The Space Ones Team

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- **Challenge**: You are my sunshine

- **Problem**: NASA's Power platform has very valuable weather and sun data for people who use non-polluting renewable energies, however it is a bit difficult to use and understand to common people who are not familiar with the technology and technical information.

- **Objectives**:

1. Link the data of the NASA POWER Platform by technological means, with the general public, with data that is easy to understand and use by interested users.

2. To offer the general public and businessmen, the meteorological and solar data generated by NASA on its POWER platform, in a simple, fast and accessible way.

Solution:

Creation of a Mobile Application, linked to NASA's POWER platform

APPs Name: Sun and Climate Power App

Specific applications: commercial use in renewable energy development and sustainable construction companies.

- **Title**

Creation of a Mobile Application, linked to NASA's POWER platform.

- **High-Level Project Summary***

The Project consists of the creation of a Mobile Application, linked to NASA's POWER platform, which transfers information on solar activity and the resulting terrestrial weather report, with the purpose of making decisions to make the best use of non-polluting energies. This solves the challenge: the platform is a bit complicated for users unfamiliar with technological resources. The solution was mobile application simple, easy to use and understand, that's also provide other useful information for the general public and business. It is important because solve a community need, providing historical information and future data projection to plan the best use of the energy resource.

- **Detailed Project Description***

Provide additional details about your project. What exactly does it do? How does it work? What benefits does it have? What do you hope to achieve? What tools, coding languages, hardware, or software did you use to develop your project?

- **Background**

NASA provides valuable information regarding the activity of solar radiation at different intensities and frequencies, which allow determining how much thermal impact could be expected on the earth. This generates climatic changes on our planet, with the consequent changes in temperature, winds, atmospheric pressure, humidity, etc. that directly affect general human activity, but also specifically, such as the use of clean energy.

People who use clean, non-polluting energy such as solar energy, especially in remote areas, need up-to-date, reliable, clear and easily understood information to make decisions regarding when to use the resource more effectively, but for it, they require that the data can be reviewed historically to see the past behavior of a geological region and predictively in terms of climate on earth to make future decisions

The Sun and Climate Power App links the information generated by NASA's POWER Platform through technology to the general public in a way to be easy to use, user-friendly and with real time data with IOT, easy to understand for interested users.

Its works through an App, that provide useful information and resources to know data about radiation flow, solar irradiation, hours of maximum intensity, clouds, rain, low or high temperatures, winds, creating historical graphs that allow companies to choose the most appropriate sites to place non-polluting renewable energy sources, such as solar, and where is the ideal place to do . It also uses maps for geo-location by GPS, to provide specific information by latitude and longitude, with the possibility of zooming in, like virtual reality, to observe the area to be studied. In addition, it analyzes weather forecasts, rainfall, sustained temperature increases to analyze projections for the optimization of the use of renewable energy resources.

- ***App´s Name: Sun and Climate Power App***

We hope to achieve and provide additional benefits to create a difference from other products such as*:*

1. We will take advantage of and universalize the valuable data generated by NASA Power and other links, in a simple, fast and accessible way with IOT, in real time. Is the benefit of home owners and businesses.
2. We will be facilitators of the use of non-polluting energies for Specific applications: commercial use in renewable energy development and sustainable construction companies, generated by the powerful information of the App.

3. Contributes with technological Marketing of supplier entrepreneurs as a collaborative process for human development and entrepreneurship and sustainable cities. We will provide information about companies offering clean energy options, costs, locations.

4. Sustainable development opportunity by analyzing the electric energy use of an area or community to offer the service through solar panels u other kind of energies and make decisions on smart, sustainable and technological development.
5. Support to people with visual special needs, in the App options.

6. Financial opportunities for people that use non-polluting renewable energy.

7. Offer companies the opportunity to reforest areas with affected biomes by the ecological impact detected by the app, as part of corporate social responsibility.

Technology tools evaluated: *adobe XD, Marvel APP and APP maker now, to offer an intuitive, friendly, layered and visually appealing interface. With audio reading option for special visual needs, and possibility of language options.*

- **Space Agency Data***

https://appliedsciences.nasa.gov/what-we-do

https://power.larc.nasa.gov/docs/services/api/temporal/climatology/

https://www.energy.gov/solar

https://www.energy.gov/eere/solar/solar-energy-technologies-office

https://www.energy.gov/eere/solar/how-does-solar-work

https://power.larc.nasa.gov/docs/services/api/

https://power.larc.nasa.gov/docs/tutorials/api-getting-started/

- **Hackathon Journey***

How would you describe your Space Apps experience? What did you learn? What inspired your team to choose this challenge? What was your approach to developing this project? How did your team resolve setbacks and challenges? Is there anyone you'd like to thank and why?

We learned about the diversification of NASA's lines of work and all the resources they make available to improve human living conditions and their particular needs.
We were inspired to select this project by protect the rights of future generations to a healthy environment by promoting the widespread use of clean energy. (Universal Declaration of Human Rights) and the recognition of the need to protect the children of the future from the impact of environmental caused by human development. The use of clean energy, promoted by our APP, such, contributes to reducing the impact of climate change, events such as melting of the poles, girl and boy phenomena,

Also we inspired to contribute to the achievement of the SDGs (Sustainable Development goals): goal number 7 (use of accessible and non-polluting energy), goal 11 (sustainable cities), goal 13(Climate action) goal 2 (zero hunger), with the reduction of poverty, through the generation of economic resources as a result of the use of clean energy, promoted by the use of our App

Our approach was to take the opportunity to leverage NASA's information resources on solar activity and Earth's climate for the development of sustainable and efficient energy technologies that promote environmental, financial, technological and energetic impact on human daily life.

We would like to thanks Rubén Ortiz Franco, Engineer and mentor, for being an inspiring enthusiast to participate in this great event and to give the best of us by contributing with our ideas, effort, time and dedication to make a better world.

- **References***

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http://www.ideam.gov.co/web/tiempo-y-clima/caracteristicas-de-la-radiacion-solar

https://paris21.org/sustainable-development-goals

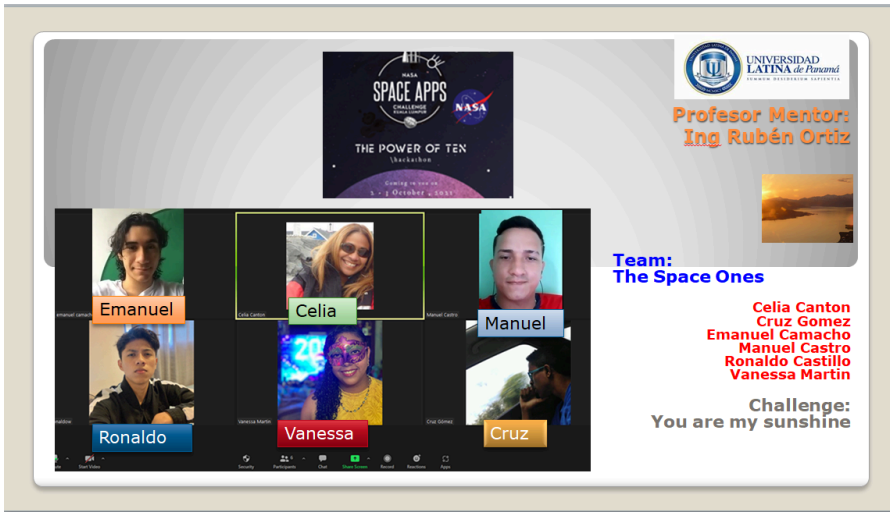
https://www.un.org/en/about-us/universal-declaration-of-human-rights

http://www.scielo.org.bo/scielo.php?script=sci_arttext&pid=S2070-81572018000100019

- **Tags:**

Add some tags so we can categorize your project. Examples include #hardware, #art, #water, #Artemis

Demo



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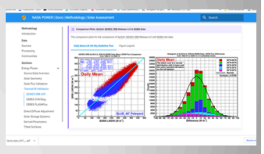
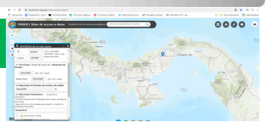
Challenge:
You are my sunshine

Situation:

NASA's Power platform has very valuable weather and sun data for people who use non-polluting renewable energies, however it is a bit difficult to use and understand to common people who are not familiar with the technology and technical information.

Objective: offer to the general public and businessmen, the meteorological and solar data generated by NASA on its POWER platform, in a simple, fast and accessible way, to develop renovable Energies.





The Challenge

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Title "Creation of a Mobile Application, linked to NASA's POWER platform"

Name: Sun and Climate Power App

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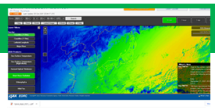


The Challenge

Inspiration

1.Environmental ecological awareness to promote clean energy, reduction of climate change, melting of glaciers.

2.Declaration of human rights of future generations to a healthy environment.

3. Desire for Contribution to the SDGs (2030 Sustainable Development Goals)2,7,11,13

What its solve?

People who use clean, non-polluting energy such as solar energy, especially in remote areas, need up-to-date, reliable, clear and easily understood information to make decisions, regarding when to use the resource more effectively, but for it, they require data can be reviewed **historically** to see the past behavior of a geological region and **predictions** in terms of climate on earth and sun to make future decisions.

APP Special Opportunities to develop renovable Energy projects:
-Know local consumption of electricity
-Possibility of zooming, like virtual reality, to observe the area to be studied

What does it solve?

How its works and benefits?

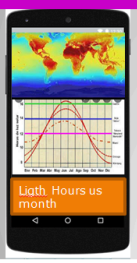
We offer 6 Options:

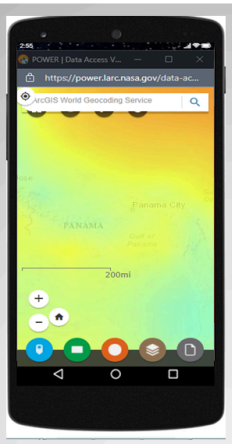
1. **Climate and solar radiation** (POWER, Servir.net, Maps GPS)
2. **Marketing** of energy companies and sustainable construction (collaborative process for human development and entrepreneurship)
3. **Audio reading** (to help people with visual special needs)
4. **Revenue**: generation of income from the use of clean energy
5. **Reforestation** (Social corporate responsibility)

- Softwares (evaluated)

- ADOBE XD
- MARVEL APP
- APP maker now

Intuitive friendly interface





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