10ALYTICS GLOBAL HACKATHON 2025

The Ultimate Tech Challenge for a Sustainable Future

UNRAVELING AFRICA'S SOVEREIGN DEBT CRISIS; PATHS TO SUSTAINABILITY

NOVEMBER 29TH - 30TH 2025

POWERED BY 10Alytics

INTRODUCTION

GENERAL OVERVIEW

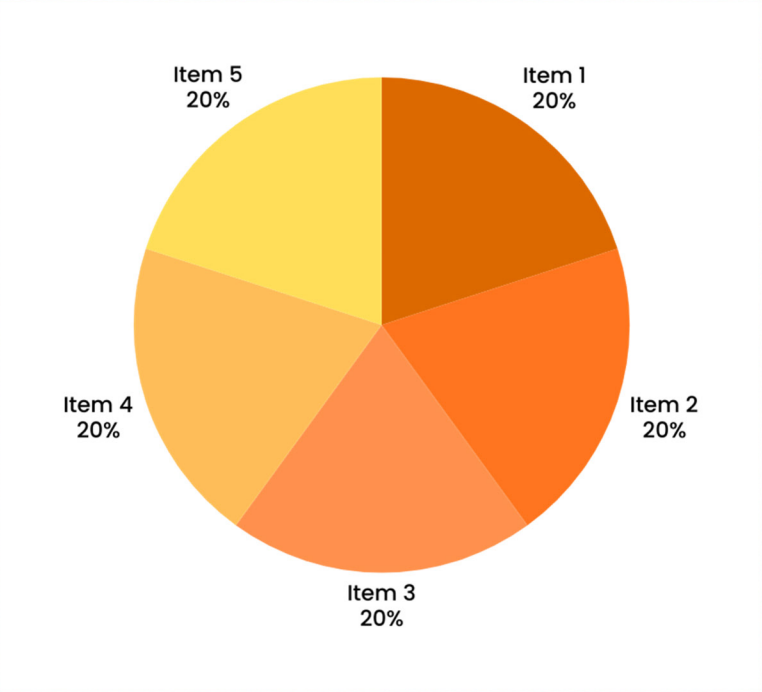
Fiscal stability is a critical pillar of national development, influencing everything from social investment and infrastructure to economic growth and poverty reduction. Across many countries, persistent budget deficits, fluctuating public expenditures, and unstable revenues pose significant challenges to achieving long-term economic resilience.

These issues affect progress toward several Sustainable Development Goals (SDGs), including Goal 8: Decent Work and Economic Growth and Goal 16: Peace, Justice, and Strong Institutions.

By leveraging data-driven approaches, this hackathon seeks to uncover actionable insights, illuminate cross-country fiscal behaviors, and contribute to global efforts aimed at strengthening public finance management.

OBJECTIVE

The primary objective is to utilize the provided fiscal datasets, containing budget deficit/surplus trends, spending patterns, and economic indicators across multiple countries, to identify meaningful patterns, detect risks, and develop strategies that support sustainable financial governance. Participants will analyze long-term trends, explore the drivers of fiscal imbalance, and propose evidence-backed solutions that can guide policymakers toward more stable and sustainable economic systems.



10Alytics

ACCREDITED BY THE AMERICAN COUNCIL OF TRAINING & DEVELOPMENT

EXPECTED OUTCOME

Participants are expected to:

BUILD VISUALIZATIONS
That illustrate historical trends in government budget deficits and surpluses across countries.

IDENTIFY KEY DRIVERS
Contributing to fiscal instability, including revenue fluctuations, expenditure growth, economic shocks, and policy changes.

DETECT ANOMALIES OR EMERGING RISKS
Using quantitative methods and analytical models.

DEVELOP PREDICTIVE MODELS
That forecast future fiscal performance or identify countries at higher risk of financial stress.

PROPOSE ACTIONABLE RECOMMENDATIONS
For strengthening fiscal resilience, improving budget discipline, and supporting evidence-based policy making.

PRESENT INSIGHTS IN A CLEAR, POLICY-READY FORMAT
Suitable for decision-makers, development institutions, and economic researchers.

DOWNLOAD DATASET

Here

DATA DICTIONARY

Country: Name of the country the fiscal observation refers to

Indicator: The specific fiscal or economic metric being measured.

Source: The institution or organization providing the data.

Unit: The measurement unit used to express the financial amount.

Currency: The national currency in which the fiscal data is expressed.

Frequency: How often the data is recorded or reported.

Country Code: A standardized three-letter code representing each country.

Time: The date or period associated with the observation, formatted as a timestamp.

Amount: The numerical value of the fiscal indicator for the given country and time period.

TOOLS & PRESENTATION CRITERIA

TOOLS TO BE USED

Participants are free to use any visualization or analytical tool they prefer for analyzing the data in the case study.

Here are some examples of tools that can be used:

- Data analysis: Excel, R, Python, SAS, Stata, SPSS
- Data visualization: Tableau, Power BI, QlikView, ggplot2 (in R)

PRESENTATION CRITERIA

Participants are free to use any tool to present their findings in the hackathon.

Here are some examples of tools that can be used for the presentation:

- PowerPoint
- Excel
- Power BI
- Tableau
- Python

etc

10Alytics

ACCREDITED BY THE AMERICAN COUNCIL OF TRAINING & DEVELOPMENT

PRESENTATION CRITERIA

Data Analysis:
- How well did the participant analyze the provided data?
- Were their findings insightful and relevant?
- Did they use appropriate statistical methods?

Visualizations:
- Did the participant create clear and visually appealing data visualizations?
- Did they use the right types of charts and graphs to communicate their findings?

Creativity:
- Did the participant approach the problem with a creative and innovative mindset?
- Did they think outside the box in their analysis and presentation?

Impact:
- Did the participant findings have a significant impact on the problem at hand?
- Did they provide valuable insights and recommendations for key stakeholders?

Interpretation:
- Did the team effectively interpret their findings?
- Did they draw appropriate conclusions and insights from the data?

Clarity:
- Was the presentation clear and easy to understand?
- Did the participant communicate their findings effectively and concisely?

Technical Ability:
- How well did the participant use the tools and technologies at their disposal?
- Were their methods sound and effective?

AREA OF CONCENTRATION

- Provide your recommendation to the case study
- Include the limitations of the dataset and how you think your analysis can be further enriched
- Be ready to discuss your insights and share what you learned working on the datasets

ALL THE BEST