

NASA SPACE APPS 2024

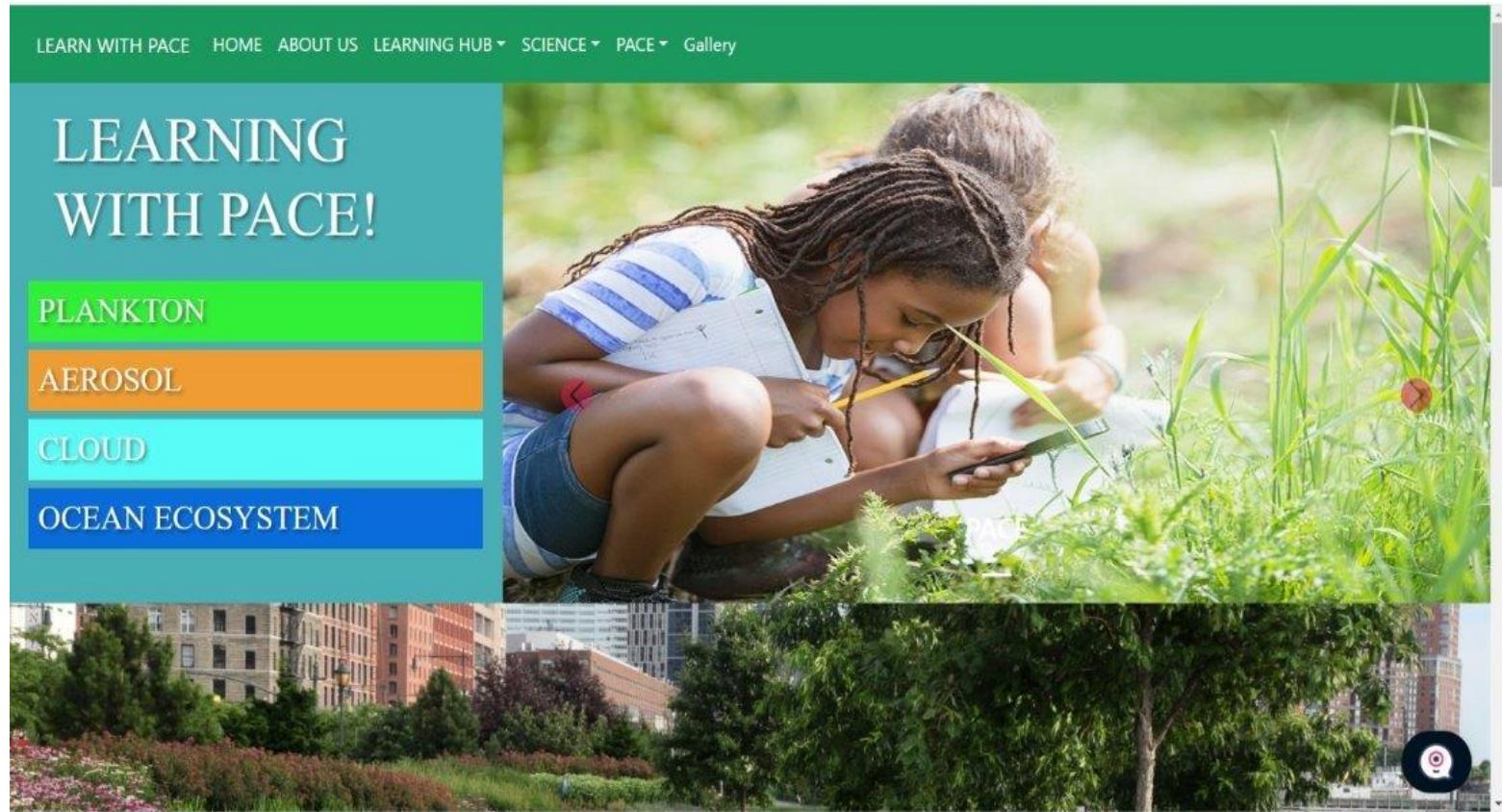


Problem Statement Title: PACE in The Classroom

Team Name: Phyto-Makers

IDEA TITLE

- The web application will offer a personalized learning experience through adaptive quizzes and data integration on topics like PACE, its working, impact, benefits and much more. Users will receive custom quizzes based on their progress, along with interactive visualizations of real-time data to deepen understanding.



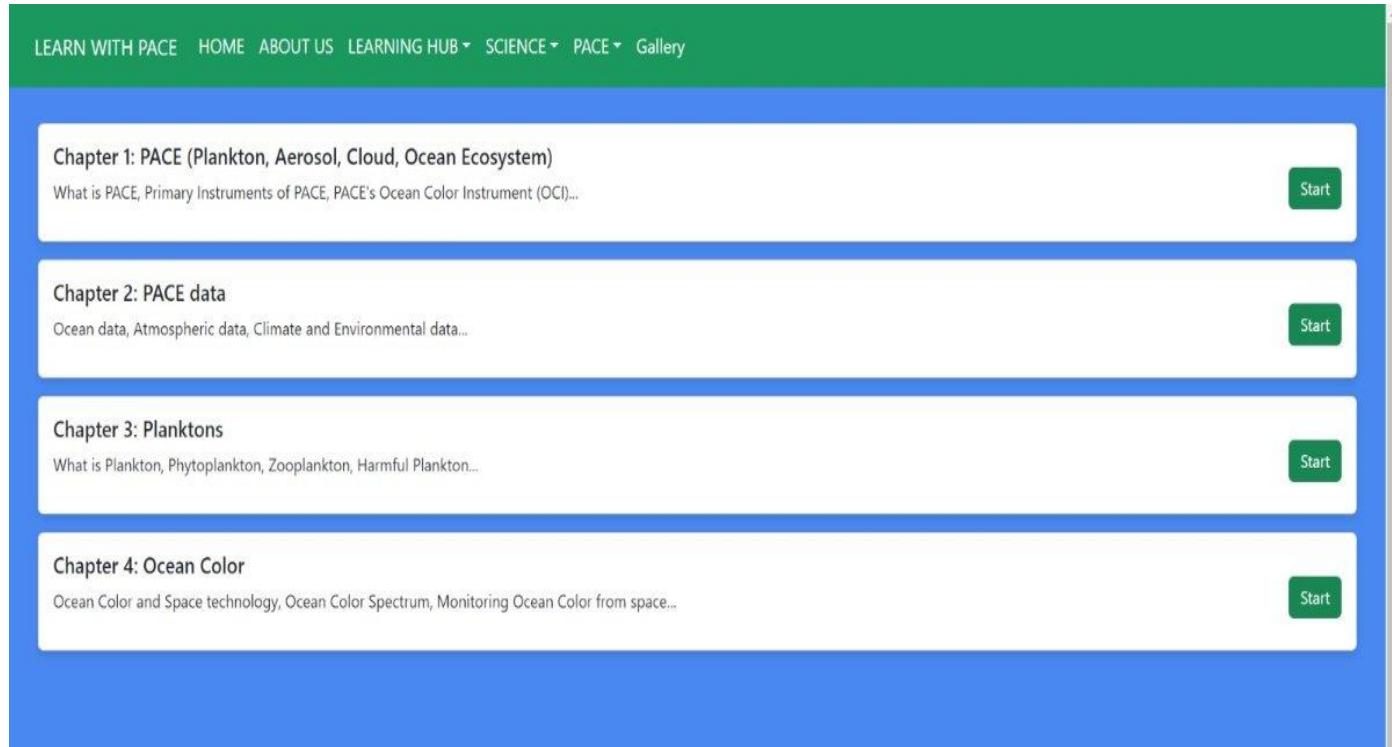
TECHNICAL APPROACH

Technologies to be used:

- Programming language:** ReactJS, HTML, CSS
- Frameworks/Tools:** GitHub, SeaDAS
- Additional Tools:** Figma, Camtasia

Implementation Steps:

- UI/UX:** Use Figma to create app's UI.
- Development:** Code the web-application using ReactJS in Visual Studio Code
- Test:** Test the web-application.



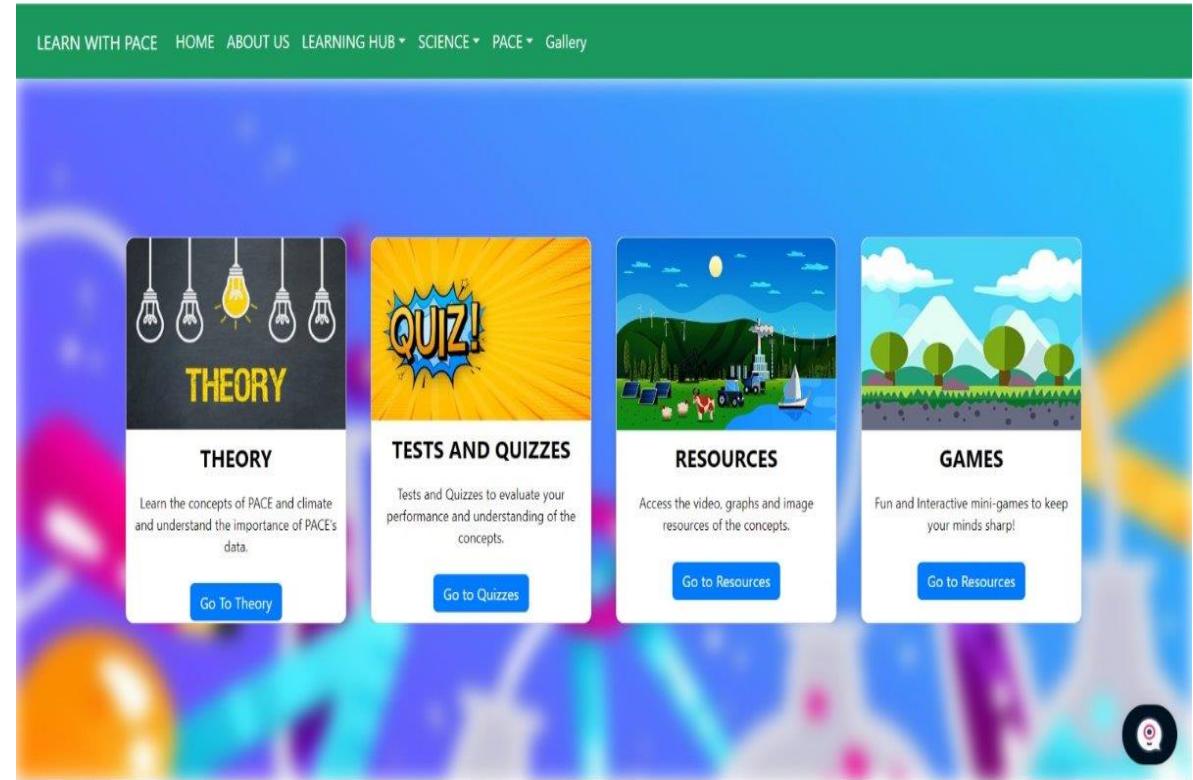
IMPACT AND BENEFITS

Impact:

- Learners can access content at their own pace and convenience.
- Scalable to serve a large number of users simultaneously.
- Features like quizzes, simulations, and gamification keep learners engaged.

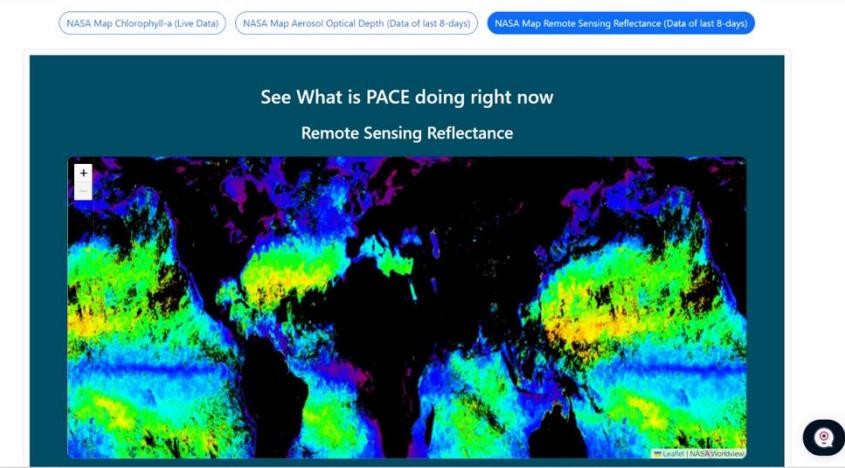
Benefits:

- More cost-effective than traditional classroom learning.
- Analytics tools offer insights into user behavior and performance.
- Develops digital literacy and critical skills for the modern workforce.
- Gamification (points, badges, rewards) makes learning enjoyable and motivating.

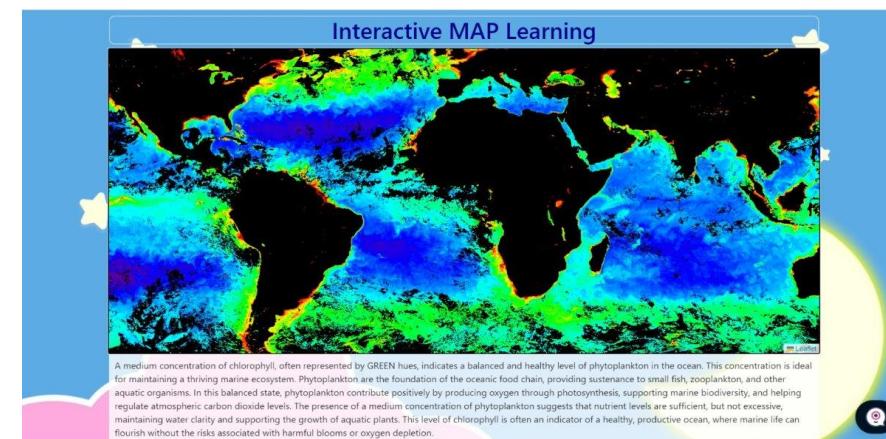


WEB- APPLICATION IMAGES

A screenshot of a quiz interface titled "Quiz". At the top, it says "Score: 0" and "1/19". Below that is the question: "What does NASA's PACE mission primarily study?". There are four options in boxes: "Outer space debris", "Ocean color and phytoplankton", "Air pollution", and "Magnetic field of Earth". The background features a dark, star-filled space scene.



A screenshot of the "PACE CHATBOT" interface. It shows a conversation with a bot named "Star". The bot says: "Welcome to Learning with PACE! Hello! I'm here to support you with all your PACE-related questions. Let's embark on your PACE journey together." A user message "What is plankton?" is shown, followed by a response: "Plankton are countless tiny living things that float and drift in the ocean. They can be really small, even smaller than a grain of sand!". A "Reply here..." input field and a "Send" button are at the bottom. The background is a view of Earth from space.



REFERENCES

- <https://pace.gsfc.nasa.gov/>
 - <https://oceancolor.gsfc.nasa.gov/l3/>
 - <https://youtu.be/OpxQZjEWC14?si=fiMUckti7ZEjHqFd>
 - <https://github.com/manan75/Pace.git>
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