

Exploratory Practice Visual Effects

Collaborative with 3D



RATIONALE

In this project, we were asked to produce a digital piece of work in response to a chosen artist or work of art placed in groups of two or three. We will consider and evaluate others' work of art and interpret this in several ways, for example, a modern version of old art, or create something with a similar theme, or a parody.

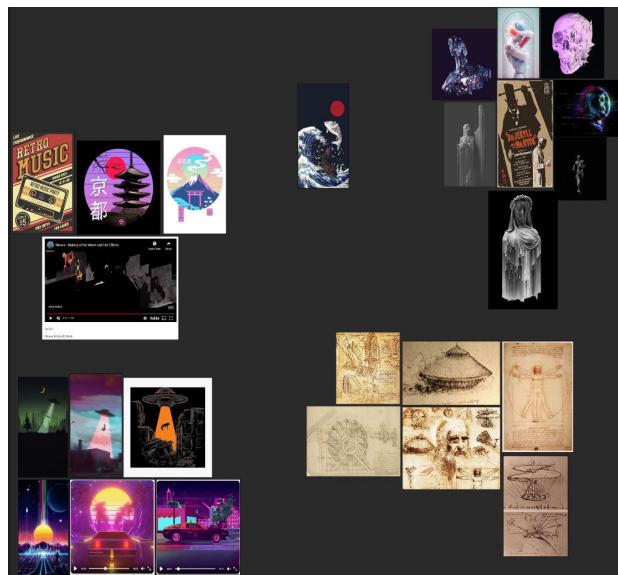
To achieve our project, we will search for paintings that we are interested in and discuss our ideas via Teams. Then having decided on our idea, we will create a storyboard and mood board, then move onto the filming of the shot. After we will distribute our works, one creating 3D animation in Maya and one adding visual effects in Nuke for our CG composition. Finally, when the outcome is rendered, we will add suitable background music on it for uploading onto Vimeo.

We searched separately several illustrations as inspiration for our ideas.

The images that my teammates collected were UFO, pictures in Neon colouring, and Japanese artworks.



Claude Monet. Series of The Rouen Cathedral



I



D



E

1. 2nd of May
2. 3rd of May
3. Saturn eating his son

A



Claude Monet. Series of The Rouen Cathedral

On the other hand, I picked *series of Rouen Cathedral* by Claude Monet in 1892-1893 that belong to the impressionism movement. This series illustrates the different daylights on the Cathedral like the variety of filters that we set to our photos by using a phone's application. Therefore, I was planning to shot a place and changing the filter along with the film, portraying that everything can change due to the time is passing and the environmental circumstances.

And also three works are done by the painter Francisco Goya are, *the 2nd of May*, *the 3rd of May* (1814), and *Saturn Devouring His Son* (1820-23). His painting style is one of the bases for the impressionism style as their colouring and brushing are truly similar. The first two paintings illustrate a Spanish history moment in the second and third of may in 1808. And the last painting mentioned framed a bloody moment from the myth of Saturn. Lots of Goya's storytelling paintings inspired me to make another storytelling short film depicting the importance of recording one moment of the history.



Spaceship. 1. wide vertical shot, 2. perspective from the bottom

In our first idea was to film a spaceship catching a person while it is flying around, and when the UFO is picking up the person, we will change the filters or colourings during that stage.



Then, we went outside to film some useful source material for our CG compositing. I recorded random places, such as buildings, skyscrapers, parks, and rivers to search for one suitable for our project. However, we rethink our idea after several meetings.

STORYBOARD

Shot 1

Camera: wide angle

Scene: outdoor city (live action)

Actor: walking around there until the ovni catch him

Ovni: flying around for few seconds and stops when it see a person there

Light: nighttime environment, ovni's lights (changing into multicolor when it catch the person)

Sound: environment sound (cars, people talking or walking), ovni flying and engine (when it is taking the person)

After deciding on our idea, we made the storyboard and a rough animatic to show a sketch of our outcome.

From our shots, we want to describe we do not have to prove that an imaginative object exists but we do not have to prove to deny its existence, plus the unexpected situation could happen anytime as concepts, like the covid 19 infecting gravely all of the sudden, thus we have to be prepared to know how to act.



We shortlisted two paintings the *Bridge Claude Monet* and *The Great Wave Of Kanagawa* while drawing the storyboards My teammate also saw another Japanese art that is really peaceful and inspirational. She has made three storyboards for these paintings.

Our project is based on the artwork *Snow In Miyajima*, done by Kawase Hasui in 1929, Japan, and the concept is to appreciating peaceful moments by feeling our environment just like the print. We filmed our footage in a park with a river due to the angle and the environment that fits our art piece selected. We started with a wide shot of the scene and we zoomed on the water when we turned to our second shot.

Snow In Miyajima is an observational, symbolic, and cultural artwork about Japan's snowy landscape. it contains Japanese elements such as the lake with the Shintoism shrine portraying what represent the Japanese customs on their time as the artwork is made when the ukiyoe (with color woodblock printing technique) was popular, especially in the first middle of XX century.

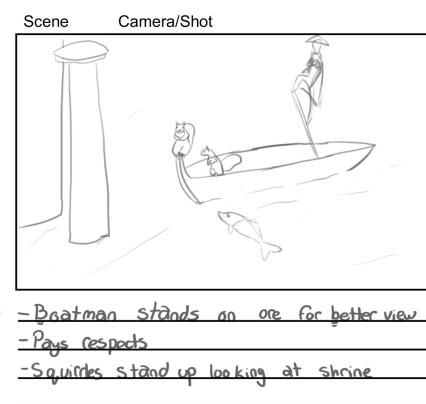
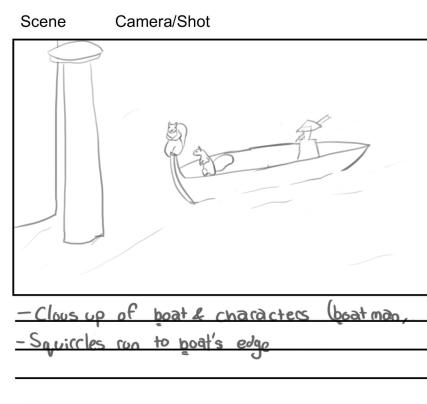
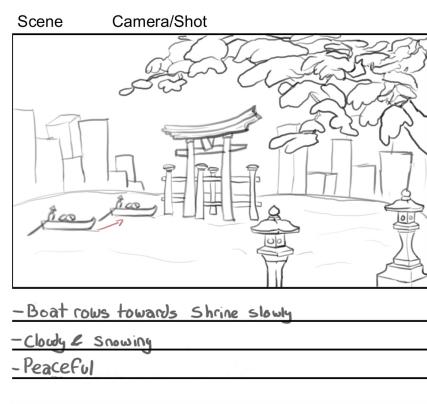
In our outcome, we try to portray a peaceful ambient as the print. The boat, with a deer and a person on it, is floating on the river as another normal routine. Through this calm scene, it shows the luckiness of having a normal day without any troubles, natural disaster and factor that interrupt one's pace.

FINAL IDEA



Snow In Miyajima, done by Kawase Hasui in 1929, Japan

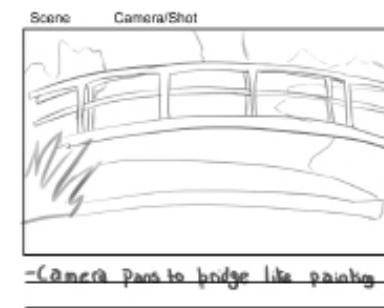
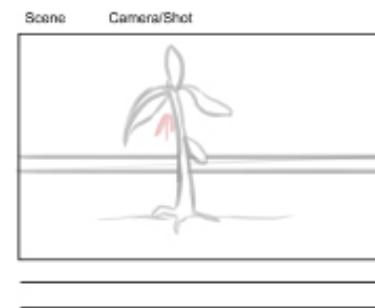
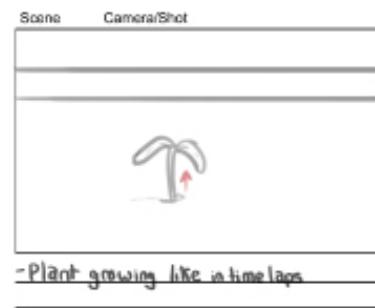
Storyboard based on *Snow In Miyajima*



STORYBOARD

In our storyboard, we have the live-action filming in the first shot which is filming a river and zooming it on one point of the background, and a 3D animation in the second shot.

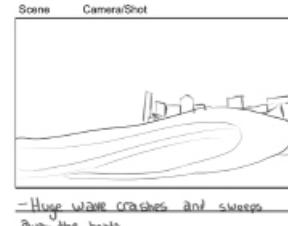
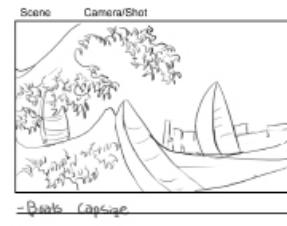
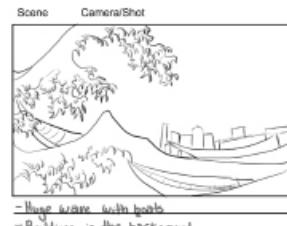
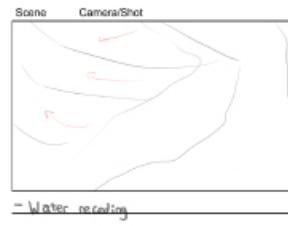
Storyboard based on *Claude Monet's bridge*

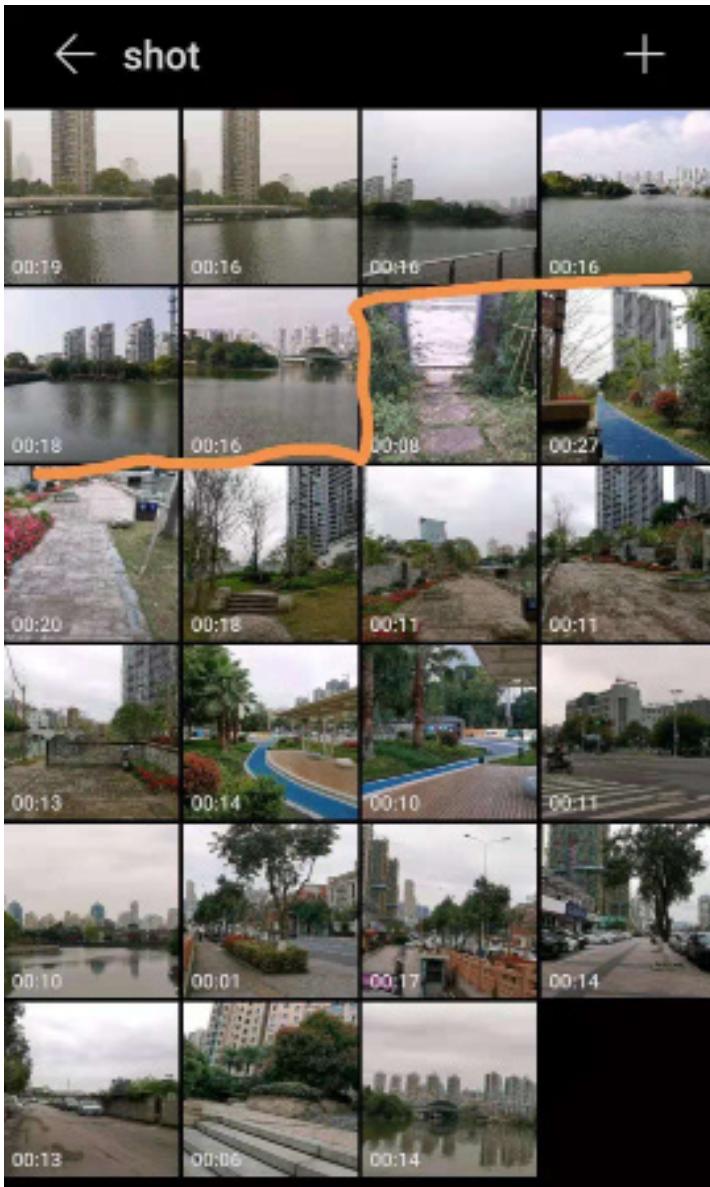


Before deciding on our definitive idea, we also made other plans. The second storyboard of Claude Monet's bridge where it starts with a close shot of one plant and as long as it is growing, the camera will zoom out and the bridge will be introduced in the end.

The third storyboard is The Great Wave off Kanagawa where a tsunami is crushing a city by filming the waving. It is adapting the old painting in nowadays situation plus a natural disaster happening at the same time.

Storyboard based on *Wave off Kanagawa*





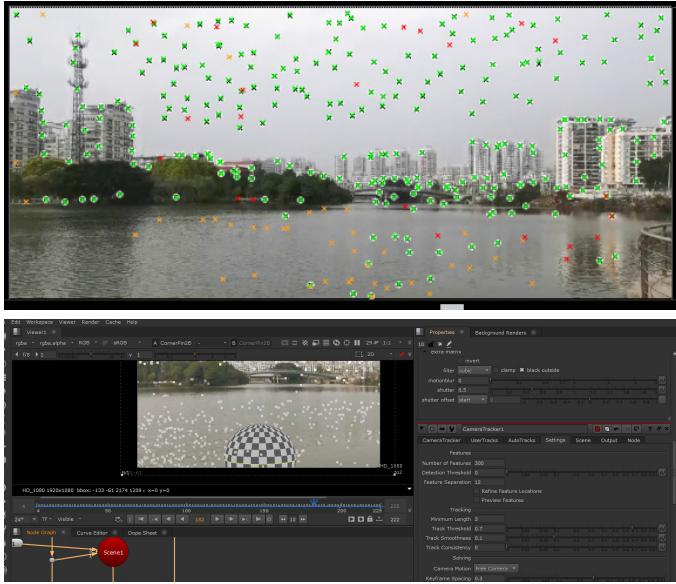
TEST SHOOT

Basing on the storyboard, I filmed the first shot several times, with different perspectives and weather. As I did not have a camera, thus I used my phone to record the live-action shot.

I tried the zoom in by setting the camera of the phone, nonetheless, I noticed that the quality and the filters changes while it is zooming. Then when it is zoomed in, the footage seems a bit blurry.

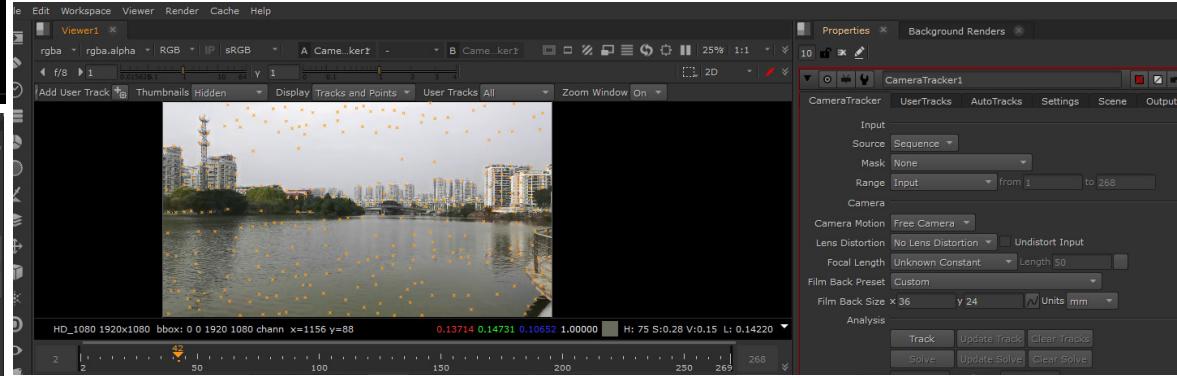
Therefore, I recorded the place again by walking into the bridge of the landscape. The lucky thing is that the weather was cloudy on that day, so there is not harsh sunlight if it is sunny.

The six firsts footage are for the final idea, and the rest were for the first idea that we made before.



NUKE: Camera Tracking (shot 1)

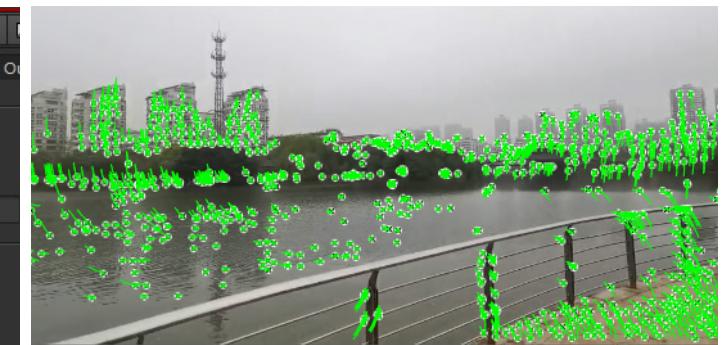
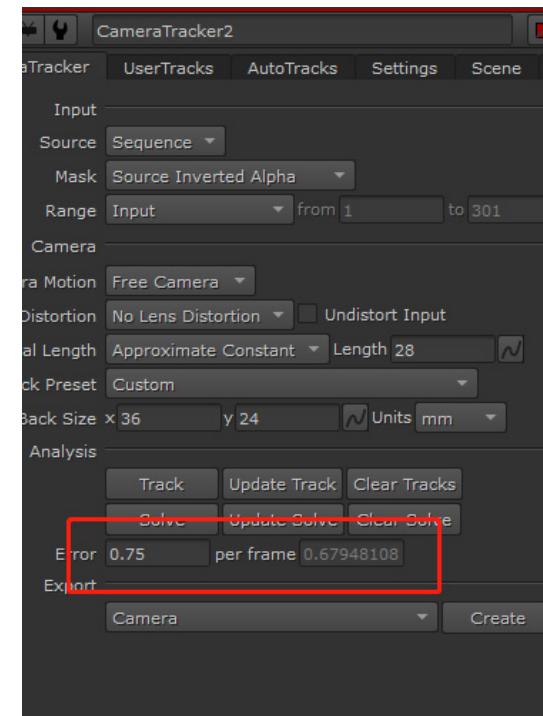
Camera tracking 1st try



The first camera tracking was not successful as I did not introduce the data correctly, thus when I watched my teammate sharing her screen, we noticed that the 3D animation was not steady in the live-action shot, it looked like they are two different and separated elements.

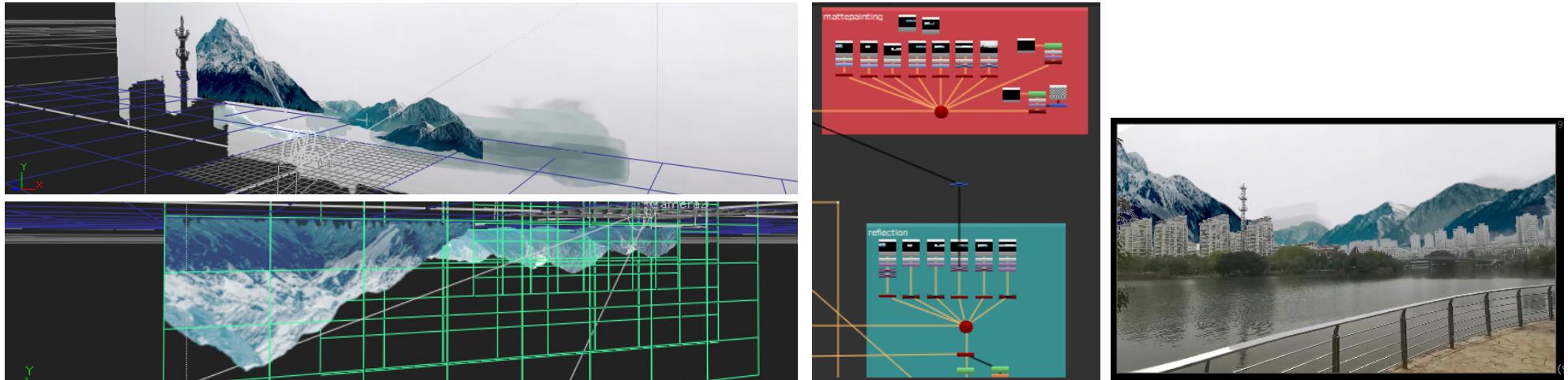
After I redid the camera tracking and I found many mistakes by asking my teachers. For example, in the first trial, I tracked the shot with the footage 960 per 540 pixels when I had the project settings in HQ 1920 per 1080 pixels. Furthermore, I changed the properties of the lenses and the camera movements to have the camera track exactly.

To check if the tracking worked, I applied some geometries like cubes, spheres, and planes plus the axes x, y, z and review it several times to make sure if the elements are moving towards the camera moves smoothly.



Camera tracking final try

Finally, I exported it in a .ext file so it can be opened in Maya when I send it to my teammate.



As the artwork chosen illustrated, there were mountains at the back of the whole image, then my teammate designed the matte painting with several mountains with fog over them. I exported the layers one by one to manage it easily into Nuke.

Firstly, I set the keylights of the shot in alpha, where everything except the sky is in white, that way, I can add the mountains over the sky and behind the foreground. Having the keylights, I started to add the layers in cards connecting with the scene.

Secondly, I continued to add their reflection on the water just copying and pasting them and plugging a mirror node after the layer. After positioning and reviewing the result, I noticed that the reflections are over the reflections of the building that are in front of the mountains. As a solution, I reduce their opacity to highlight the constructions' reflections.

Finally, I watched the footage several times with the matte painting on it, as a conclusion, the background followed nicely the trackings and looks natural like the mountains existed in the reality.

MATTE PAINTING



Doing 3D compositing was the key to changing the whole atmosphere for our outcome.

I have received several versions of 3d animation files, the first pairs of the animation were rendered in monochromatic gray, the second pair, shot 1 have no plane under the shrine the boat, and the final pair are the 3D models in textures but without alpha channels, thus I asked her to render the same shots but with alpha. Then I tested them in the first shot footage.

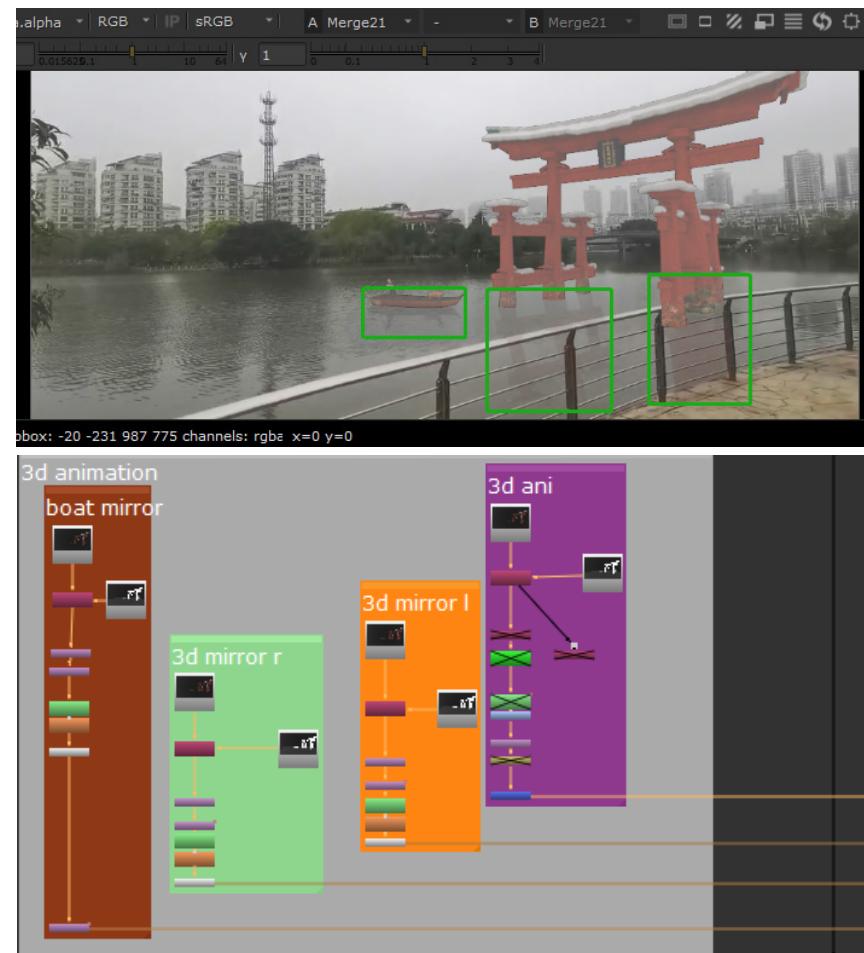
The 3D animation in the footage caught perfectly the camera movements which fit smoothly in the plate. However, the models look they are in front of the plate because the fence on the right bottom corner is behind it, then I set the keylights to depict the fence over the animations. Therefore, the 3d object is acting on the water.

As the animation is on the river, I had to apply the reflection as I did with the matte painting in the background. With on frame from the animatic, I brought up transforms, rotos, and conerpins to turn down the models as a mirror. However, it did not work due to I animated the reflection to fit with their opposite.

There were trials that I did with the first files, when I add it over the footage, it just an outline moving around the place.

I rendered the shot without the last four seconds as the 3D animation was made for the first eight seconds following by shot 2.

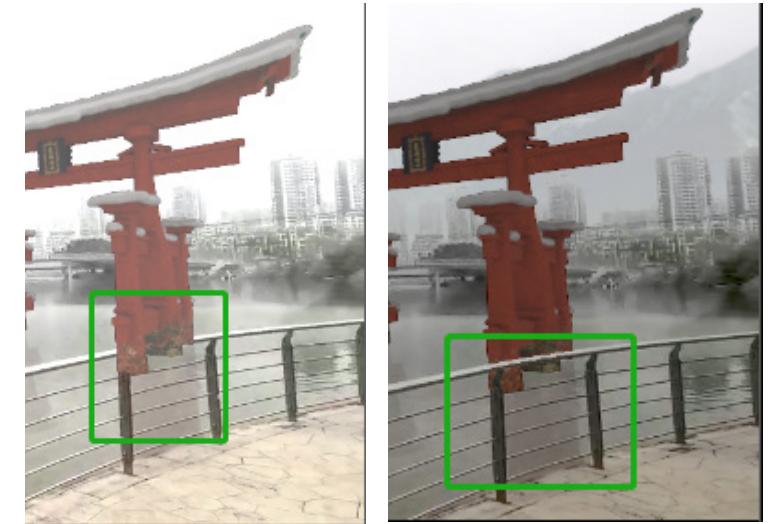
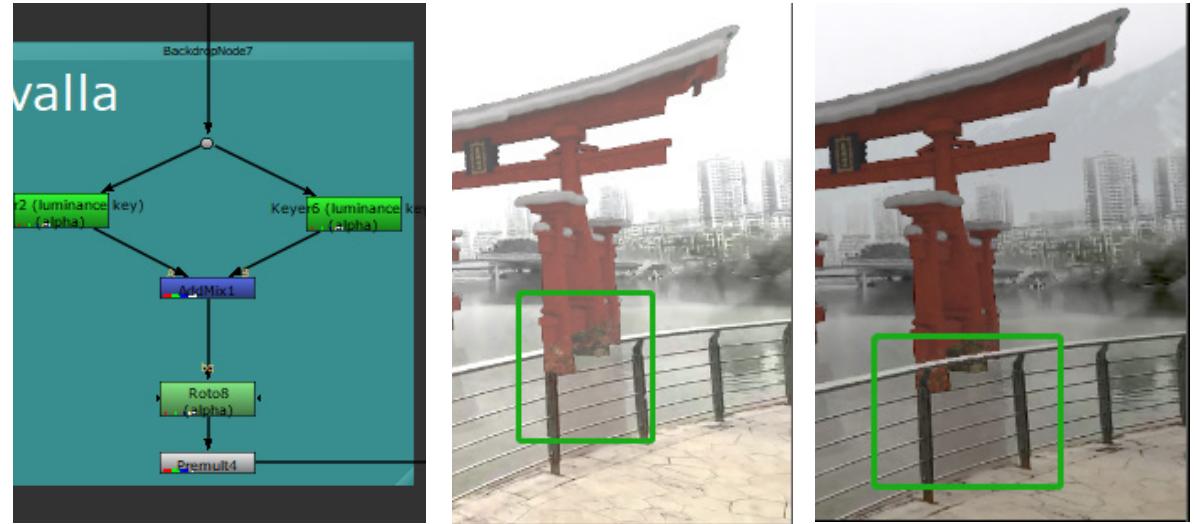
CG COMPOSITING



KEYLIGHT, REFOR- MAT

I resize my outcome in high-quality 1080 pixels. I forgot that the size of the 3D animation and the live-action shot was different, the 3D is in 1920 per 1080 pixels and the footage was 960 per 540 pixels which I resized in a new Nuke script.

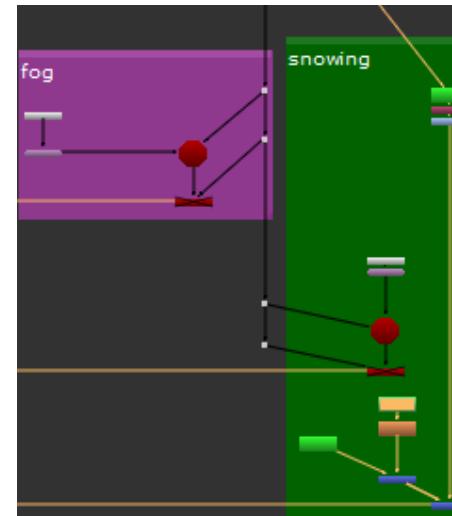
In the new script, apart from the resize, I added again the snow and fog because if I had them rendered before, the 3D models would not be involved in the weather as the models will be over them in the resize. Thus I applied the same environment and the keylights of the fence in the new script.



S H O T 2



I noticed that the colour of the water in the second shot is different from the first shot. The water looks greener in the first shot, however, when it turned to shot two the water is white and gray, it seems that they are not in the same place. And over it, I inserted the snow on this shot also.



WEATHER

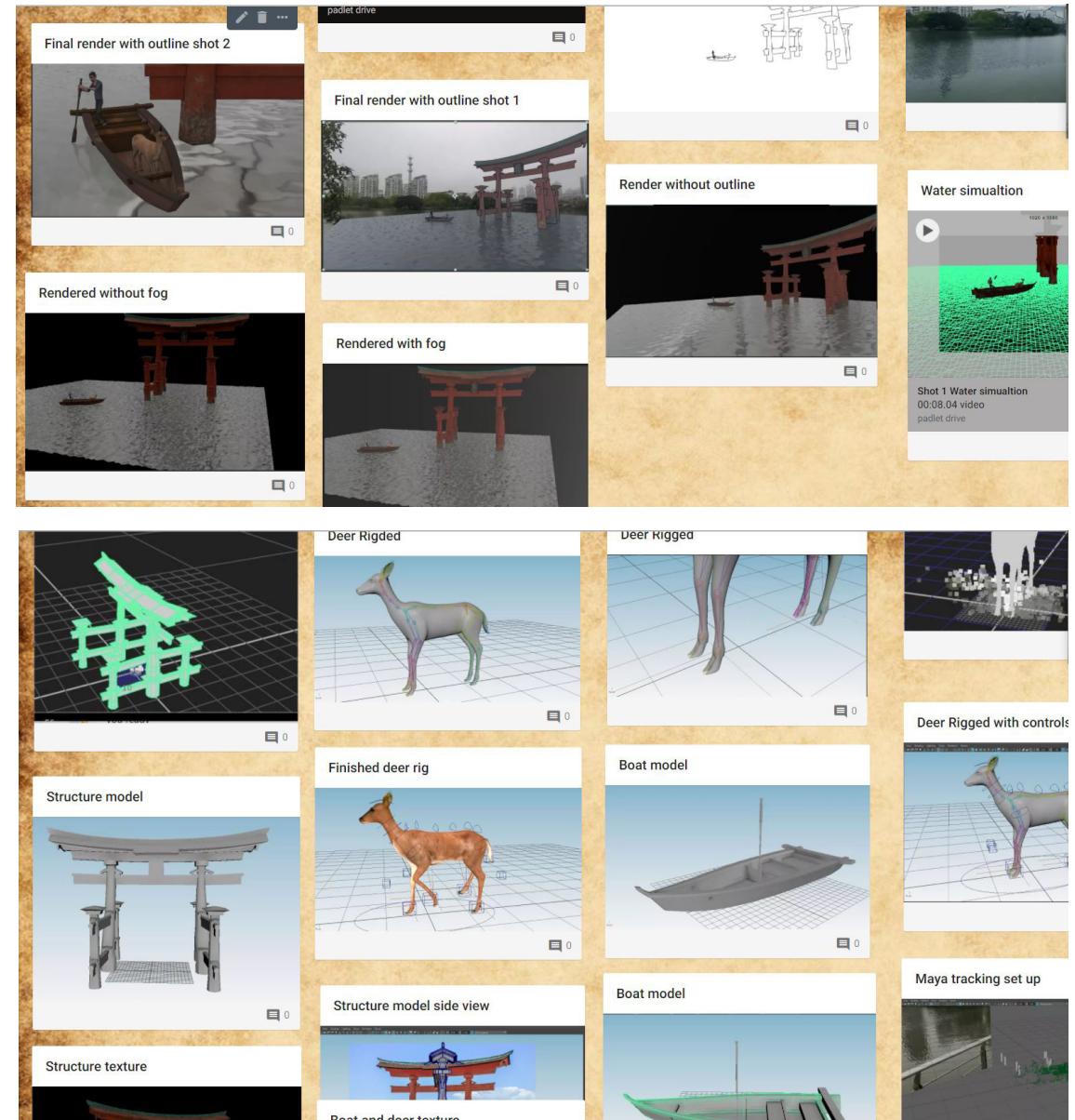
To assimilate the weather of the painting, I added fog and snow in the shot.

Apart from applying the snow, I set the colour of the footage whiter with grades, keylight, and roto to imply the snow accumulated around the scene.

3D MODELS

Those pictures are the 3D models that my teammate had used for the animation. Many of them were downloaded from websites and build in Maya.

When we were choosing the character for the boat, we had three options, a thin guy, a muscular man, and the one that it is in the final outcome, a mustache man wearing black suit. I opted for the third one due to his texture, color, wearing, face, and hairstyle can fit in an Asian style, plus the painting looks peaceful and quiet. in contrast, we had another guy, but his look was more for a calm, colorful and happy atmosphere.





MATTEPAINTING

In fact, we planned to applied outlines on the outcome as the artwork chosen has an essential lineart, thus we would like to imitate that style by lining the elements in the footage and the matte painting. I had tried two ways of the outline work, one is drawing the line in Photoshop and import it to Nuke and another was adding a black roto shape behind the mountains in Nuke, however, they did not work as the grade is affecting them, consequently, in the result, the black lines tend to a lighter colour.



Overall, the outcome was successful as it reached to our expectations. The creation of the weather, the animation, the live-action shot chosen and the mattepainting are good interpreted from our idea based on the artwork Snow In Miyajima.

The snowing and the fog effect changed the real weather of the shot, plus the white color around the scene imitating the accumulation of the snow makes it more credible that it is a winter snow in the plot when in the reality, it was a cloudy day.

Thanks to trying several times the camera tracking, the 3D animations followed smoothly the trackers and the camera movement. Unlike the first trials where the two elements were no interaction, the 3D models were moving strangely.

The mattepainting looks natural as the movement of the animation. I think that the audience would consider that the mountains are at the back in reality if it is at the first glance.

Having so many test shots, we made a good decision of choosing the first shot since the others are too blurry or difficult to track.

Furthermore, the audio was well chosen. One is the background music which is relaxing and calm, it is suitable for the outcome as the scene has no drastic movements, there is just a boat peacefully swimming to the shrine plus the cuteness of the deer movements highlights how innocent is the atmosphere is. Another sound effect is the water running, this sound makes the river more vivid, in other words, it is almost like we are in the same place as the character and watching them rowing.

CRITICAL APPRAISAL



Blog: <https://bavfxruiliwu.myblog.arts.ac.uk/2021/06/18/vfx-3d-collaborative/>

Password: 1234

Outcome: <https://www.bilibili.com/video/BV1SK4y137mm/>

Process: https://juliechart.lofter.com/post/4bc8da48_1cc43bbef

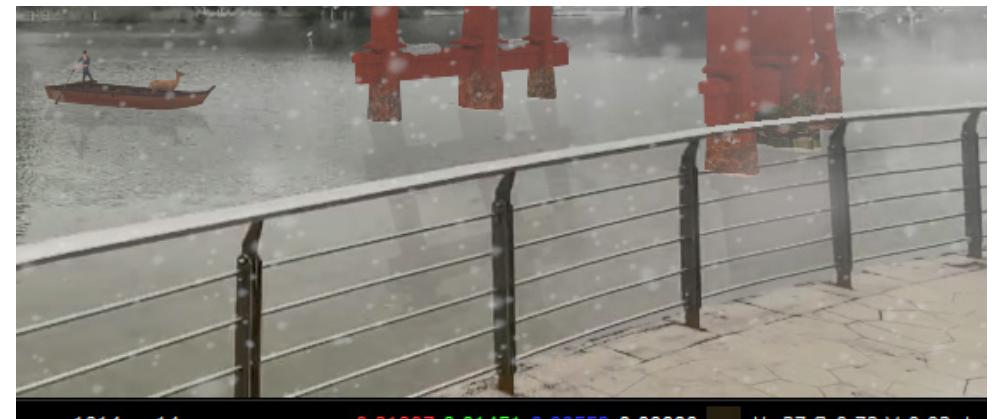
The mistakes that I would like to fix are:

-the reflection of the 3D animations. I had rendered a version with the reflections, but as long as the animation was moving towards the camera, I was animating the mirror as well and when I watched it rendered, the reflections on the water were moving strangely, changing its length in many frames and it is not following their reverse as I expected. Then we opted for the version without the reflections. To improve it, I may ask for the same 3D file plus the reflection on it.

-there is too much grading that the mountains at the back are barely visible, just like few gray triangle shapes at the back. Next time, I will use a keymix to remain their original colours.

In this project I learned amount knowledge about CG compositing and more new skills in Nuke such as changing the weather of the shot, adding a 3D animation, managing with alpha channels, and colour correcting.

Working in pairs was an incredible experience, especially when the two members are from different departments, thus we can apply our own skills and give birth to an amazing piece of work.



Reflection of the animation



Matte painting after grading