NASA SDG App: Leveraging Space Data for Sustainable Development

A Streamlit-based app that integrates NASA's vast array of data to support the United Nations' Sustainable Development Goals (SDGs), bridging the gap between space technology and real-world applications for a more sustainable future.

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Addressing Global Challenges with Space Data

1 UN Sustainable Development Goals

The 17 interlinked global goals designed to be a "blueprint to achieve a better and more sustainable future for all".

2 Role of Space Technology

Space-based data and observations can provide critical insights to tackle climate change, monitor biodiversity, and address other pressing global issues.

3 The Challenge

Bridging the gap between the abundance of space data and its practical application for sustainable development initiatives.

Introducing the NASA SDG App

Web-based Application

A user-friendly interface that allows researchers, policymakers, and the public to leverage NASA's open datasets.

Powered by Streamlit

Built using the Streamlit framework for rapid development and easy deployment of interactive data applications.

Connecting Space to Earth

Bridging the gap between space-based observations and real-world applications for sustainable development.

Core Functionalities of the NASA SDG App

Real time Chatbot

QnA chatbot using NASA's open datasets to provide insights related to specific SDG indicators.

Custom SDG Selection

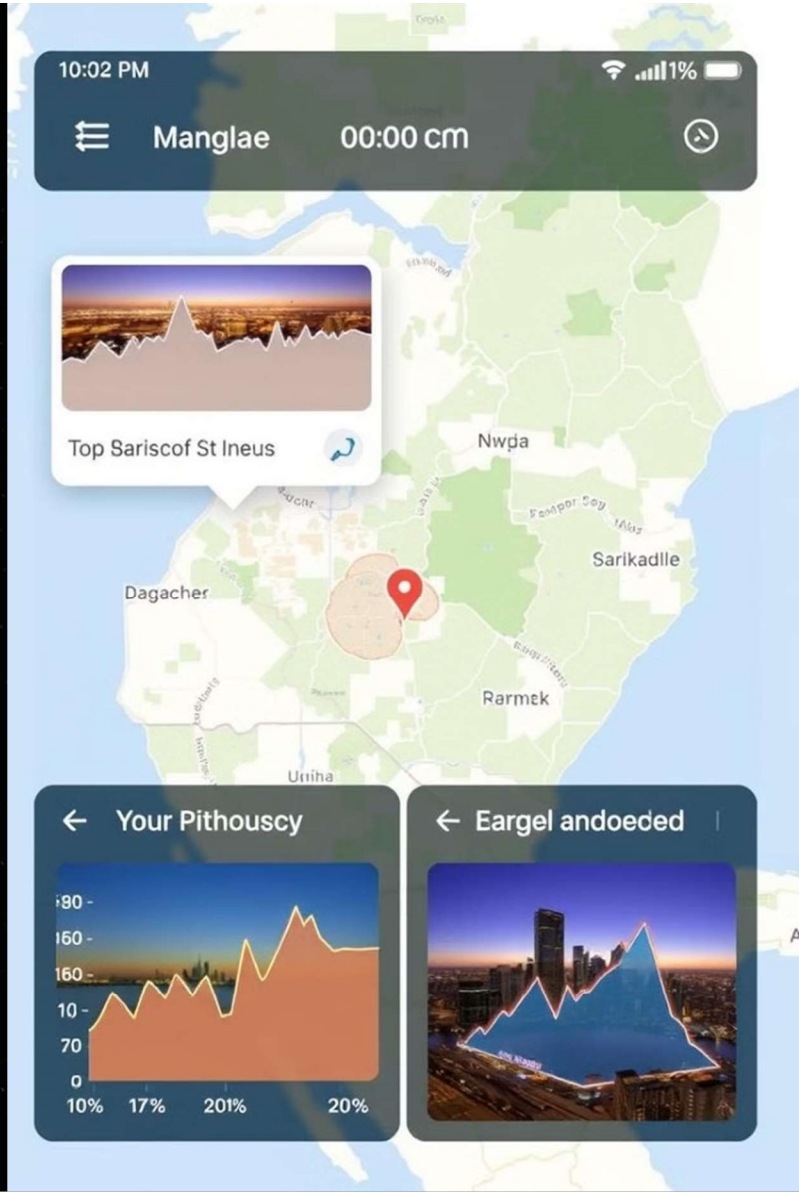
Allowing users to explore data and insights for individual Sustainable Development Goals, such as Climate Action (SDG 13) or Life Below Water (SDG 14).

Real-time Updates

Access to NASA's latest datasets, ensuring continuous monitoring and up-to-date information for sustainable development initiatives.

Accessible Interface

Designed with non-technical users in mind, providing clear and intuitive features for seamless exploration of space data.



Technology Behind the NASA SDG App

Streamlit Frontend

Leveraging the Streamlit framework for rapid app development and easy deployment to the web.

NASA API Integration

Seamless integration with NASA's extensive data APIs to provide real-time access to the latest space-based observations.

Artificial Intelligence

Using powerful ai models like llama 3 and Gemini to create diverse application, featuring quizzes and certificates, SDG's and Q/A chatbot.

Real-World Applications of the NASA SDG App

Policymakers

Track progress towards the UN's Sustainable Development Goals using credible space-based data and insights.

Researchers

Analyze long-term trends and patterns in areas like climate, biodiversity, and resource management.

Educational Institutions

Leverage the app to teach the importance of space technology in tackling global sustainability challenges.

Global Impact

Empower informed decision-making and accelerate progress towards the UN's sustainable development agenda.

Next Steps for the NASA SDG App

1

Expand SDG Coverage

Integrate data and insights for additional Sustainable Development Goals beyond the current offerings.

2

Predictive Modeling

Introduce advanced analytical tools and predictive models to forecast future trends and scenarios.

3

Collaboration Features

Enable users to share insights, compare progress, and foster collaborative efforts across regions and organizations.

The Future of Space Data for Sustainability

1 Summary

The NASA SDG App bridges the gap between the wealth of space-based data and its practical application for sustainable development initiatives.

2 A Call to Action

Continued innovation in applying space technology and data to address global challenges is crucial for a more sustainable future.

Let's Connect

NASA SDG App

www.nasa-sdg-app.streamlit.app

GitHub Repository

https://github.com/Shan-Ul-Haq/Nasa-Space-Challenge-Hackathon-Oct2024

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