

Solar Sky VR

A stylized diagram of the solar system is centered in the background. The Sun is a large, bright orange sphere at the center. Several concentric, thin white lines represent the orbits of the planets. Planets are shown as small spheres of various colors (brown, blue, green, orange) positioned at different points along these orbits. The background is a deep blue space filled with numerous small, white stars of varying brightness.

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Overview

Solar Sky VR is the evolution of Solar Sky AR, an application that gathers live data about planets through API requests and displays them alongside planet models in an augmented (and now virtual) 3D space.

A second API request is made in order to gather fun facts about each planet, and that is also displayed in an information panel. Multiple facts are gathered, and one is selected at random, so you get a new fun fact each time you select a planet.

Purpose

Solar Sky VR is designed to educate students about the Solar System and the bodies within it while providing a semi interactive experience to visualize it through a computer or VR headset.

GitHub Repository

github.com/BenBerryman/Solar-Sky-VR

The screenshot shows the GitHub repository page for **BenBerryman / Solar-Sky-VR**. The repository is in the **main** branch, with 8 branches and 0 tags. It has 37 commits and 2 watchers. The repository is a C# project for a VR application, as indicated by the file list and the language statistics.

Repository Details:

- Repository: BenBerryman / Solar-Sky-VR
- Branch: main (8 branches, 0 tags)
- Commits: 37
- Watchers: 2
- Stars: 0
- Forks: 0

File List:

File	Commit Message	Time Ago
.vscode	Initial commit	9 days ago
Assets	Larger Fun Facts panel for Venus	2 hours ago
Logs	Initial commit	9 days ago
Packages	added hand menu	3 days ago
ProjectSettings	added extra buttons for hand menu	3 days ago
.gitattributes	Initial commit	9 days ago
.gitignore	Initial commit	9 days ago

Contributors:

- BenBerryman (Ben Berryman)
- nikuhuss
- rhvjwdeks (Polar Bear)
- TarunApp (TarunApp)

Languages:

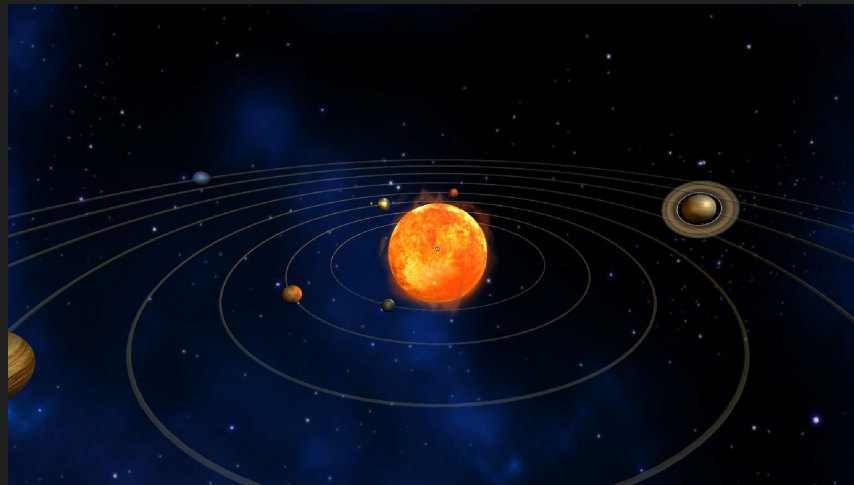
- ShadersLab: 82.0%
- C#: 14.9%
- HLSL: 2.5%

Usage

Unity

Open the Unity project, and press Play! You should see the planets of our solar system orbiting the vicious fiery ball that is our Sun against the glittering backdrop of space.

This is the Solar System View.



Usage cont.

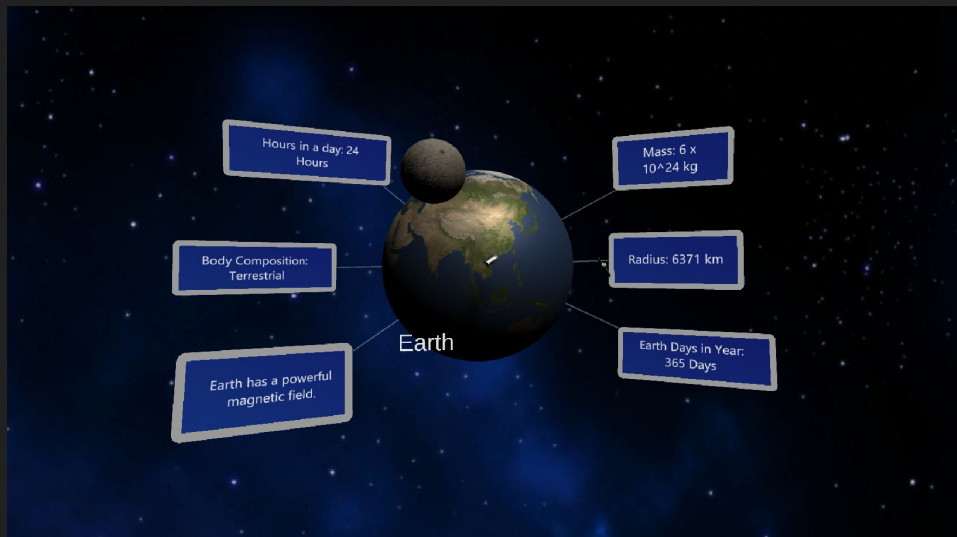
Solar Sky VR also features Planet Views where for each planet you will find out:

- Mass
- Radius
- Number of hours in a day
- Number of days in a year
- Composition
- A random fun fact!

To display Planet Views:

If you are on a system that supports hand tracking, simply raise your left or right palm towards you to bring up the selector. Then tap the button for the planet you wish to view.

If you are using the application in Unity, you can use MRTK's built-in hands by pressing either T (left hand) or Y (right hand). To rotate the hand towards you, hold Ctrl-LShift for the left hand, or Ctrl-Space for the right hand. Then use your mouse to maneuver the hand.



Code

The code was written in C# using the Unity Engine. The API requests are made through the API call of “le-system-solaire” (api.le-systeme-solaire.net/rest/bodies/).

The facts for the planets are provided by the API endpoint tarunapp.github.io/api/planets.json and for the planet compositions we used the API endpoint tarunapp.github.io/api/planets.json.

SimpleJSON library was used to gather the JSON data:

github.com/Bunny83/SimpleJSON