Student Forum
International Debt Statistics

Brain strorming Phase Empathize & Discover

Date	13 October 2023
Team ID	Team-591279
Project Name	International debt analysis
Maximum Marks	4 Marks

1

Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

5 minutes

PROBLEM

How can we leverage Inte , rnational Debt Statistics to develop a predictive model that assesses and forecasts the impact of changing global economic conditions, political events, and financial policies on a country's debt sustainability and creditworthiness?

Key rules of brainstorming

To run an smooth and productive session

- Stay in topic.
- Defer judgment.
- Go for volume.
- Encourage wild ideas.
- Listen to others.
- If possible, be visual.

2

Brainstorm

Write down any ideas that come to mind that address your problem statement.

10 minutes

Sushanth

Data Collection: Gather international debt data from reliable sources like the World Bank or IMF. Convert data into a common format for easy analysis.

Data Cleaning: Identify and handle missing or inconsistent data. Standardize data formats and make sure it's ready for analysis.

Recommendations: Based on the analysis, use predictive models, offer recommendations for countries and financial institutions to manage their debt effectively and take preventative measures when early-warning signs are detected.

User-Friendly Dashboard: Create intuitive and interactive dashboards using Tableau and IBM Cognos that enable users to explore international debt statistics on their own, facilitating self-service analysis and decision-making.

Chaitanya

Data Transformation: Prepare the data for analysis by normalizing, scaling, or encoding categorical variables as necessary.

Pattern Recognition: Look for patterns, anomalies, and correlations in the data that may offer insights into factors affecting international debt.

Visualization (Tableau and IBM Cognos): Create interactive dashboards in Tableau and IBM Cognos to visualize the findings and predictions from the predictive models. These dashboards should be user-friendly and informative.

Geospatial Visualization: Utilize geographic data to create geospatial visualizations that show debt dynamics on a world map, helping to identify regions with high debt vulnerability.

Chinmayee

Data Integration: Combine data from various sources to create a comprehensive dataset that can be used for analysis.

Identify Risk Factors: To pinpoint potential risk factors, such as high debt-to-GDP ratios, economic downturns, or political instability.

Predictive Modeling (Using Python, Tensorflow, Pytorch): Develop predictive models to forecast potential debt crises. Use historical data to train models that can identify early-warning signs, considering factors like economic ratios, economic growth, and political stability.

Documentation and Presentation: Prepare a clear and concise documentation of the project's findings, analysis process, and recommendations. Present the results to stakeholders, including policymakers and financial institutions.

3

Group ideas

Use this space to group similar ideas from the brainstorm. Each group should have a title that describes what the ideas have in common. If a group is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

20 minutes

Data Preprocessing and Cleaning (Using Python)

Data Collection: Gather international debt data from reliable sources like the World Bank or IMF. Convert data into a common format for easy analysis.

Data Cleaning: Identify and handle missing or inconsistent data. Standardize data formats and make sure it's ready for analysis.

Data Integration: Combine data from various sources to create a comprehensive dataset that can be used for analysis.

Data Transformation: Prepare the data for analysis by normalizing, scaling, or encoding categorical variables as necessary.

Dashboard (Using Tableau and IBM Cognos)

User-Friendly Dashboards: Create intuitive and interactive dashboards in Tableau and IBM Cognos that enable users to explore international debt statistics on their own, facilitating self-service analysis and decision-making.

Geospatial Visualization: Utilize geographic data to create geospatial visualizations that show debt dynamics on a world map, helping to identify regions with high debt vulnerability.

Predictive Modeling and Visualization (Using Tableau and IBM Cognos)

Recommendations: Based on the analysis, use predictive models, offer recommendations for countries and financial institutions to manage their debt effectively and take preventative measures when early-warning signs are detected.

Visualization (Tableau and IBM Cognos): Create interactive dashboards in Tableau and IBM Cognos to visualize the findings and predictions from the predictive models. These dashboards should be user-friendly and informative.

Documentation and Presentation: Prepare a clear and concise documentation of the project's findings, analysis process, and recommendations. Present the results to stakeholders, including policymakers and financial institutions.

Identify Risk and Pattern

Identify Risk Factors: To pinpoint potential risk factors, such as high debt-to-GDP ratios, economic downturns, or political instability.

Pattern Recognition: Look for patterns, anomalies, and correlations in the data that may offer insights into factors affecting international debt.

4

Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

20 minutes