



Honduras Towards Space:

Space Applications for Sustainability on Earth

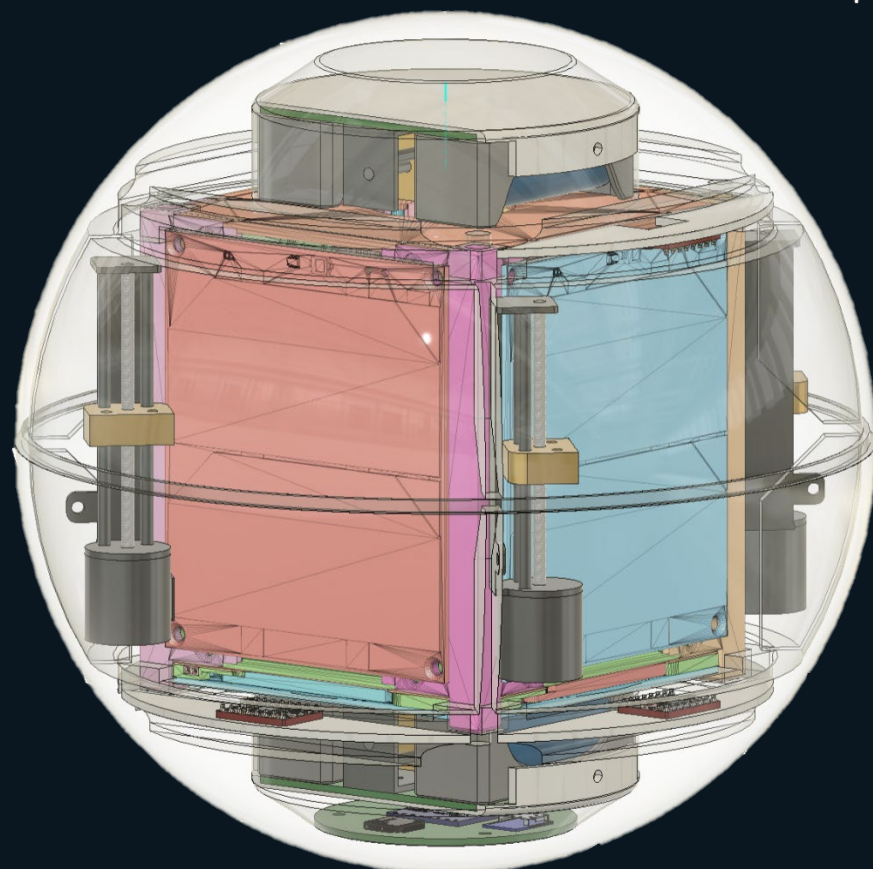
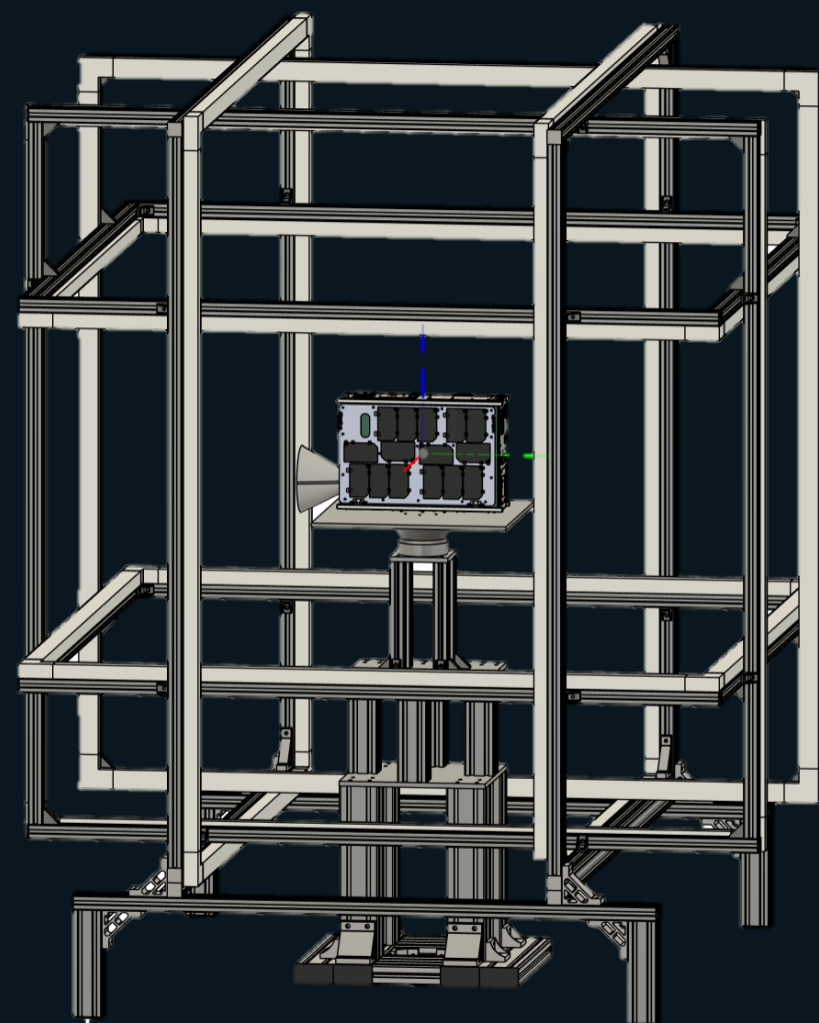
Space Activities

First Honduran Space Breath

As a response to the devastation caused by floods, the Morazán Satellite initiative was launched. This nanosatellite's primary mission is to provide a monitoring and early warning system to enhance the response to climate-related events.

The **Morazán satellite** is a joint project with three Central American countries: Honduras, Guatemala, Costa Rica. But also possesses international cooperation as the winner of the 5th round of the KiboCUBE program organized by UNOOSA and JAXA.





Space Activities

Development of cost-effective testing methods for Attitude Determination and Control Systems (ADCS)

In collaboration with the Kyushu Institute of Technology, we are currently developing low-cost testing methods for Attitude Determination and Control Systems (ADCS).

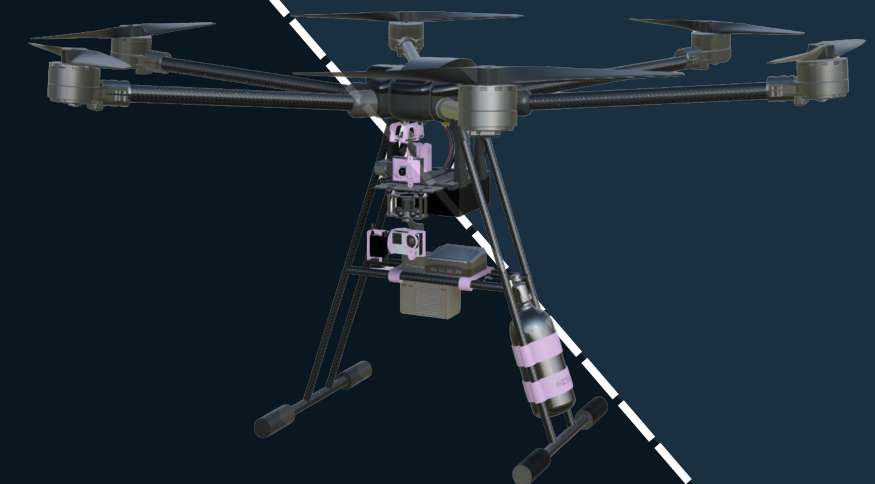
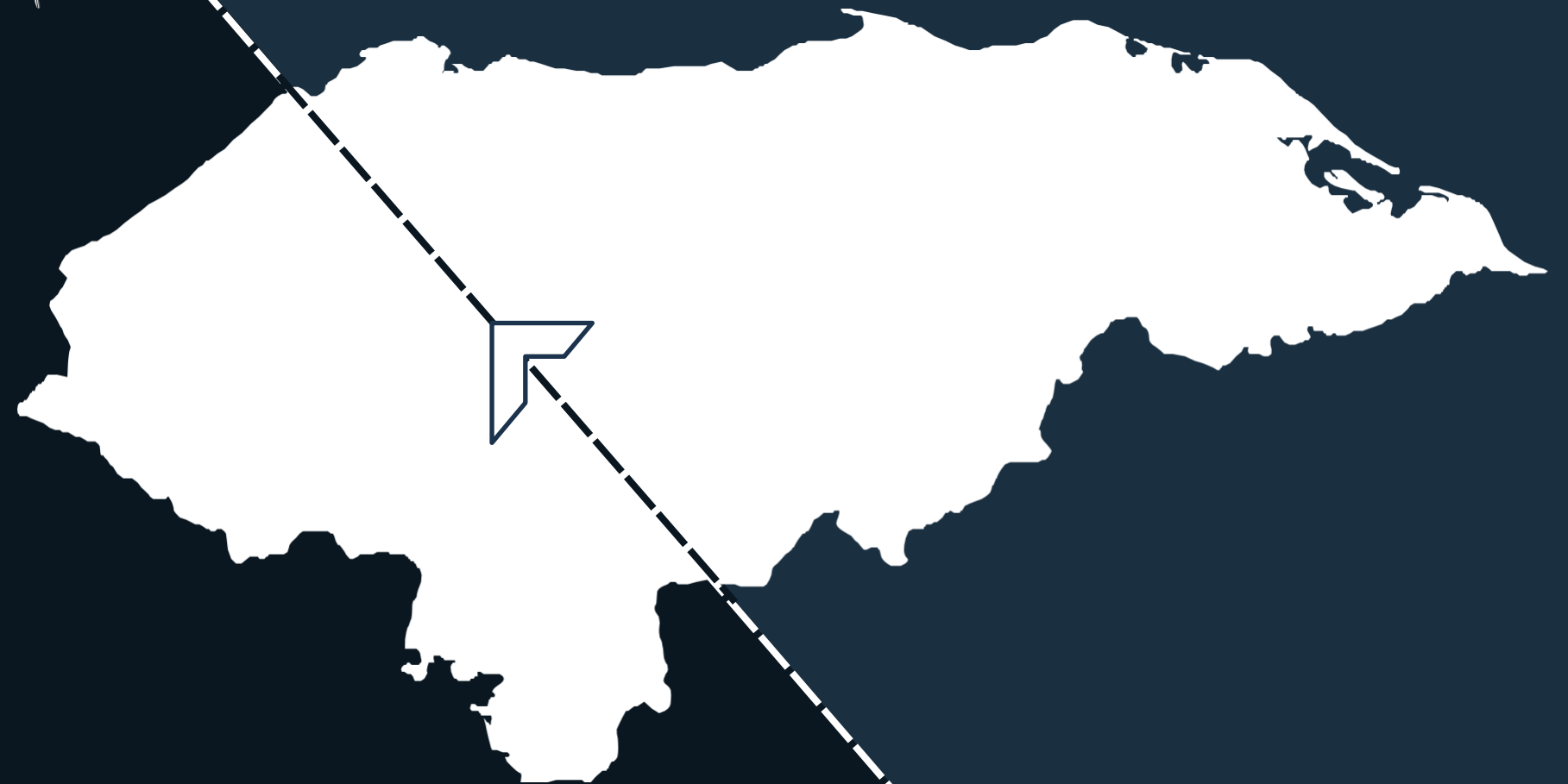
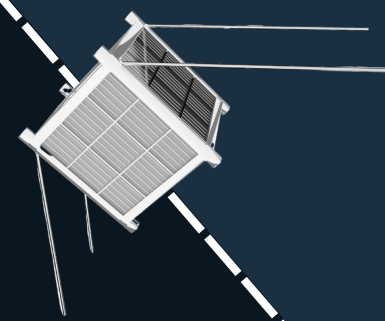
The project focuses on creating affordable solutions that can be implemented by emerging spacefaring nations like Honduras, which are at the early stages of developing their satellite capabilities. The aim is to make space technology accessible to these countries by reducing the cost of testing, ensuring they can develop reliable and effective ADCS systems for their satellites.

Space Activities

Early-stage development of a Deep Learning Method for green coverage analysis and deforestation detection using LiDAR and multispectral camera data

Honduras has 56% of its land covered by forests, making regular monitoring essential for their health and sustainability. Due to the vast area, manual tracking is challenging. By integrating deep learning, LiDAR, and multispectral cameras, a more efficient and accurate system can be developed to detect deforestation early, enabling timely action to protect and manage forest resources while supporting ecosystem conservation.

So far, we have only collected data using an equipped drone, but the plan is to implement this approach using space technologies in the future.



Next Steps

First Honduran Space Agency: A way to enhance international cooperation

A national space agency will centralize our space activities, fostering technological and scientific development while generating significant educational, economic, cultural, and international cooperation benefits.

Honduras has untapped potential in the space sector, and by learning from successful international space agencies, we can create a robust and sustainable foundation. Our model emphasizes economic viability, environmental responsibility, and strategic planning.

Thank You

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