LUNAR LAUNCHERS

TEAM MEMBERS:

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MOONQUAKES

The moonquakes, confined to the lunar nearside, are most numerous and triggered by tidal deformation of the Moon.

The lunar seismic signals generated during moonquakes have a large degree of wave scattering.

Seismic events cause ringing — you could visualize them as concentric torus shapes or circles.

OBJECTIVE

Our challenge is to develop an app that plots the seismic events detected by the EASEP and ALSEP instruments on an interactive 3-D digital moon globe.

We aim to build a digital lunar globe, a display on an interactive 3-D virtual model that gives a virtual reality experience set on the lunar surface where seismic events shake the camera’s point-of-view.

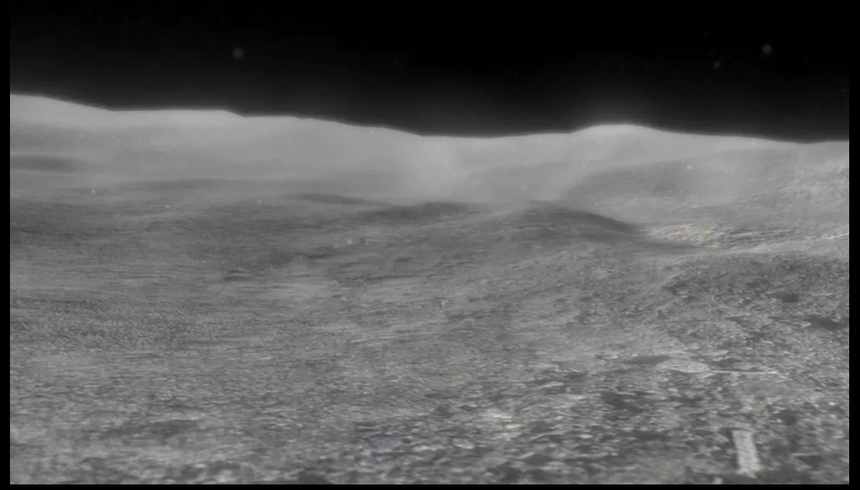
OUR IDEA

- We are aiming to develop an app for detecting the seismic events on the surface of the moon due to moonquakes.
- We have developed a 3D model of the digital lunar globe which when zoomed at different angles gives a virtual reality experience set on the lunar surface .
- This 3D virtual model of the lunar globe has been developed with the help of Unity software.
- The Lunar Surface model and stars skybox is obtained from unity's assetstore and blended together using the unity software.

- The codes for these VR 3D models of Moon are done in C# language.
- The more the surface is prone to lunarquake, the more will be the seismic events.
- This will increase the frequency of vibration which in turn shakes our screen accordingly.
- We connect the seismic datas in the backend to the VR 3d model using OBSPY python module .
- We can also use Google Cardboard SDK to get a real VR experience of our app.

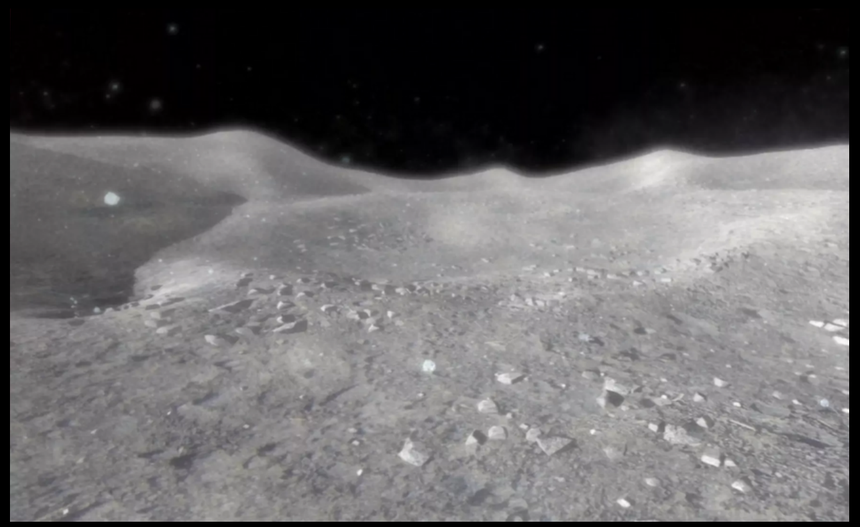
LANDSCAPE MODEL

1)



2)

3)



4)

TECH STACK

- C#
- UNITY
- PYTHON (OBSPY MODULE)