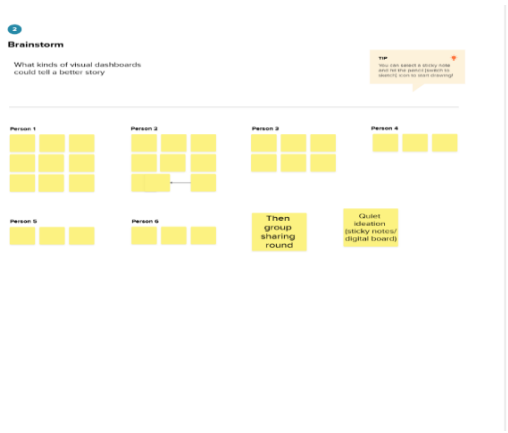
2.1 Problem Statement

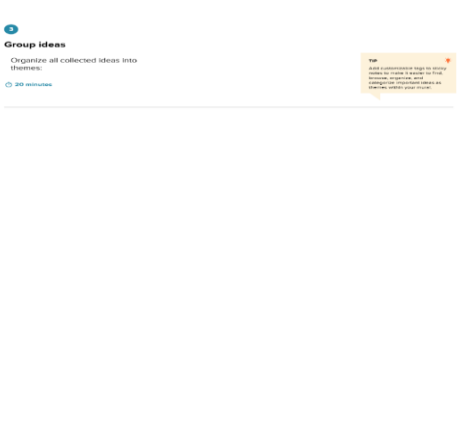
Despite global economic growth, disparities in prosperity persist. Understanding how economic freedom impacts prosperity can help nations adopt better policies.

2.2 Empathy Map Canvas



2.3 Brainstorming





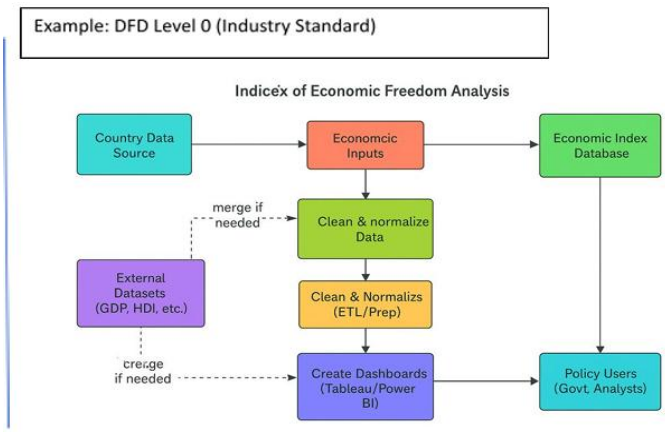
3. REQUIREMENT ANALYSIS

3.1 Customer Journey Map

3.2 Solution Requirement

- **Functional:** Interactive dashboards, predictive modeling.
- **Non-Functional:** Scalable, real-time data updates.

3.3 Data Flow Diagram



3.4 Technology Stack

- **Data Processing:** Python (Pandas, NumPy)
- **Visualization:** Tableau, Matplotlib/Seaborn
- **Backend:** Flask (for interactive dashboards)
- **Version Control:** GitHub

4. PROJECT DESIGN

4.1 Problem Solution Fit

The solution aligns with the need for data-driven economic policy decisions by providing:

4.2 Proposed Solution

- **Interactive Dashboard:** Filters by country, year, and economic indicators.
- **Predictive Model:** Forecasts economic freedom trends.

4.3 Solution Architecture

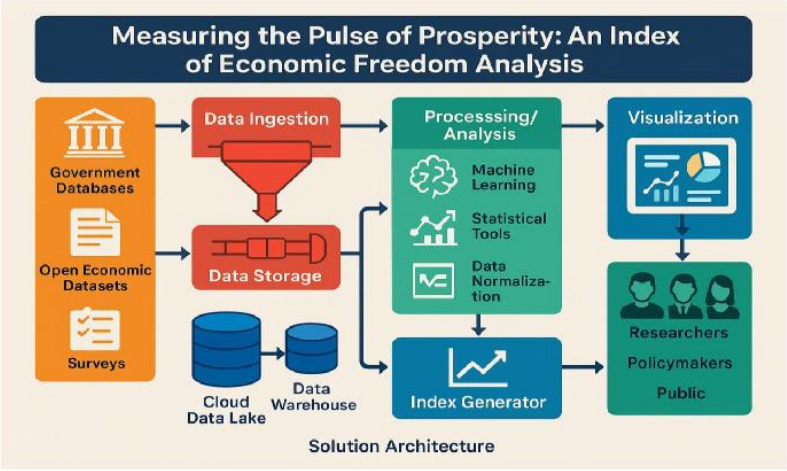


Figure 1: Architecture and data flow

5. PROJECT PLANNING & SCHEDULING

5.1 Project Planning

Phase	Timeline	Deliverables
Research & Data Collection	Week 1-2	Dataset, Literature Review
Data Cleaning & EDA	Week 3	Cleaned Data, Initial Insights
Model Development	Week 4	Regression/Clustering Models
Dashboard Development	Week 5	Interactive Visualizations
Testing & Final Report	Week 6	Final Report, GitHub Repo

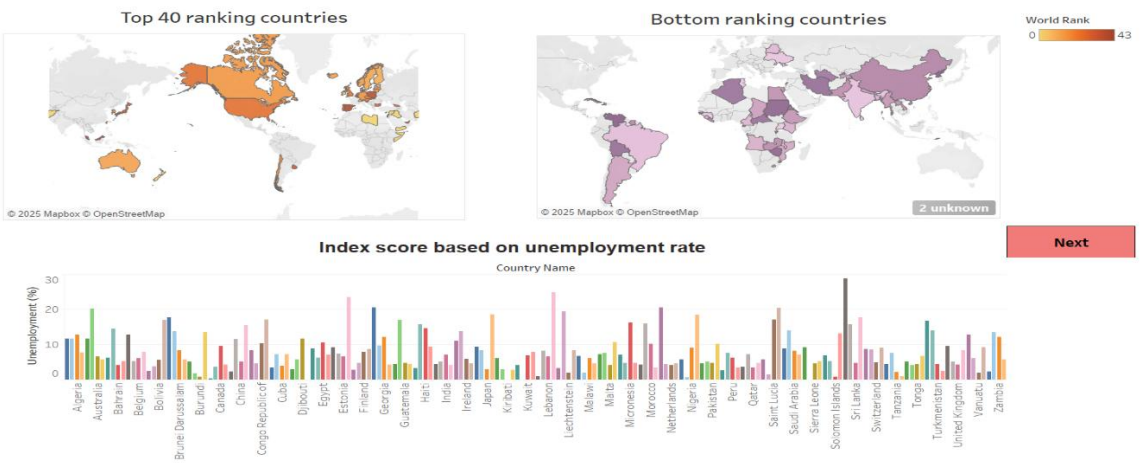
6. FUNCTIONAL AND PERFORMANCE TESTING

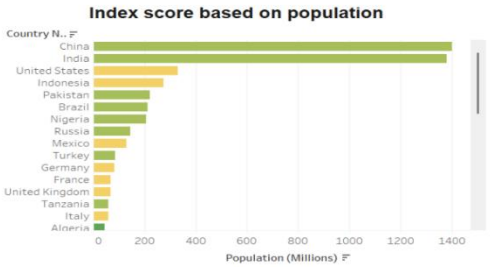
6.1 Performance Testing

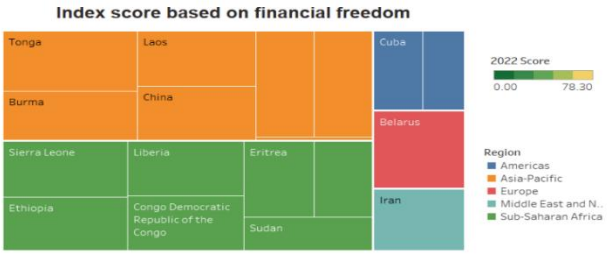
- **Data Accuracy:** Cross-validated with World Bank/IMF datasets.
- **Dashboard Load Time:** Optimized for <2s response.

7. RESULTS

7.1 Output Screenshots

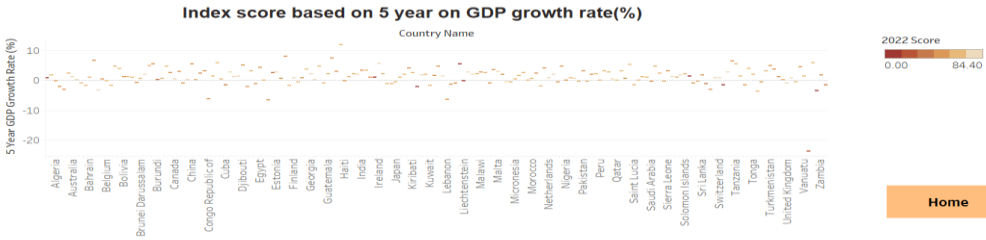




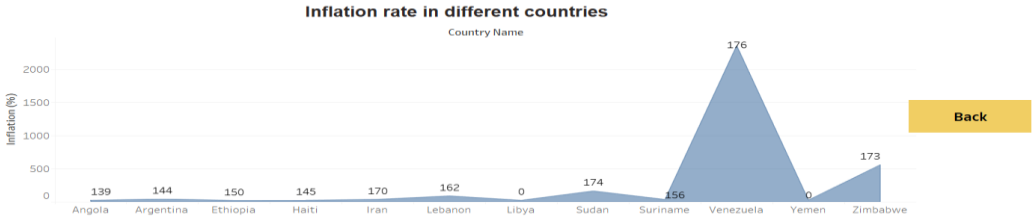


Next

Back

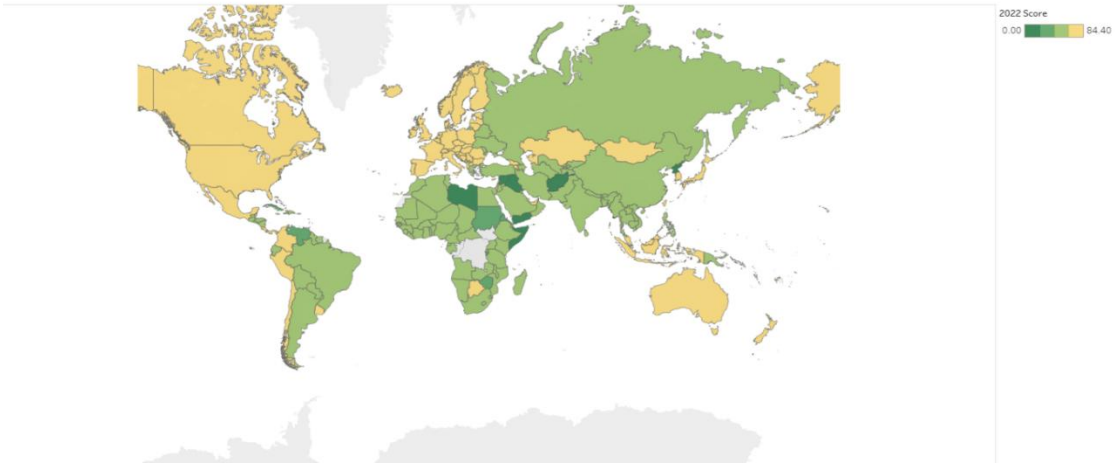


Home



Back

This Map demonstrates the economic score | This map demonstrates the top 40 ranking countries | This map demonstrates the bottom ranking countries | This column chart demonstrates the unemployement across countries | This Tree map demonstrates the effect of financial | This horizontal bar demonstrates the population of countries



8. ADVANTAGES & DISADVANTAGES

Advantages

- Evidence-based policy recommendations.
- User-friendly visualizations for non-technical stakeholders.
- It creates the most favorable environment for broad-based economic growth and prosperity.
- It has driven innovation and progress in critical sectors such as healthcare, education, and other public services.

Disadvantages

- Data limitations for some countries.
- Correlation ≠ Causation (external factors not accounted for).
- It can lead to the concentration of market power in the hands of dominant firms.
- It may result in rising unemployment and socioeconomic inequality, especially without regulatory safeguards.

9. CONCLUSION

This project demonstrates a strong correlation between economic freedom and prosperity, providing valuable insights for policymakers. Future work could incorporate machine learning for predictive analytics.

10. FUTURE SCOPE

- Expand dataset to include socio-political factors.
- Develop a real-time global economic freedom monitor.

11. APPENDIX

Dataset: https://drive.google.com/file/d/1EBIa1LtM3Ni2Uh3nekLB6wt3263Q3NeX/view?usp=share_link

Tableau Public Link:
Dashboard:
https://public.tableau.com/app/profile/bekkem.divya/viz/AnIndexofEconomicFreedomAnalysis/Dashboard1#1
Story:
https://public.tableau.com/shared/WGCZWSNHD?:display_count=n&:origin=viz_share_link