

# **Portfolio Element 4 – Virtual and Augmented Reality**

## **Description of the technology**

In this section, the technology of virtual and augmented reality is developed and demonstrated. To be more specific, I followed up a given video tutorial and practised the poly tour creator that is sponsored by Google to design and create a virtual tour based on panorama and Google map (street view). Virtual tour or virtual travel refers to a simulation of an existing location, usually composed of a sequence of videos or still images, which are mostly constructed with high-resolution or ultra-resolution panorama. Google Poly tour creator is a powerful web-based creative tool to help users and designers to build immersive, 360° tours from individual devices with a Google account simply and nicely (Google, 2021).

## **Citation for tutorial**

Citation: (Peters, 2019)

Title: “Google VR Tour Creator Tutorial”

Link: <https://www.youtube.com/watch?v=Z2N89aqCHfc>

## **Output of that tutorial**

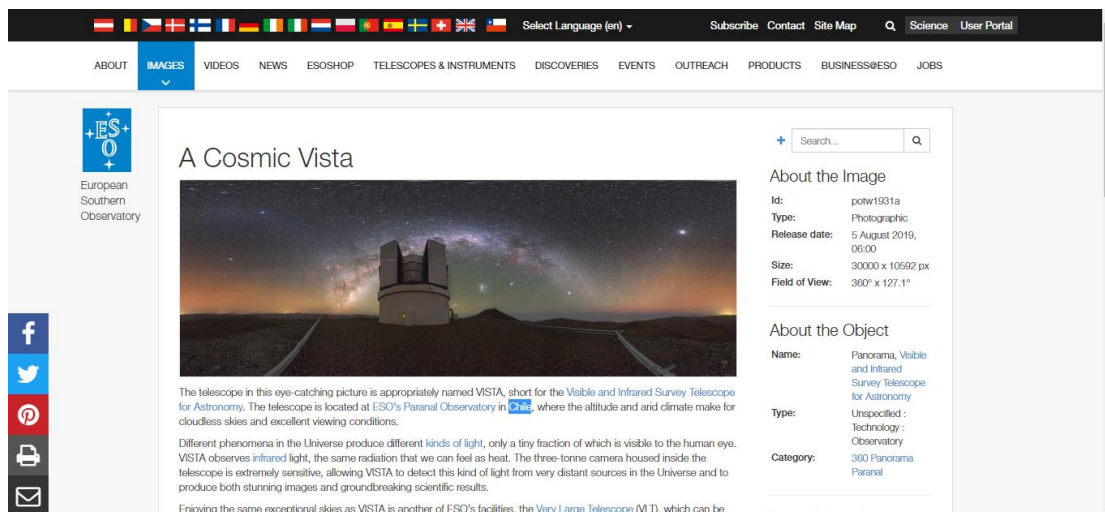
By looking through the nominated video tutorial and following up every step in my Google Poly virtual creator panel, I have successfully produced a virtual tour using my own materials collection and idea, which can be checked in the following “Produced output – Result from the following tutorial” section on this page. During this process, I have learned how to collect high-resolution and ultra-resolution image materials, including panorama, from online free copyright sources, and how to create and locate a virtual tour, which can present a simulated virtual reality experiences for users, using the Google Poly platform.

## **Demonstration of ability**

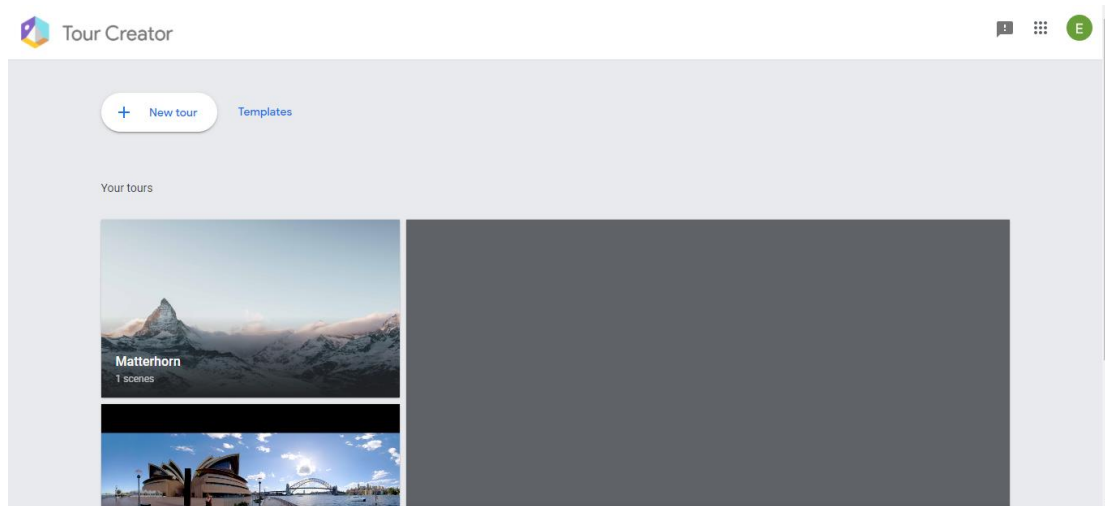
After learning the virtual tour design and creation using Google Poly tour creator by following the nominated tutorial, I have practised the gained ability to create a custom version of a cosmic vista tour in ESO’s Paranal Observatory located in Chile. The step-by-step demonstration is shown as follows.

- Go to the [eso.org](http://eso.org) website to search for panorama pictures related to the cosmic vista. Finally, an ultra-resolution panorama named a cosmic vista was obtained at

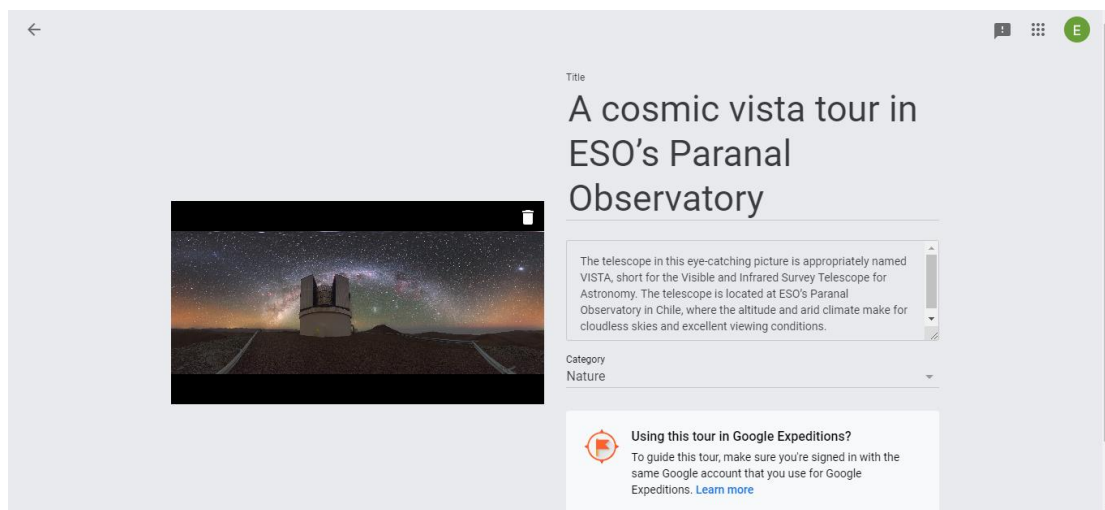
<https://www.eso.org/public/images/potw1931a/> (ESO, 2019).



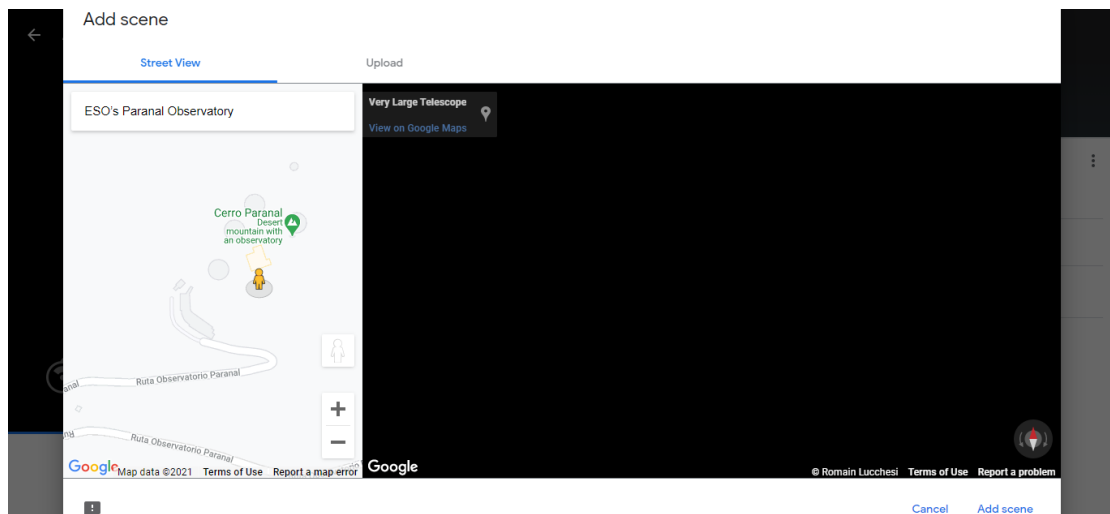
- Go to the Google Poly virtual tour creator panel.



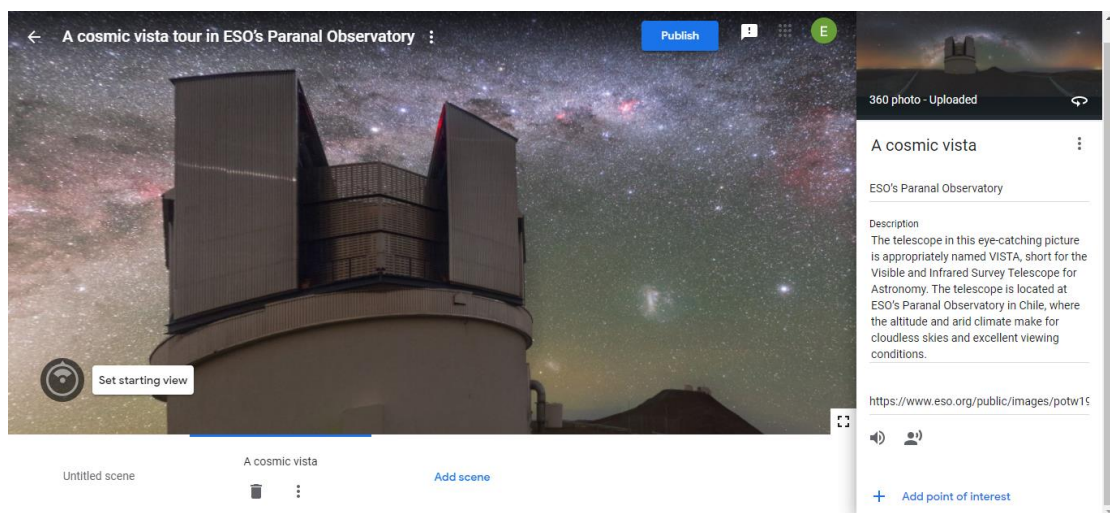
- Start a new tour and enter proper meta information to introduce the created tour.



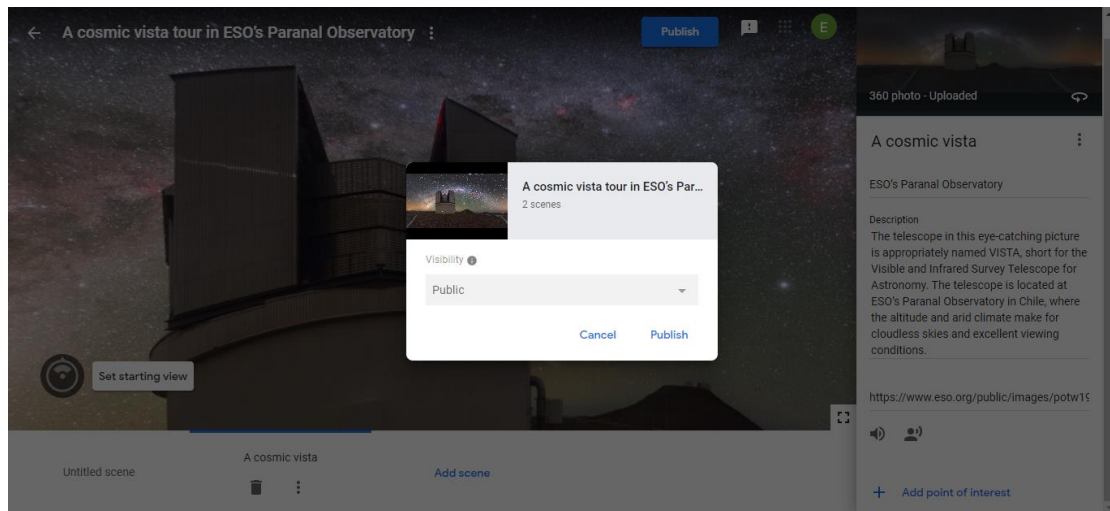
- Add the scene to the correct location (ESO's Paranal Observatory located in Chile).



- Adjust the scale and rotation rate and upload the panorama picture as collected and added previously.



- Publish the tour.



- The published virtual tour can be accessed at the <https://poly.google.com/view/dZ3G36GdeHc>, and the embedded effect is demonstrated as the follow.

Use the embedded code.

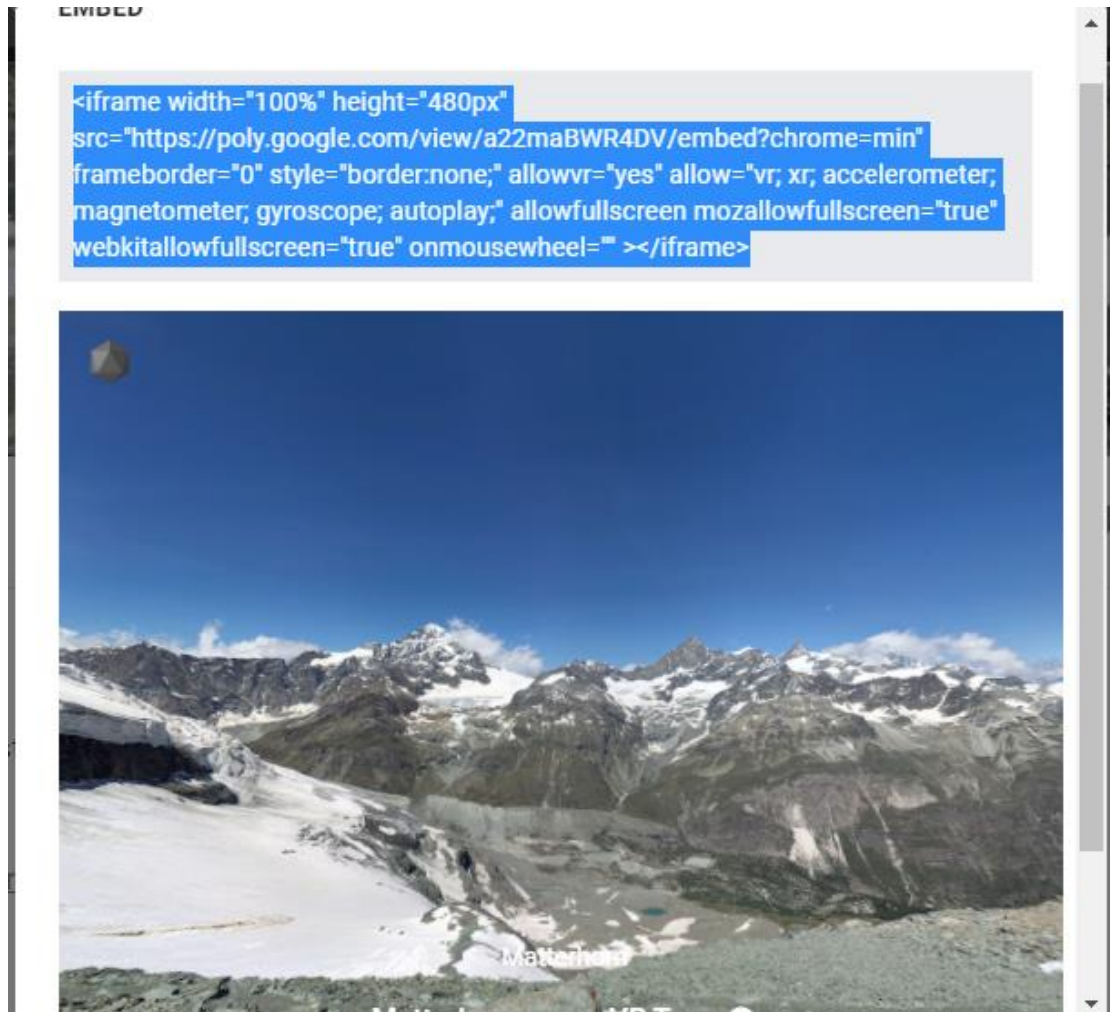
```
<iframe width="100%" height="480px"
src="https://poly.google.com/view/dZ3G36GdeHc/embed?chrome=min"
frameborder="0" style="border:none;" allowvr="yes" allow="vr; xr; accelerometer;
magnetometer; gyroscope; autoplay;" allowfullscreen mozallowfullscreen="true"
webkitallowfullscreen="true" onmousewheel="" ></iframe>
```

## Produced output

<https://poly.google.com/creator/tours?dmr=0/creator/tours/>

- Result from following the tutorial

<https://poly.google.com/view/a22maBWR4DV>

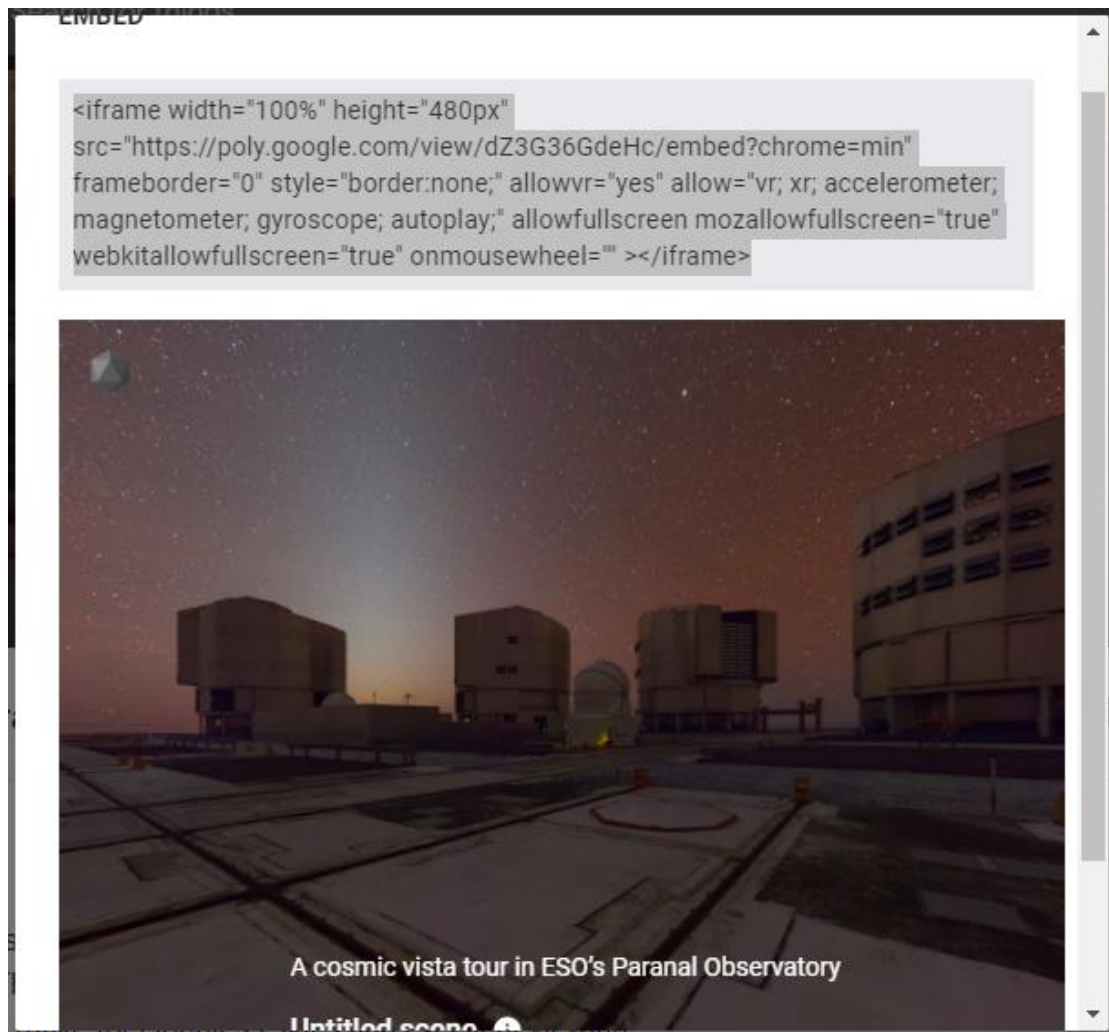


Embedded Code:

```
<iframe width="100%" height="480px" src="https://poly.google.com/view/a22maBWR4DV/embed?chrome=min" frameborder="0" style="border:none;" allowvr="yes" allow="vr; xr; accelerometer; magnetometer; gyroscope; autoplay;" allowfullscreen mozallowfullscreen="true" webkitallowfullscreen="true" onmousewheel="" ></iframe>
```

- Custom version

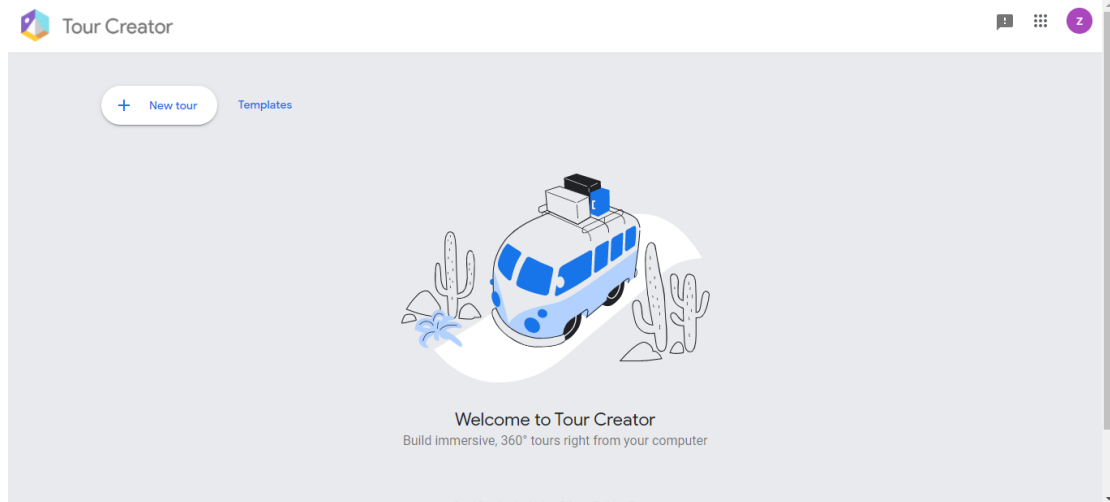
<https://poly.google.com/view/dZ3G36GdeHc>



Embedded Code:

```
<iframe
width="100%"
height="480px"
src="https://poly.google.com/view/dZ3G36GdeHc/embed?chrome=min"
frameborder="0" style="border:none;" allowvr="yes" allow="vr; xr; accelerometer;
magnetometer; gyroscope; autoplay;" allowfullscreen mozallowfullscreen="true"
webkitallowfullscreen="true" onmousewheel="" ></iframe>
```





## Notable features

This tutorial is created and practices using the application of functional web-based Poly tour creator sponsored by Google, which require less efforts on hardcoding so as to enable users to focus more on creative design and integration processes.

## References

ESO, 2019. *A Cosmic Vista*. [online] [www.eso.org](http://www.eso.org). Available at: <https://www.eso.org/public/images/potw1931a/>.

Google, 2021. *Tour Creator*. [online] Tour Creator. Available at: <https://arvr.google.com/tourcreator/>.

Peters, D., 2019. *Google VR Tour Creator Tutorial*. [online] YouTube. Available at: <https://www.youtube.com/watch?v=Z2N89aqCHfc>.