DESN 27425
Modeling and Materials

PROJECT 2

MODELING SPACE

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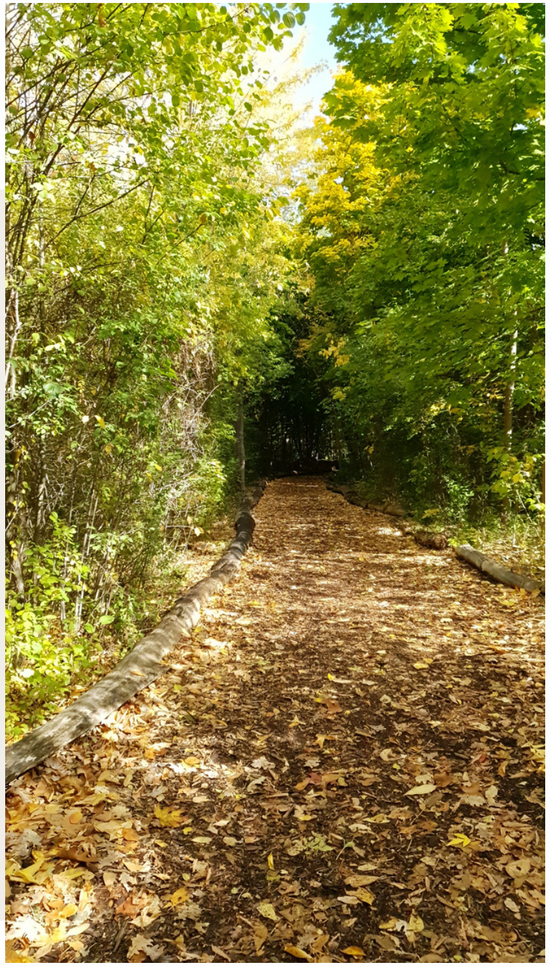
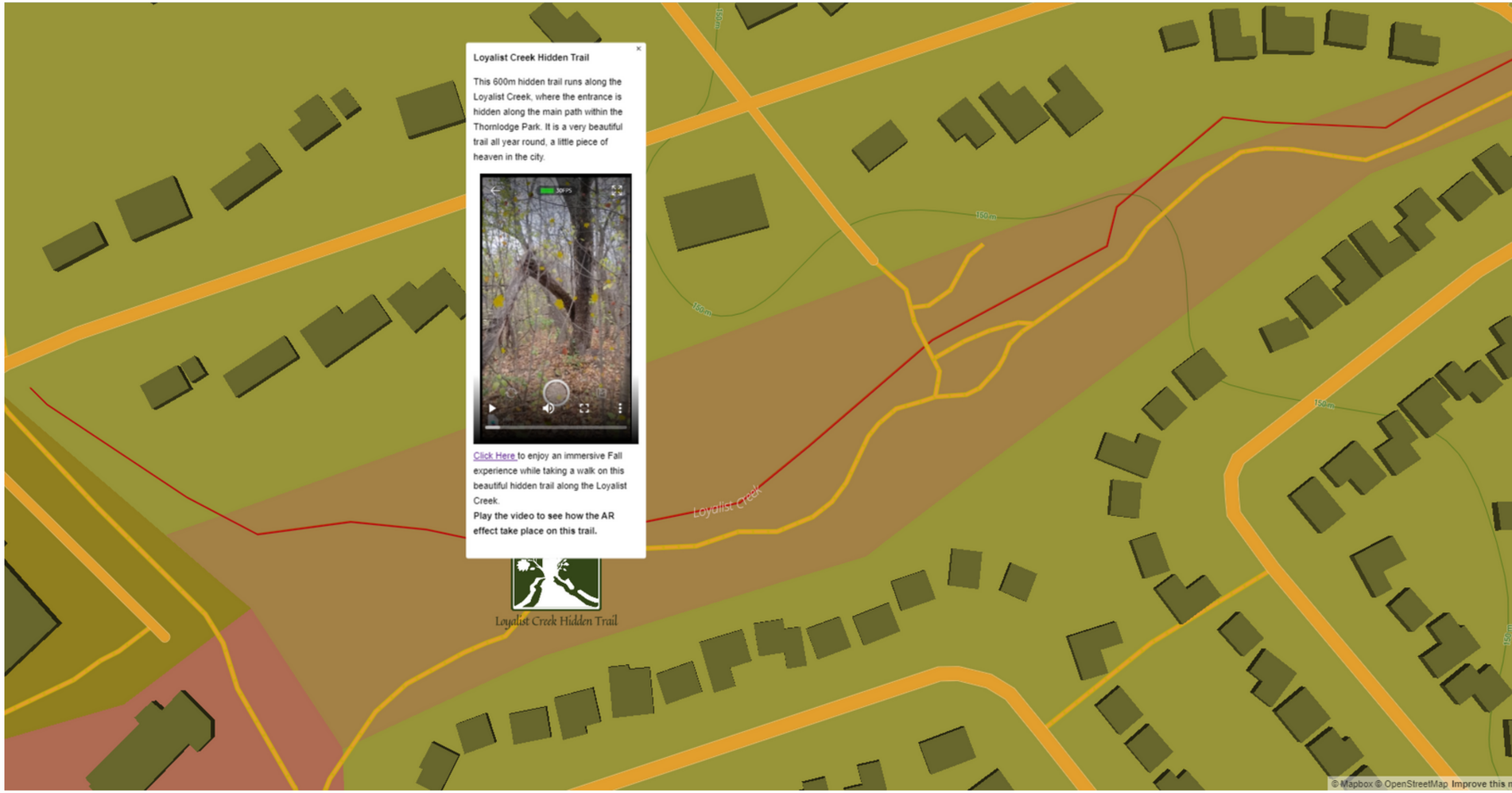
Design Statement

The purpose of this project is to explore data in the context of space, location, and geography using various mapping and 3D modelling tools through formstorming activities to challenge the idea of place and position using location and spatial data within my neighbourhood while generating a meaningful dialogue to connect residents with nature as well as creating awareness for preservation.

Hidden Fall Trail is an augmented reality experience created from Meta Spark AR and utilizes real-time geolocation data to expand our awareness of our own neighbourhood. This AR experience is aimed at long term residents and newcomers of the Sheridan Homeland neighborhood to identify and appreciate the natural beauty that is hidden within the city.



Final Design



Click here to view the final design.

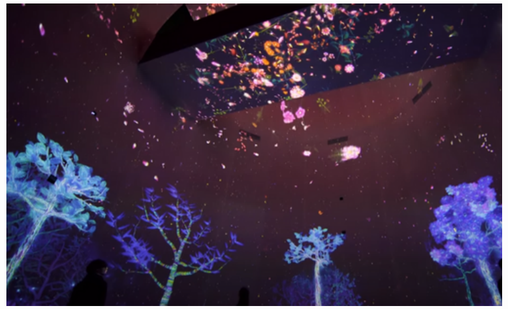
Final Design Reflection

Maps as narratives and maps as data are two concepts that really inspired the direction and the creation of the final design of this project. The Loyalist Creek Hidden Trail was initially found during the pandemic on a day where I needed to keep my hyper energetic child motivated and engaged. The initial hesitation was there prior to stepping foot into this trail, because as someone who had lived in this neighbourhood for 10+ years, this trail was unfamiliar. Google map was used to search to see if this trail had an end to a main road and not lead to someone's backyard. Thus, map was the data used to help navigate. Yet map also became narratives, because the location of this trail has been shared to other friends and family laced with stories that comprised my adventures with my family on this short trail.

As Mississauga continues to grow, green spaces are becoming increasingly important for residents, both long-term and newcomers, to connect with nature. Nature has a positive effect on mental and physical health, additionally, the beauty of nature inspires creativity and boundless imaginations. The tranquility of green spaces grounds us, especially a hidden trail beside the Loyalist Creek that discharges to the Credit River, offers that peace and quiet within a bustling city.

The idea of falling leaves along this trail is used to encourage residents to take a moment and appreciate the beauty that this trail offers. This AR experience aims to visualize the beauty of a place that from the outside looks creepy and unkept. Additionally, this AR experience is meant to create awareness to the residents of the Sheridan Homelands neighbourhood that this is a place that should be preserved and that we should all unite to maintain and restore the beauty that this creek and path have offered our neighbourhood.

Inspiration


During the summer, I went to the Van Gigh Exhibit Toronto: The Immersive Experience. Yet this experience introduced me to immersive art exhibits created by teamlab, where “massive, ‘body immersive’ space comprising a labyrinth of varying virtual experiences” are created so that “the boundaries between the body and the work becomes ambiguous... for people to think about their relationship with the world” (Senda).


This openness to invite people to engage in an experience that combine art, science, technology, and design, challenges our understanding and view of the world, as well as redefine boundaries as limitless to enable our own creation of our narratives.

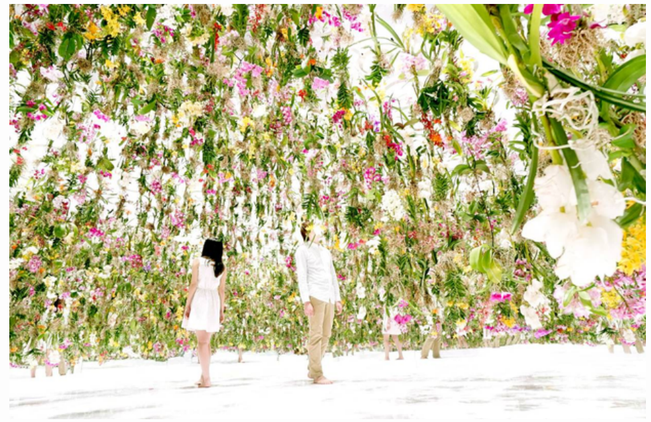
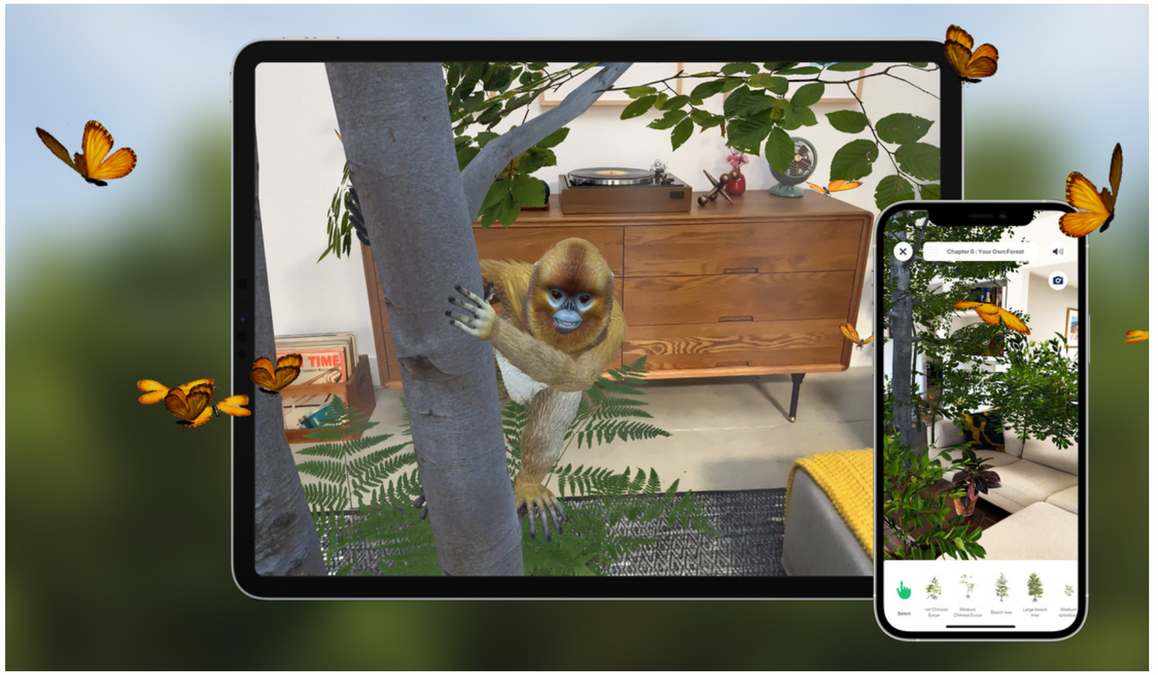



Image citations is in the last page

Inspiration

World Wildlife Fund created an immersive augmented reality app that brings the forest into your home to educate people om the importance of forest sustainability and preservation. The app allows users “to immerse themselves in the forest and watch as animals react to their presence as if they’re really out walking in nature” (WWF). This idea of having the forest come alive around the users really help steer the immersive interaction I want users to experience while going on the Loyalist Creek Hidden Trail.



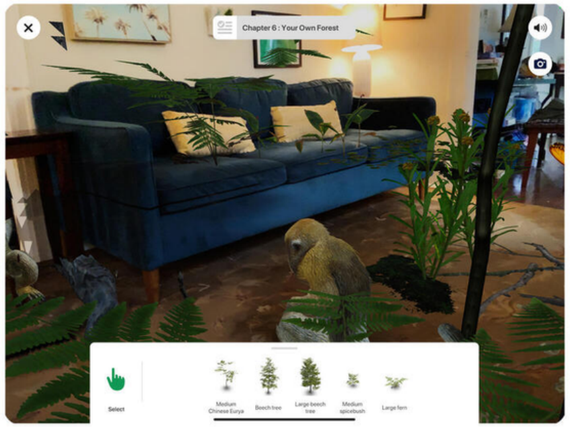
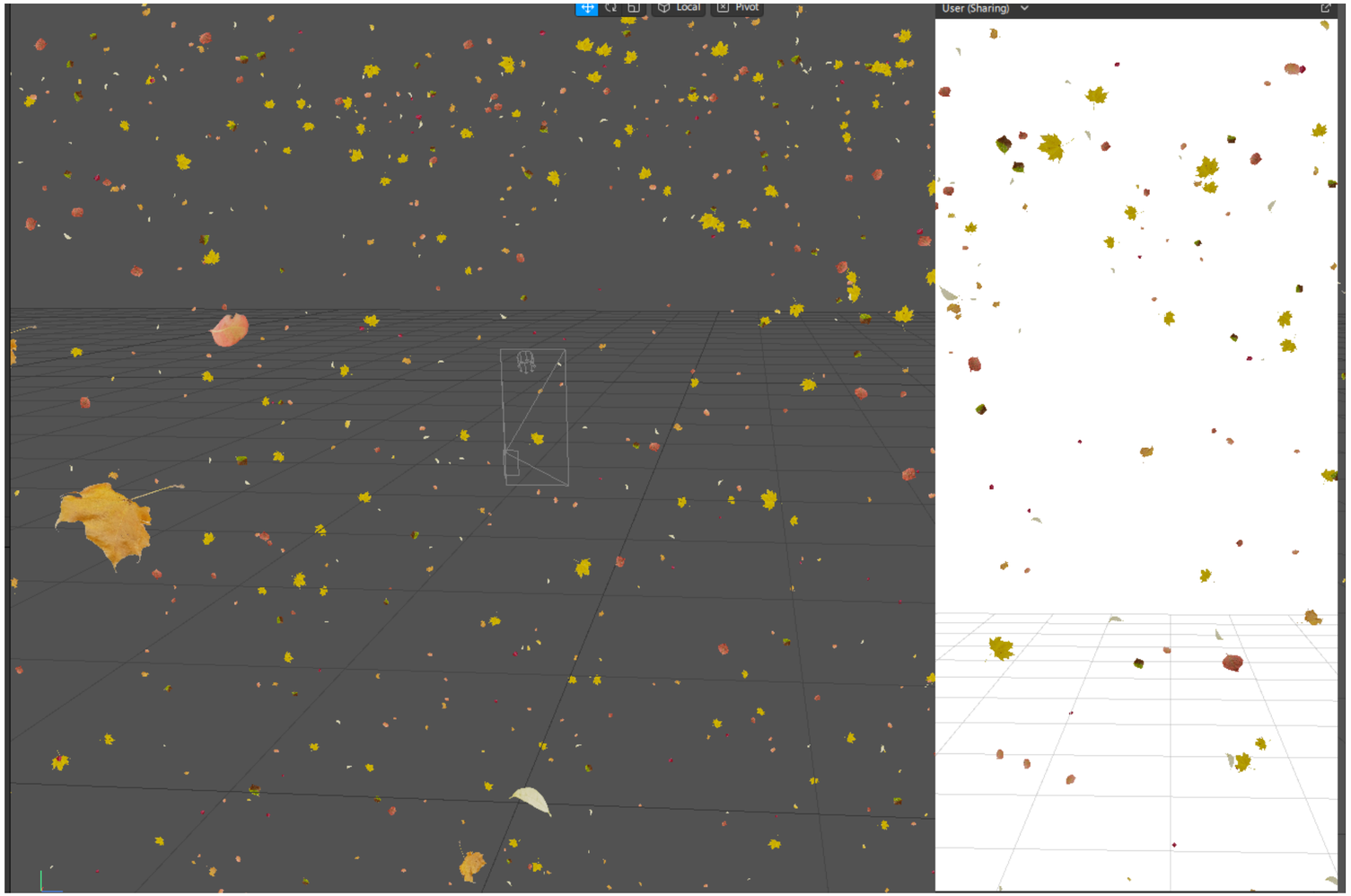


Image citations is in the last page

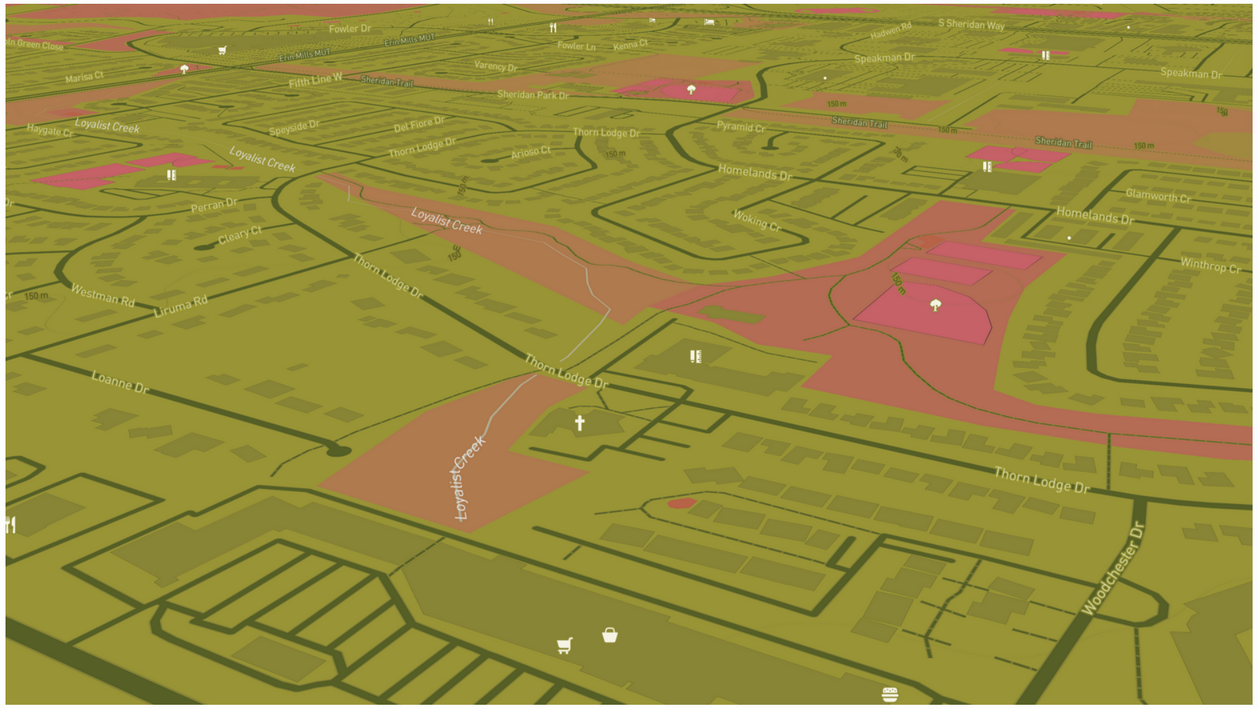
Meta Spark AR

The final design for this project was deeply inspired by the captivating experiences created by teamlab. Meta SparkAR was used to create an immersive experience - a particle world effect – using a series of particle systems and leaf textures to make it look like you would be surrounded by falling leaves in autumn.

I used both Create a Particle World Effect tutorial and Adding and Editing Particle Systems tutorials from Meta Spark AR as guides to create this AR effect for the final project.

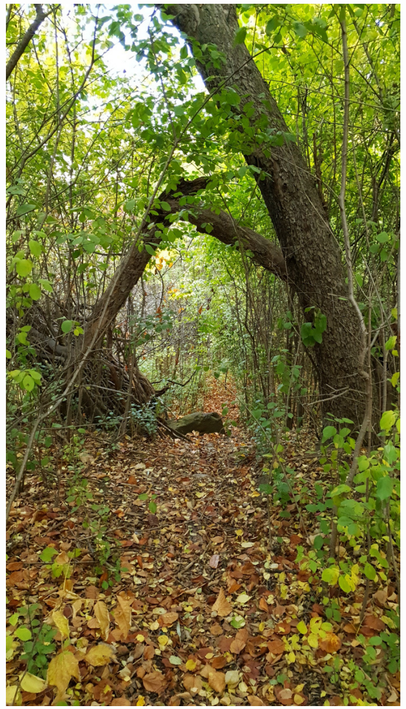


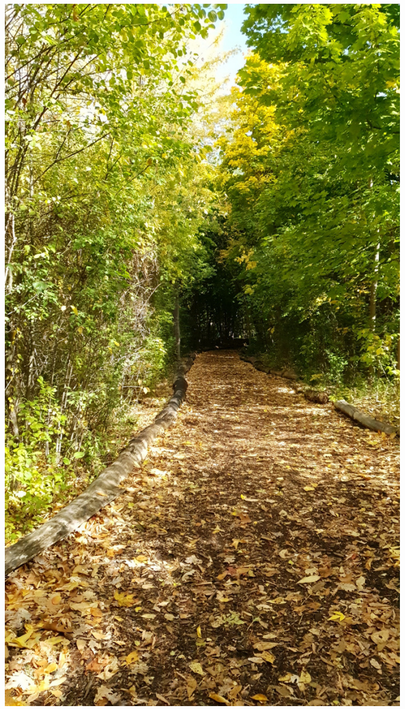
Design Process

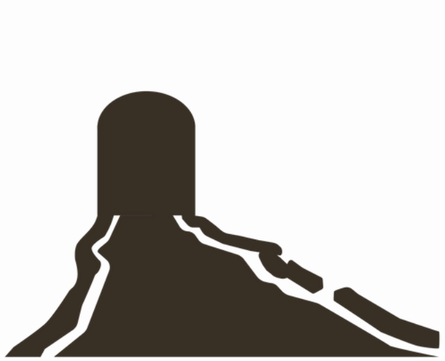


This photograph inspired the style for the final map design. Here green spaces, such as forests and parks are styled in pink, which breaks away from the traditional understanding of "green spaces", since it is not styled as green here.
However, the roads, residential areas, and various other elements are styled in different hues of greens to contrast the pink.

Design Process





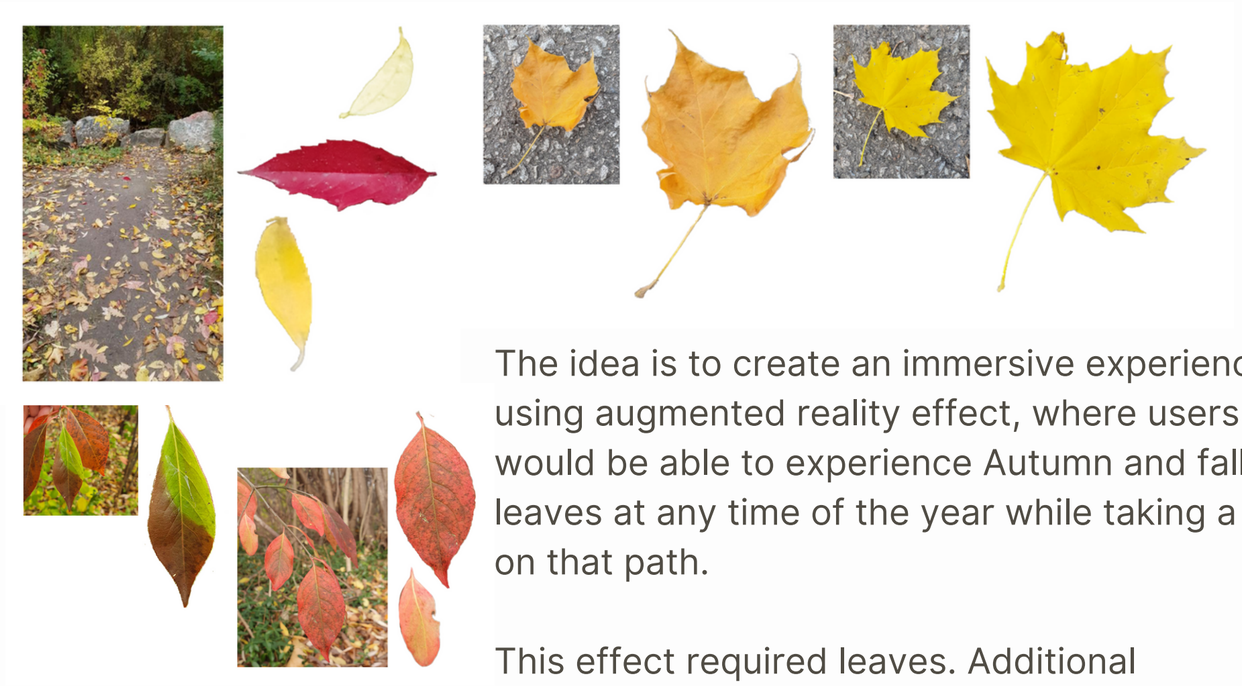


The icon was inspired by these two photography. The idea behind this is to create an icon that incorporated the idea of a hidden path that would be surrounded by the beauty of nature.

Design Process

This is the initial ideation that was placed as content for the popup window. The whole purpose that this trail was picked is to share this beautiful trail. Hence, a short description is included in this popup with a link to that discuss on the need to conserve and preserve this amazing green space.

Design Process

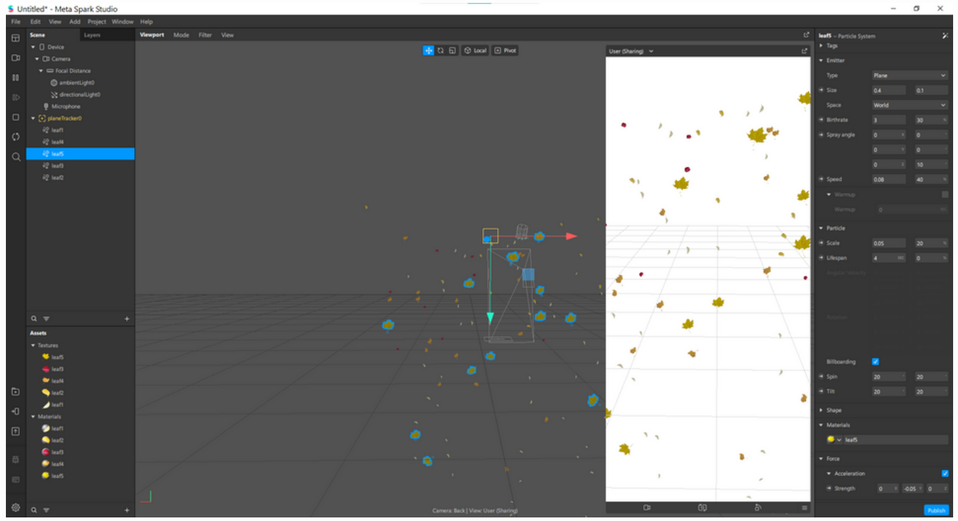


The idea is to create an immersive experience using augmented reality effect, where users would be able to experience Autumn and falling leaves at any time of the year while taking a stroll on that path.

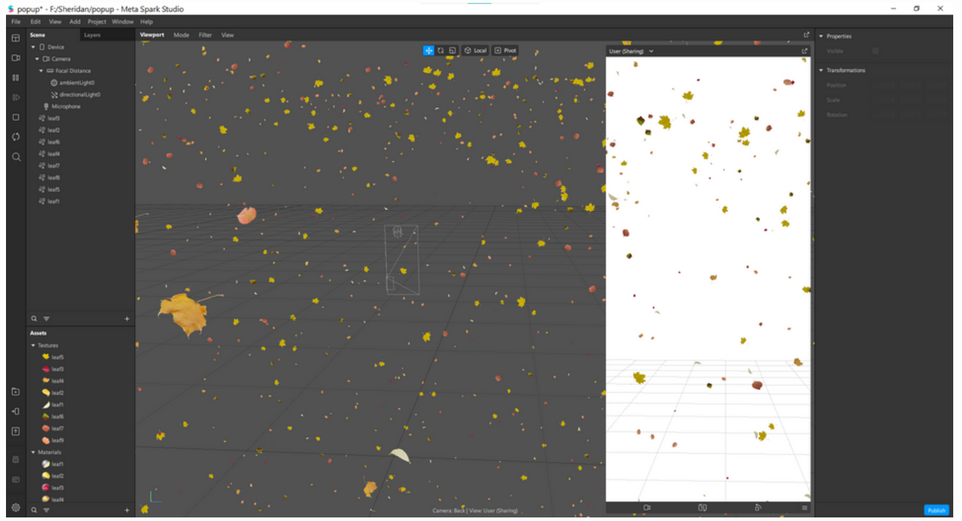
This effect required leaves. Additional photographs were taken so that individual leaves can be isolated in Adobe Photoshop so that can be added into Meta Spark AR.

This image was taken to act as a target tracker after Spark AR is initiated. However, this was scrapped. The goal is to create an immersive experience to captivate users, having a target tracker would not offer the same level of immersive experience that a world effect would offer, since world effects add virtual objects into real world environments.

Design Process

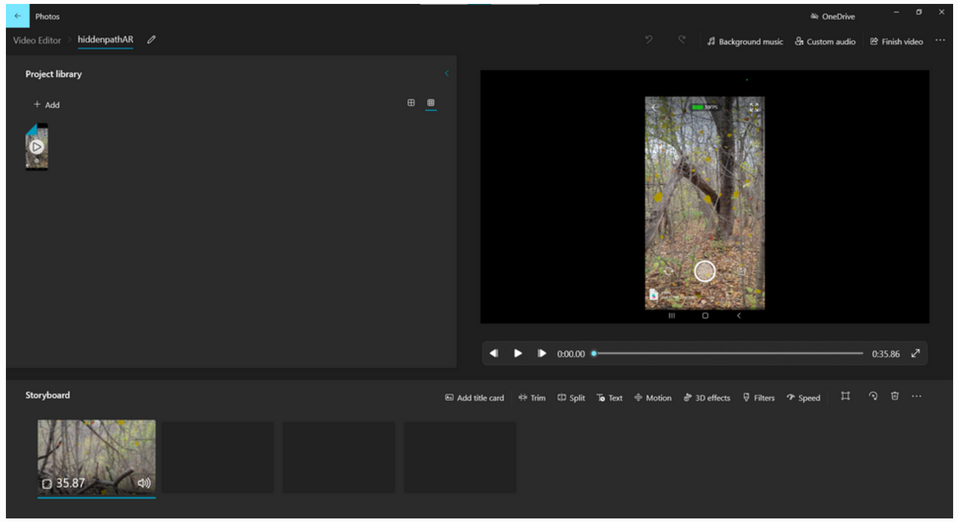


The falling leaves effect was created using a particle system in Spark AR for each leaves. There are a total of 8 particle systems used. Initially, the emitter type for particles were set to plane, because originally the effect would only play if a target was tracked.

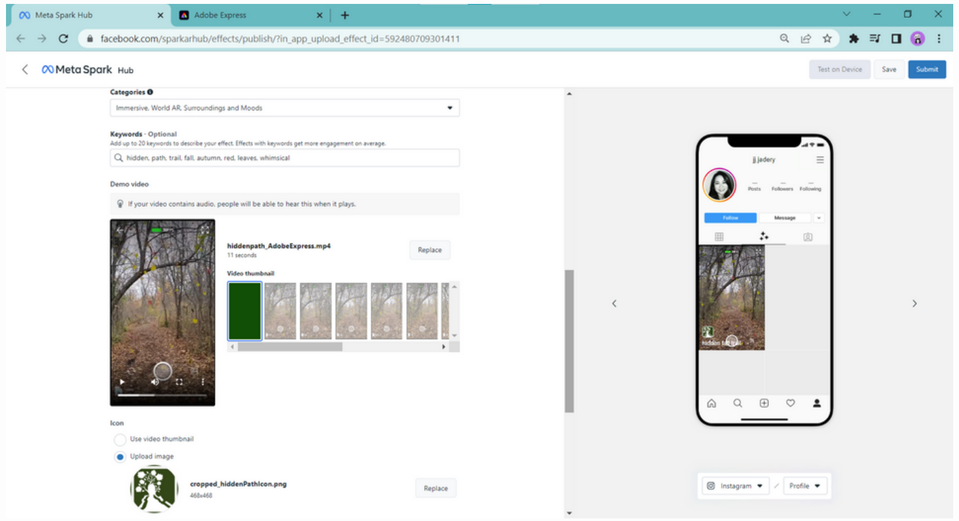


The emitter type was later set to ring since the AR effect will be displayed all around in world view, so that no matter where the user position the camera, the effect would still be displayed. As a result, the target tracker was removed so that the leaves would be in a fixed position in user's environment.

Design Process

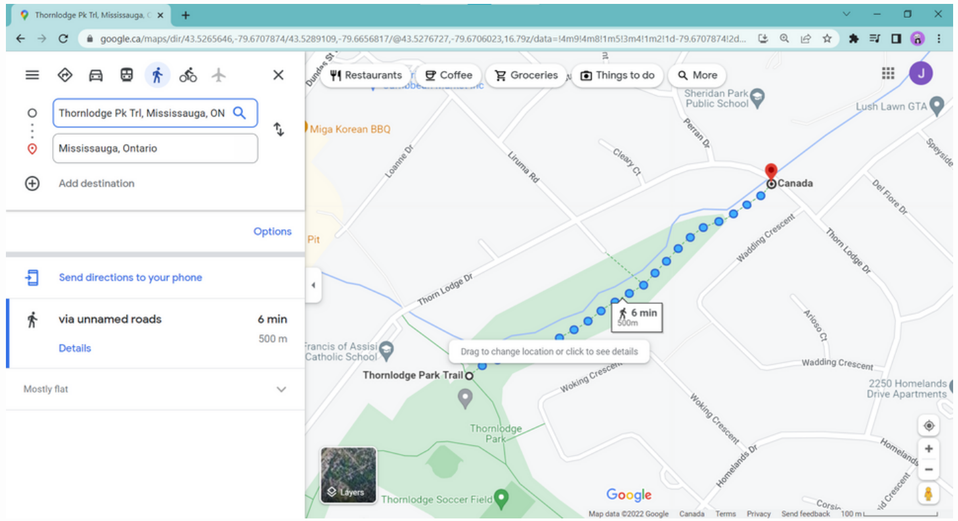


The screen recording was edited in preparation for publishing the effect. This video was screen recorded on the trail, and the effect was initiated at the trail.

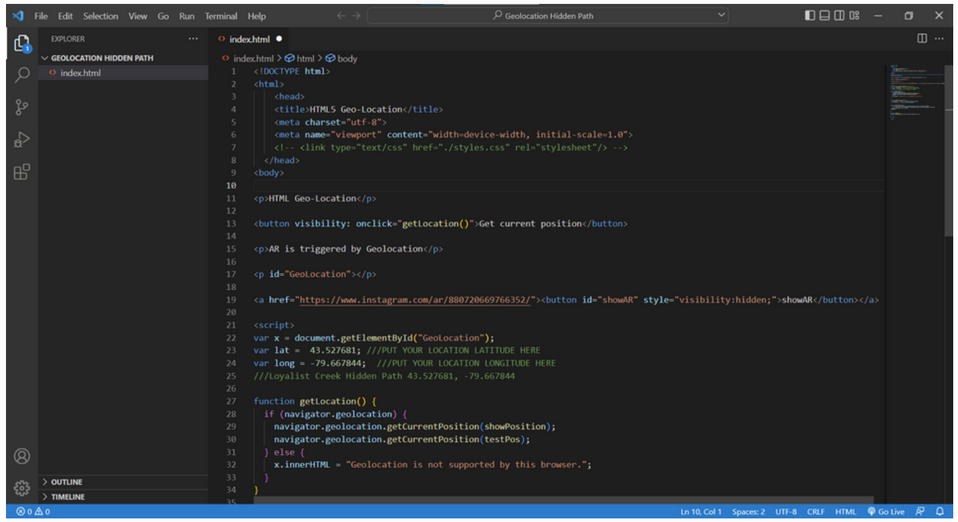


The effect is published by Meta Spark AR through Facebook and Instagram.

Design Process



Google was used to calculate the length of the trail. Google calculated the trail to be approximately 600m long.



Using this data, 600m was the data used to calculate the distance when the AR effect would play, since the drop point is in the middle of the path. So when the user is within 300m of the geolocation point, the effect would be displayed.

Design Process

Experimenting different contents and positioning of the content in this popup box.

At first, a gif was placed in this popup box. However, the gif was replaced to a video so that user can decide if they want to watch the video or not.

Citation

Images:
https://www.teamlab.art/e/botanicalgarden/
https://www.teamlab.art/ew/collecting_sacredforest/collecting_sacredforest/
https://planets.teamlab.art/tokyo/
https://www.wundermanthompson.com/insight/the-future-museum

Work Cited:
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"Creating a Particle World Effect." *MetaSpark,* https://sparkar.facebook.com/ar-studio/learn/tutorials/particle-world-effect/.
“Introducing WWF Forests, Now Live in Apple’s App Store.” *World Wildlife Fund*, www.worldwildlife.org/pages/wwf-forests.
Senda. Shuhei. "Teamlab Planets Tokyo: A 'Body Immersive' Exhibition of All-encompassing Digital Art." *Designboom | Architexture & Design Magazine*, 19 Jan. 2022, https://www.designboom.com/art/teamlab-planets-tokyo-body-immersive-07-06-2018/.