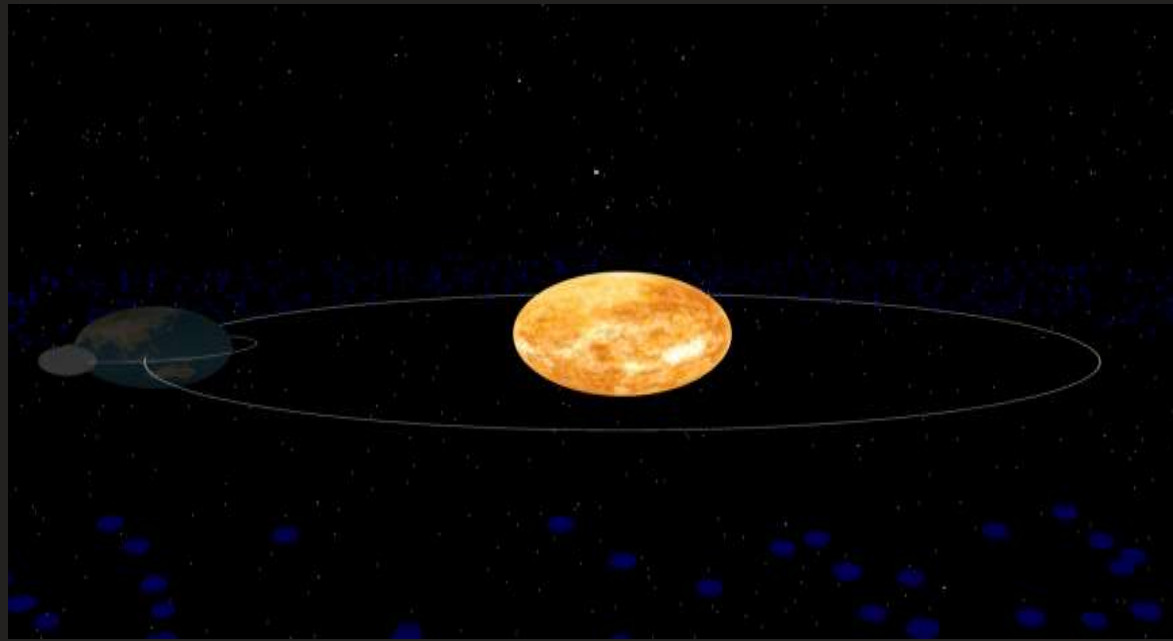


TEAM NAME : WELTRAUM

# NASA ORRERY WEB APP

October - 2024

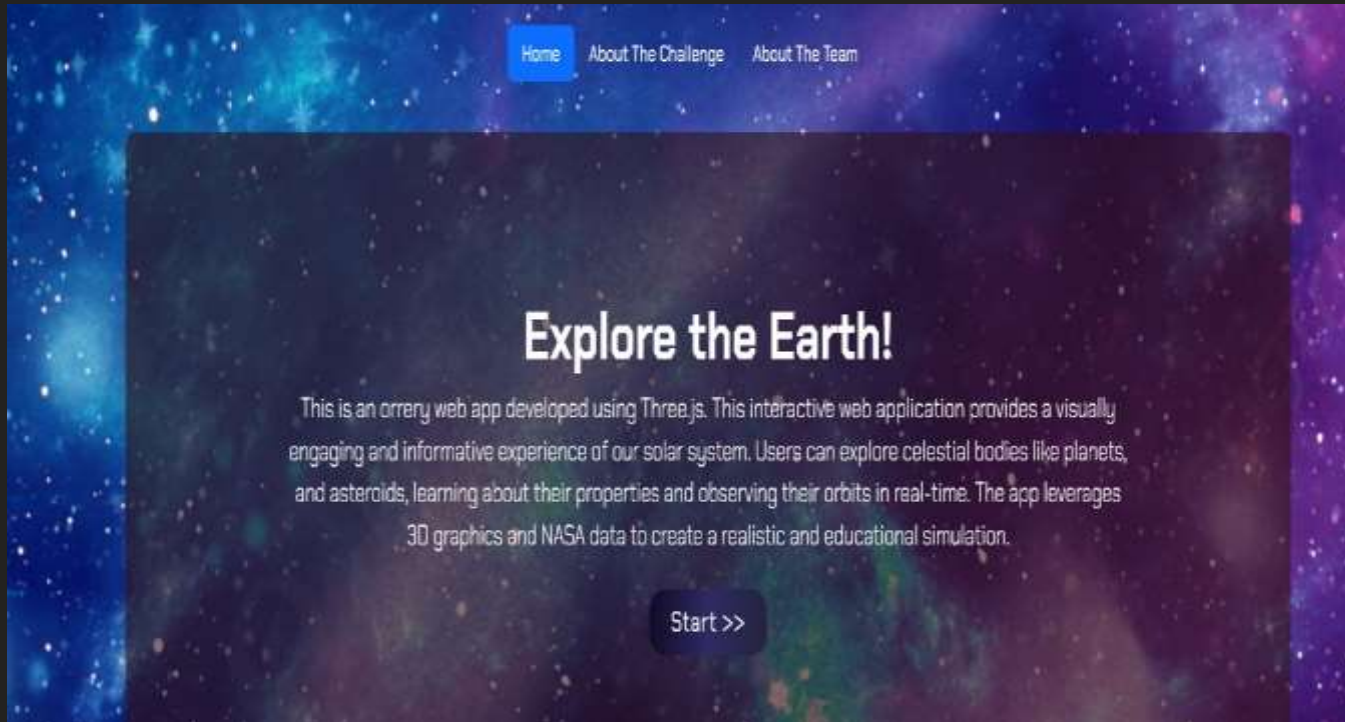


# Overview of Orrery

## Concept and Significance

An orrery is a mechanical model of the solar system that demonstrates the relative positions and motions of celestial bodies. It serves both educational and entertainment purposes, helping users grasp complex astronomical concepts. Historically, orreries were used in teaching astronomy to illustrate planetary movement. The NASA Orrery Web App expands this idea into an interactive digital format, bringing the wonders of the cosmos to a wider audience.

# Web App Features



## Educational Resources

The app includes educational resources such as detailed data that promote active learning. These resources help users deepen their understanding of celestial mechanics and space science while making learning interactive and user-friendly. It bridges theoretical knowledge with visual representation.

## Interactive Visualization

The NASA Orrery Web App offers interactive 3D visualizations allowing users to manipulate the view of the solar system. Users can explore planetary orbits, relative sizes, and distances, creating an engaging experience. Visualization plays a crucial role in understanding astronomical phenomena with immediacy and impact.

# User Interface Design

## Responsive Layout

The app features a responsive design accommodating various devices, ensuring a consistent experience whether accessed on desktop or mobile. This allows users to engage with the content from anywhere.

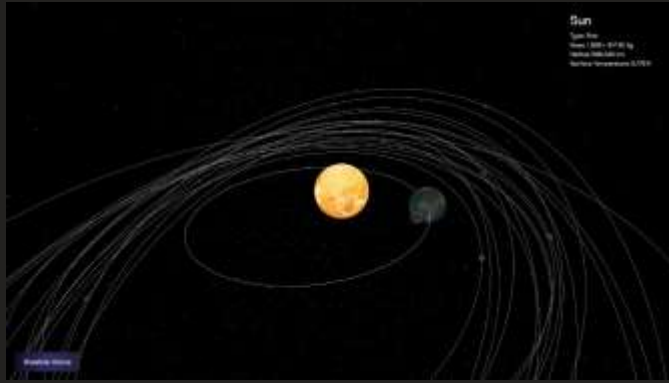
## Visual Aesthetics

The visual design prioritizes clarity and engagement, utilizing high-resolution graphics and animations. This enhances the educational aspect, making complex information visually accessible and appealing.

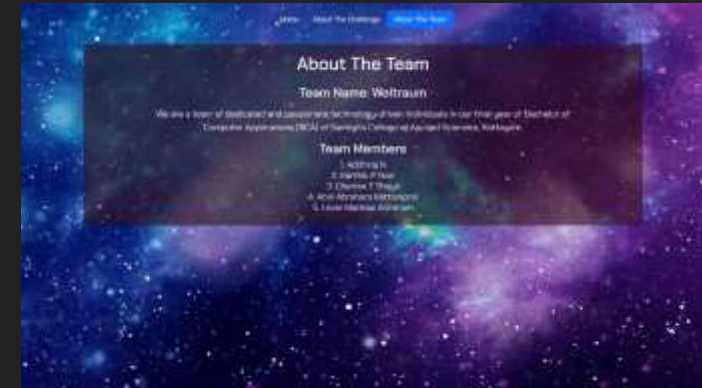
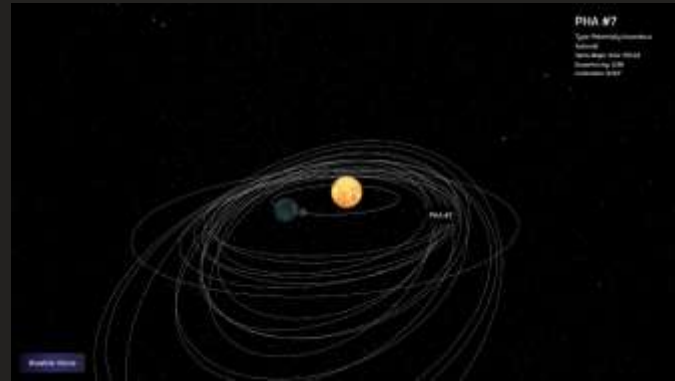
## User Experience Focus

The UI design revolves around a seamless user experience, providing easy navigation and accessibility. Intuitive controls enable users to manipulate settings effortlessly, enhancing engagement and exploration.





# User Interface Design



# Technical Specifications

Element	Description	Technology
Programming Languages	Used for app development	JavaScript, HTML, CSS
Frameworks / Libraries	Support structure	Three.js
APIs	Interact with space data	NASA APIs, WebGL
Hosting	Where the app is hosted	GitHub

## References

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[https://nasa.github.io/missionviz/RMarkdown/Elliptical Orbit Design.html](https://nasa.github.io/missionviz/RMarkdown/Elliptical%20Orbit%20Design.html)

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