



The Problem:

It is difficult for the general public to visualize and understand the importance of the Psyche mission and the data returned by it. As a result, there is a need for an immersive and intuitive application that will allow users to experience planetary bodies and learn more about Psyche in a more entertaining and interactive way.

The Solution:

The PC-based Virtual Reality (PCVR) application developed in Unity using the High-Definition Render Pipeline (HDRP) to deliver high-fidelity, immersive environments. It utilizes official NASA and Psyche mission data, including digital terrain models (DTMs) from Mars missions, which are transformed to heightmaps, imported and processed within Unity to create realistic 3D planetary landscapes. Custom shaders, lighting, and post-processing effects enhance the visual authenticity of the terrain. Users interact through a VR-compatible interface using the XR Interaction Toolkit, enabling exploration of multiple fixed and user-controlled viewpoints within a 360-degree VR environment. Informational UI panels are integrated contextually in-world, presenting comparative facts and mission data about the Psyche asteroid.

Understanding the Psyche Mission Through VR: An Interactive Learning Experience Team members: JOSE GRIJALVA, IULIIA ORELLANA, ESTEVAN PEREZ, NEISA MATTOS.













