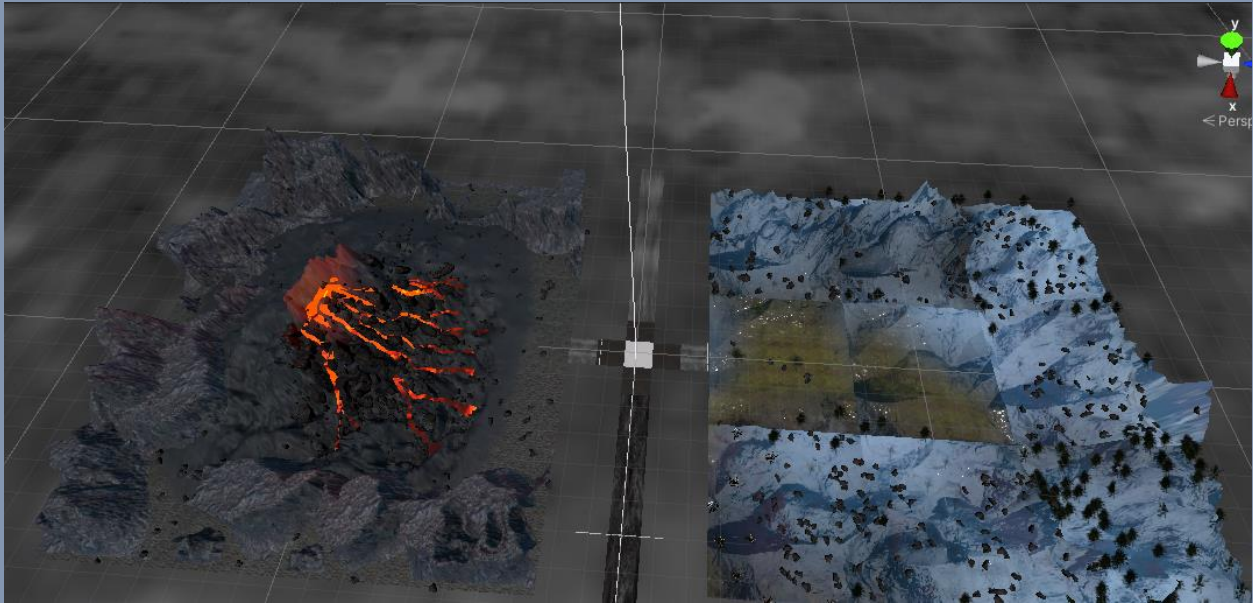


Immersive – Ed (VR)



This document will serve as a summary of the XR prototype with which I worked the last two weeks. The list of prompt places for this week's prototype was identical to previous weeks, and I selected to work in the school scenario. Our prompt for this project was to make use of Unity3D and your VR headset to create a virtual version of one of the locations. and also have three audio triggers to tell the users about the space by recording narration about the space and/or the experience. After deciding on a location, I quickly began to make a list of everything that I felt was missing during my education. And the first thing that popped up was the lack of availability of classroom/laboratory materials once we leave the actual room. And I wanted to come up with an experience where a user can just grab and interact with different laboratory tools in their desired locations via the VR application.



Classroom Scene With the implementation of grabbable ink markers to note data in different rooms.

But after my first-week presentation. I came to learn of VR classrooms and did thorough research on the portals related to and around them. The first thing I observed was all of them were way too focused on the real-world laboratory and theoretical classes and there was no availability of real-world lessons. I tried to come up with a much more focused VR learning experience, and in my second week, I tried to build a scene revolving around Natural Hazards.

I have to say that there are currently more than three audio triggers available in the scene, of which the main introduction to each hazard was the key one. This is a mid-fidelity prototype with near high resolution. And the target audience is education systems and users interested in specific topics and want to be aware of a topic and learn the 'what to do' and 'what not to do' when such events happen. And I target any user over the age of 13 as that is the minimum age requirement to make use of a VR headset.



Wildfires



Volcano Eruption



Earthquake Scene

The three natural hazards I focused on for this project were Volcanic eruptions, Wildfires, and Earthquakes.

Video Links:

[Link 1](#)

[Link 2](#)

From the provided video you can view how I'm making use of the audio triggers. Similarly, there are Audio triggers for both Wildfires and Earthquake hazards with the following messages:

Wildfire's message - A wildfire, forest fire, bushfire, wildland fire or rural fire is an unplanned, uncontrolled fire in an area of combustible vegetation starting in rural and urban areas.

- Wildfires continue to burn across the globe, threatening homes and buildings throughout the region.

- No matter how hard we try, the fires are going to keep getting bigger, and the reason is really clear. Climate is really running the show in terms of what burns.

And for Earthquake – An earthquake is the shaking of the surface of the Earth resulting from a sudden release of energy in the Earth's lithosphere that creates seismic waves.

- In an earthquake, you shouldn't run out of the building but rather stay in it.
- We can't avoid it but only be impressed by the magnitude of these quakes.

For future iterations, I would like to choose several widely awareness-required topics from a range like a Climate change issue or the Wonders of the world.

I made use of the following tools for this project:

- Unity Editor
- Oculus Headset
- Audacity
- One-Note
- GIT-LFS

And for the assets which I didn't build from the Blender and 3dsMax, I made use of RAM river maker, Free3D, and All3dp websites to access some free and paid resources.

The most difficult yet interesting part of this project was trying to understand the terrain tools and particle system of the Unity engine better.

The post-presentation critiques I received from my peers were constructive mostly as they want me to add a few of the following functionalities:

- A class on side of each variable we are learning and more basically like a field trip to that particular location for the users to better understand the scenario.

Even though I couldn't present this part in my design. My focus was based on this idea right from the first week and will definitely try to add it in future iterations.

- Can used for group activities?

I would like this to be implemented around the same time when the above iteration will be added to the prototype.

- Can add historical sites.

Yes, definitely. The sole purpose of my trying to elaborate on the topics for future iterations was this there is a large scope of immersive learning and a lot of interesting topics and stories one can experience with the help of XR.

- And finally, the representation for comparison between worlds.

I think this is one of the key reasons for immersive learning as a user already tries to compare the scenes with actual-world objects, maybe not at the moment due to a lack of objectives and a much clear path of learning. But that is one of my goals for this project.