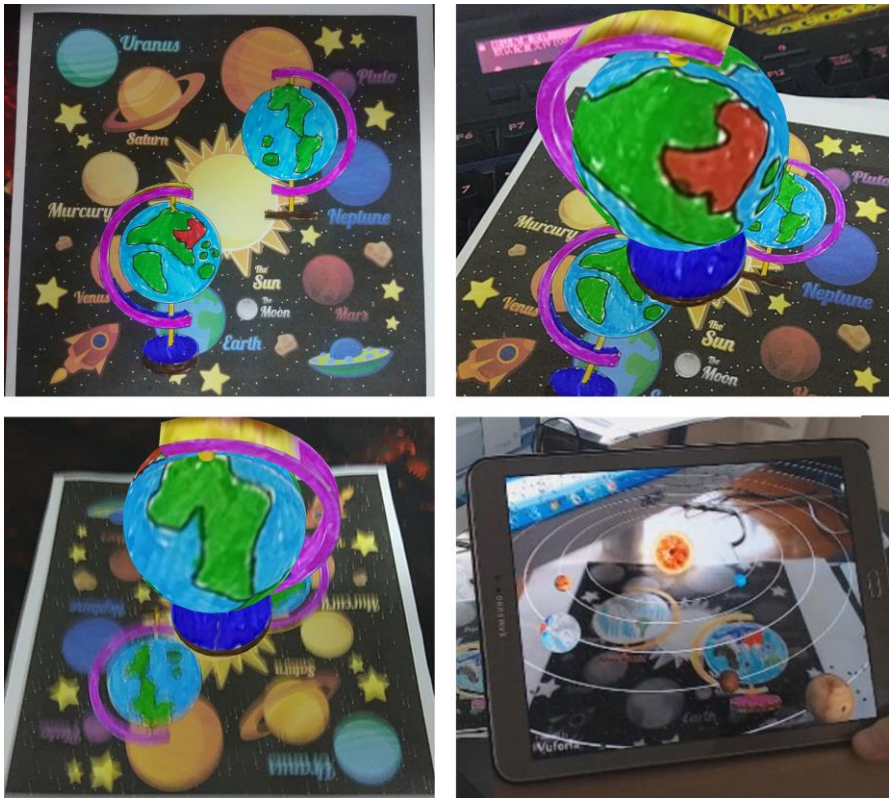
Thank you for downloading **AR Color 2.1** Package!

If you have any questions, please feel free to contact me, preferably with screenshots and your operating procedures.

My Email: 2180024901@qq.com



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0.DESCRIPTION

The classic technology in AR.

You can make a AR color app with this package.

Fill the pattern with the color and display it on the AR model.

Support for Android/iOS/PC.

Three model: a girl /a globe/a Beijing opera actress.

Very meticulous UV layout.

And It's fit to all AR SDK.Can be replaced according to the document guide into other ARSDK, E.g Vuforia/EasyAR.

Contains a detailed PDF tutorial.

Feature：

1. Click the button to display the image color on the model correctly.
2. Automatically identify the scope of the color card, and automatically intercept when the color card appears completely in the scanning frame
3. You can save the color information you ever drew, you can delete or load the colored records.

Because the third-party SDK cannot be authorized, the asset package does not contain any AR SDK. AR SDK needs to be configured according to the manual. Of course, you can also contact me by email to get the configured project.

1. Pictures description.

1. ARColor/PicturesForARCard: Used to make track image data. For example, in Vuforia, you need to upload these images to Vufoira's official website to make image database.To EasyAR, you can put these pictures in folder " StreamingAssets" to read the image data.

2. ARColor/ PicturesForPint: Used to print on paper.

3. ARColor/PicturesForTest It is used to test the complete color in Unity Editor.

2.How To USE Example

English video Url: https://youtu.be/dCflfw-8gA4

Chinese video Url: https://youtu.be/beAYsHotYeE

Tutorial Path: ARColor/ Tutorial

There are Three patterns ：

1.Normal mode: Can run without AR

2. AR mode: Run after adding ARSDK

3.Save mode: You can save the painting record, view the previous painting history and select the specified painting record to paint on the model.

Show you the Normal Mode first ☺

Normal mode: Just run it. First click the clear button on the interface to make the model transparent, and then click color to paint the color of the model image range in the picture on the model.

AR mode :

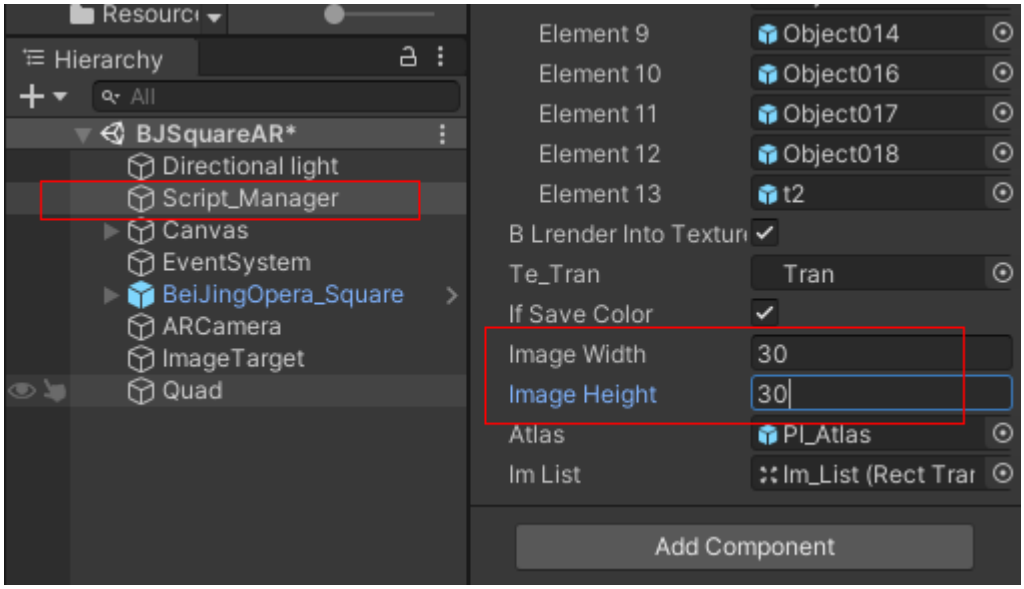
a . Download an AR SDK and configure it.

b. Make sure you know how to use the AR SDK's image tracking mode.

c. There should be an image to track in the scene. Take the model as a sub object of this image.

d. Add the ARCamera in the scene and change the mode of ARCamera to First Target

e. Enter the actual size of the recognition map in the script. After running, you can test the effect.



Save mode :

This is a new feature added by 2.0.

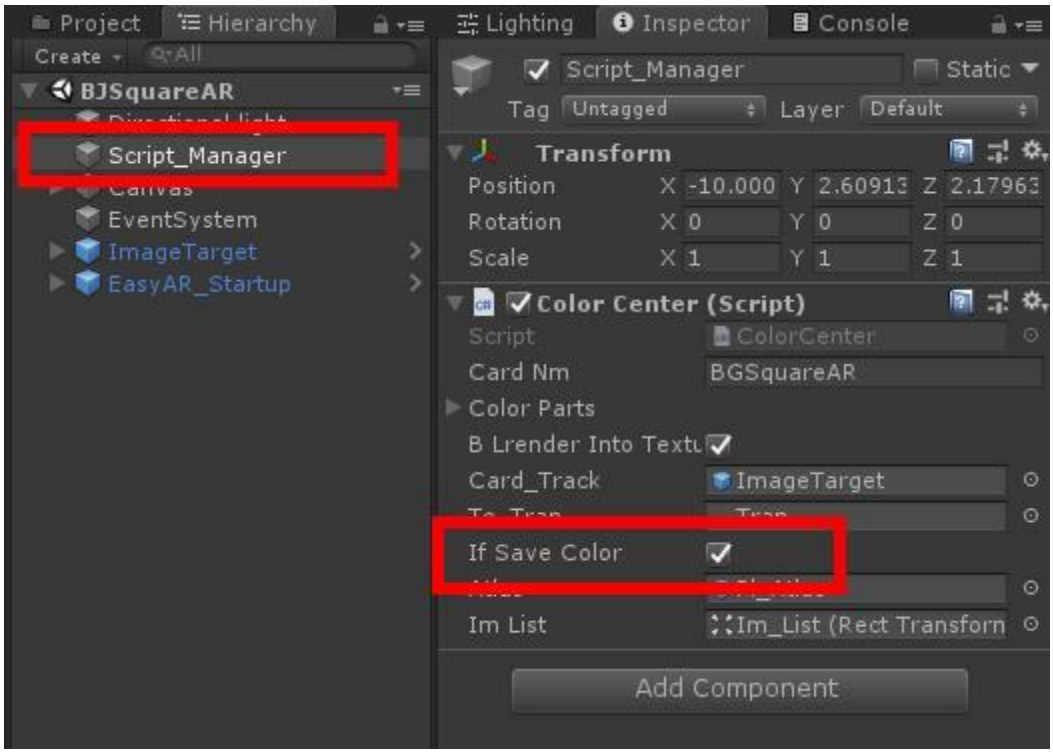
a. Find sample scenes :

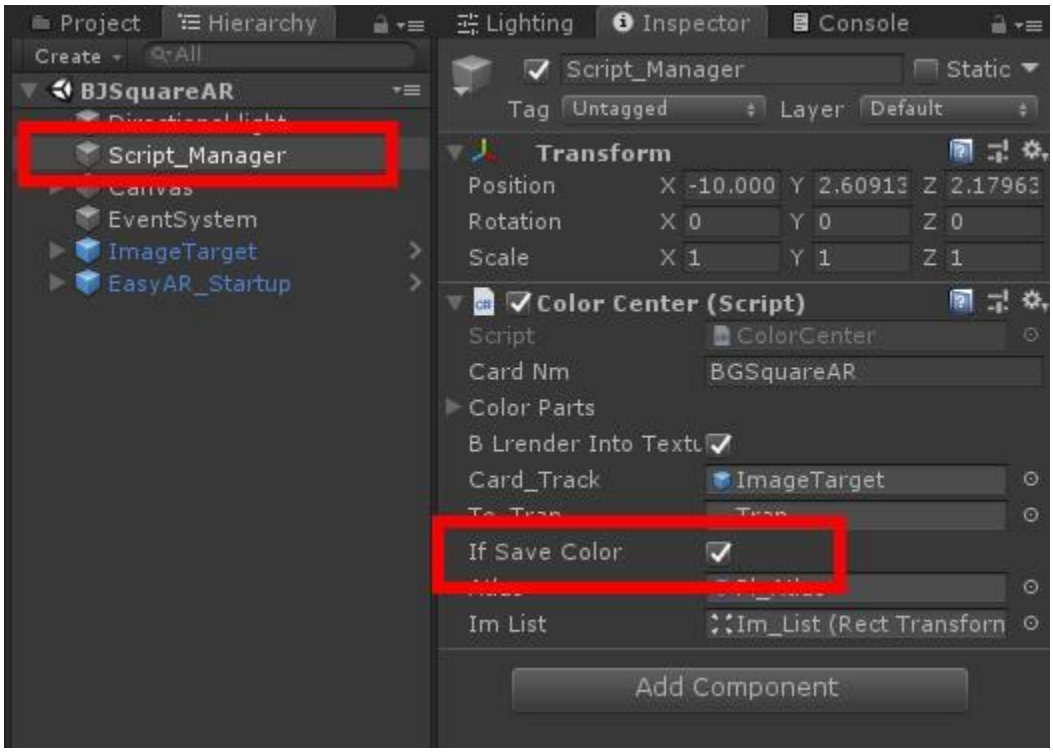
ARColor- Scenes-SaveColorExample-BJSquareAR

b. Configure according to normal AR mode

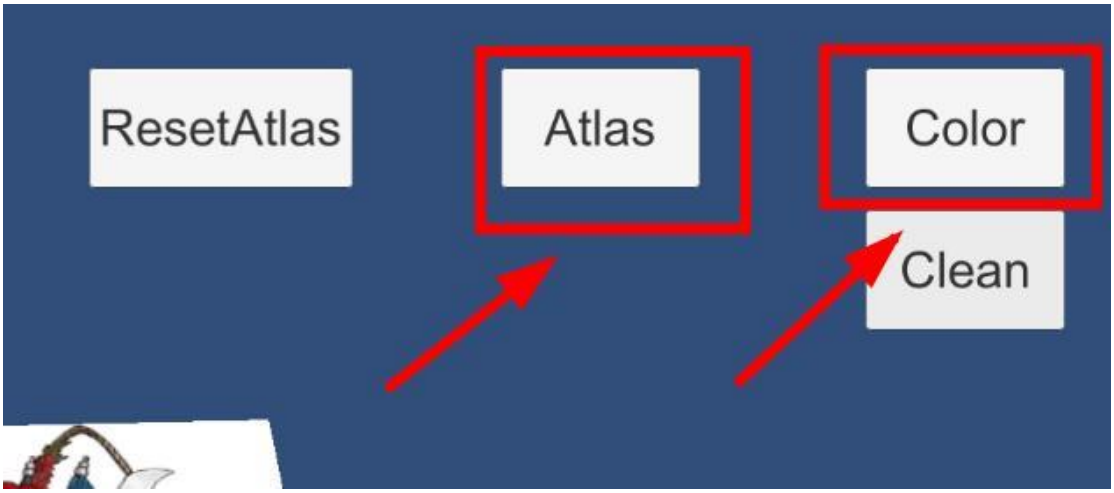
c. In “Script_Manager” ,check “if save color” in the script “Color Center” to allowed save the history you painted.

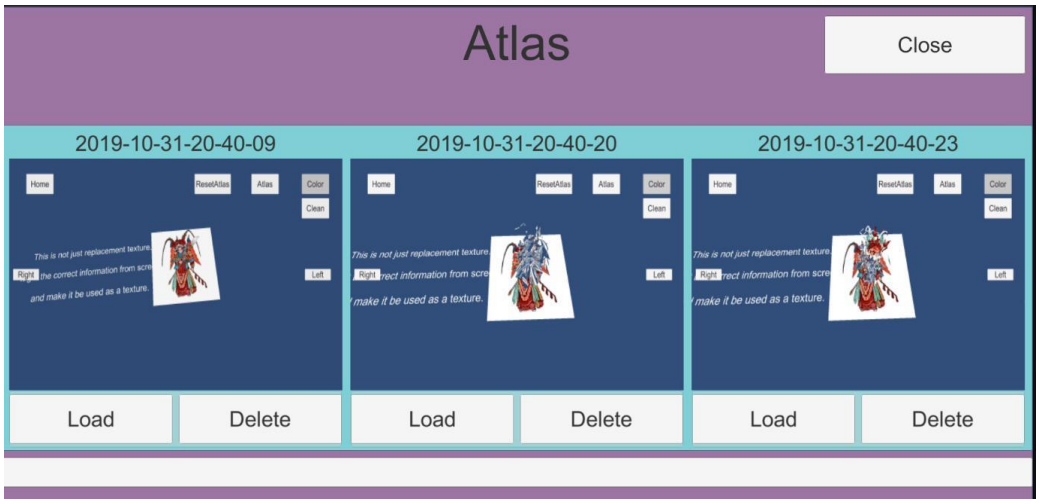
Note that in different scene you should change the unique name at “Card Nm” in script “Color Center”. In this way, the correct coloring record can be record and load.





d. Then, each time you click the "color" button, the coloring will be saved. When you click the "Atlas" button, A window will pop up to display the saved coloring information.





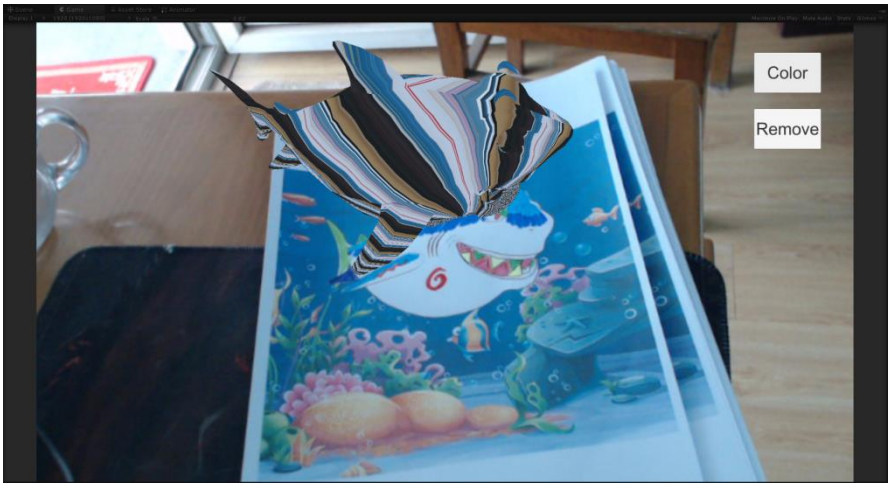
3.Common problem (Very Important)

Why are there no configured AR scenarios in the asset?

Reason: Third-party plug-ins is not allowed when upload Asset. This is an official requirement of Unity3D.

Solution : Configure according to the manual or video, or contact me by email to get the configured project directly. Please attach the screenshot of the payment order.

Abnormal color on the model(Completely chaotic color)

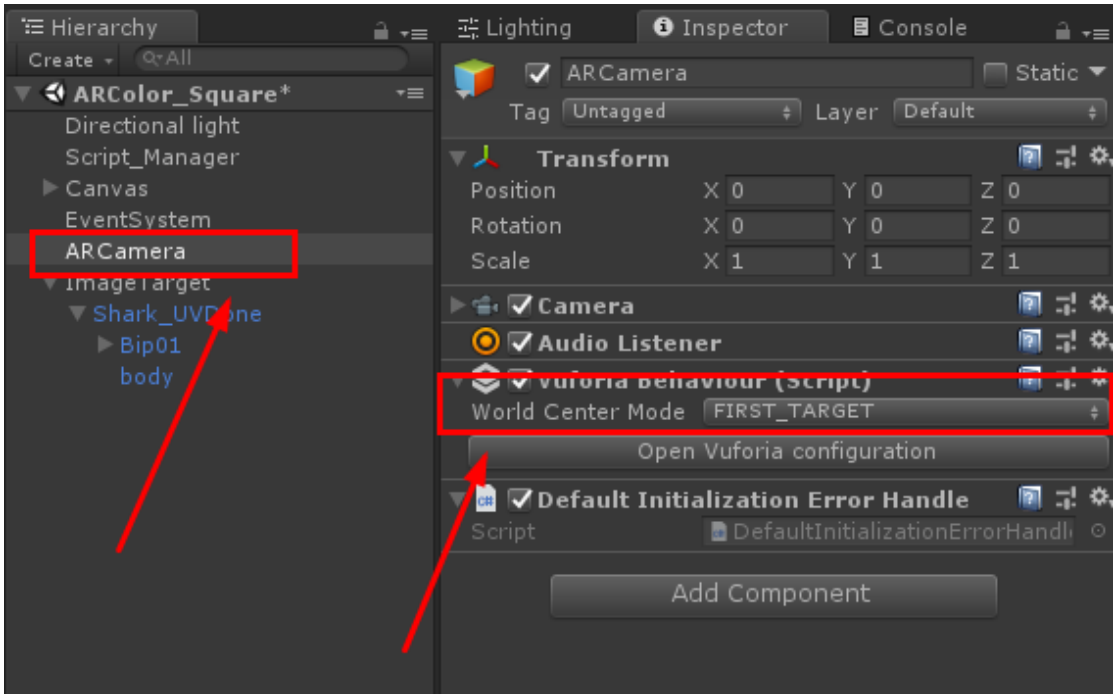


AR Color technology involves many fields, so any problem may cause this situation. Here are the most common questions.

World Center mode Wrong

Solution :World Center mode please select FIRST_TARGET.

If you are familiar with the mechanism of ARColor, of course, you can use other patterns and adjust them from the code accordingly.

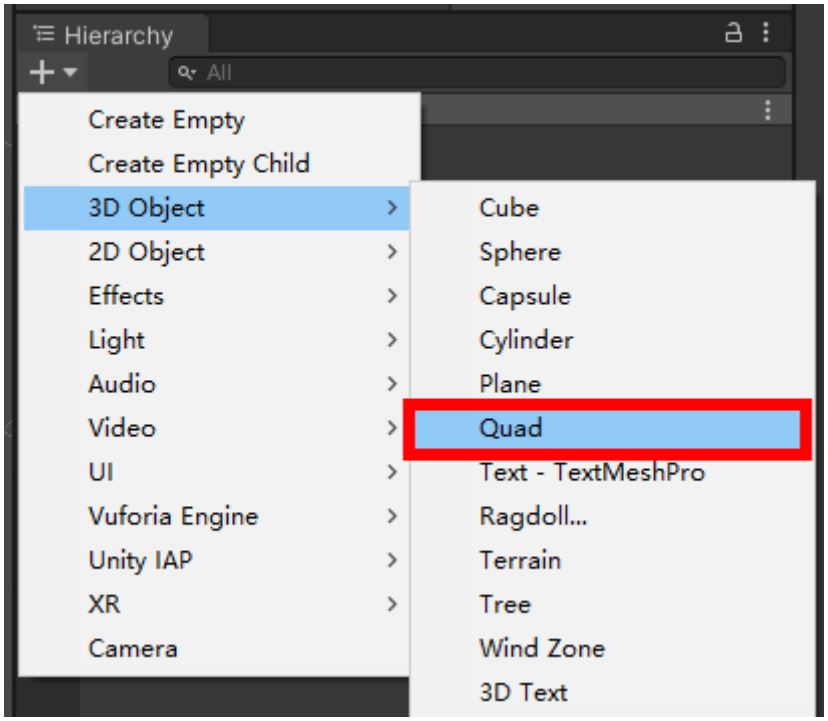


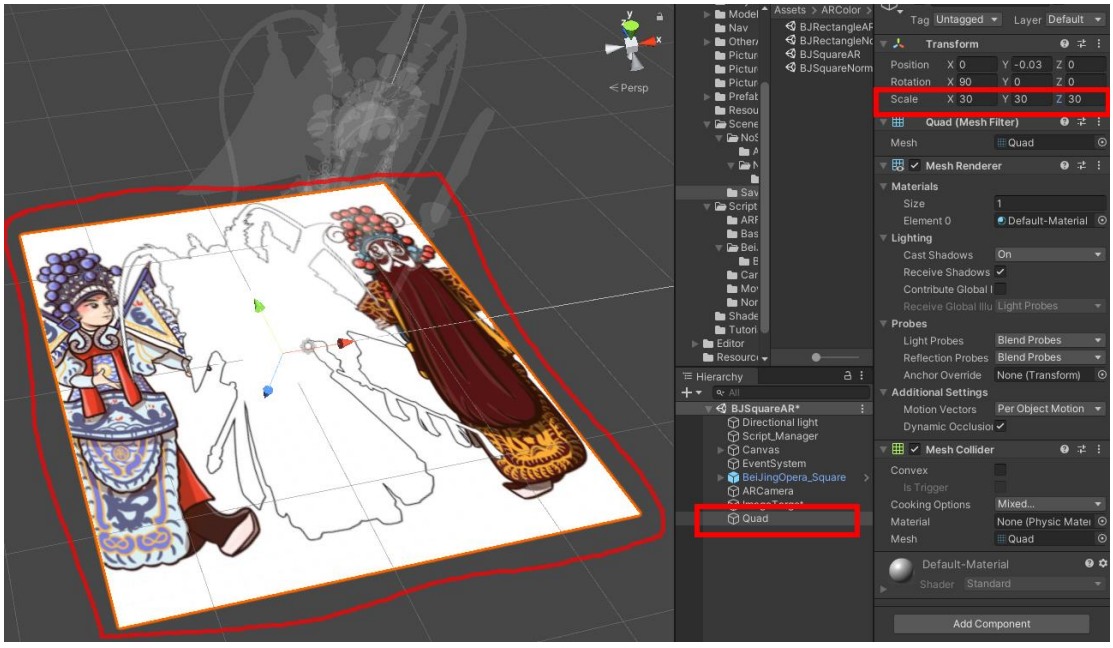
The width and height of the track image are not correct.

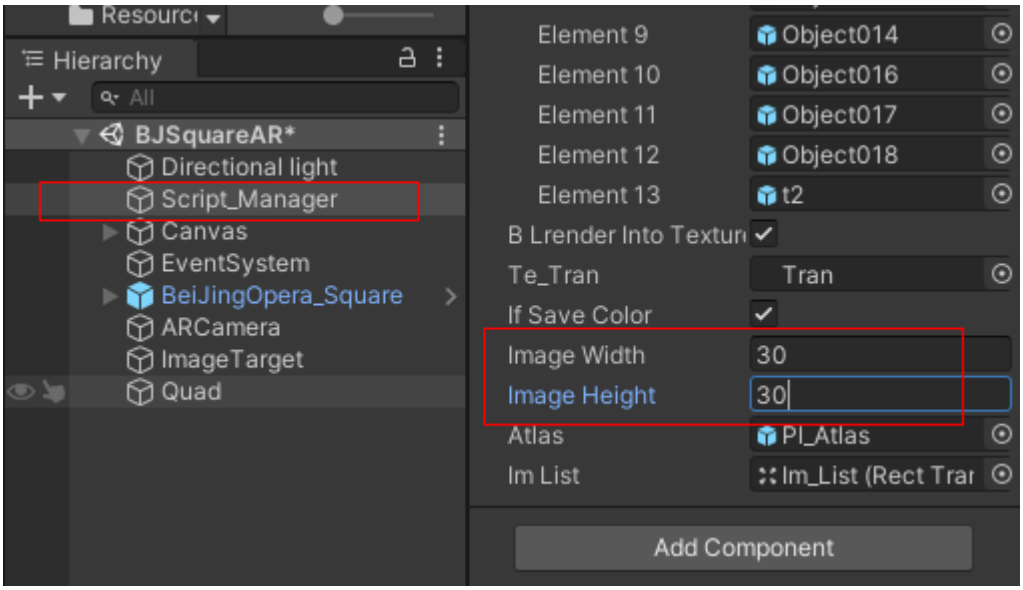
Solution : Script “ColorCenter” needs to be found in the Hierarchy panel on GameObject” Script_Manager”, and the actual width and height of the picture are entered in Image Width and Image Height.

If you are not sure about the width and height of the picture, you can use the auxiliary reference to view it. For example, the width and height of the Plane created by default are 10,10, and the width and height of Quad are 1,1.

Create 3D Object / Quad in the Hierarchy panel. You only need to scale Quad to make it consistent with the size of your track image. Then the x value of scale in quad's transform component is image width and the Z value is image height.



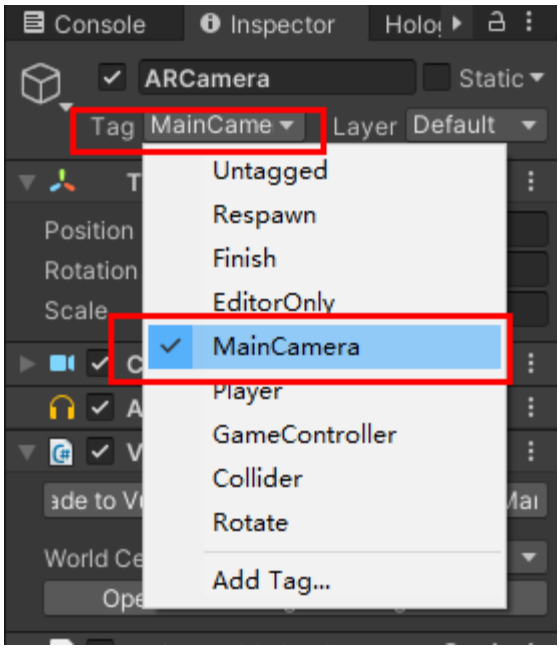




It should be noted that when Quad or Plane is used as auxiliary, there can be no parent object.

The space parameter of the camera and target is wrong.

Solution :Make sure the main camera in the scene is ARCamera.If the main camera is other camera, It may result in parameter errors that C# passed to the shader.



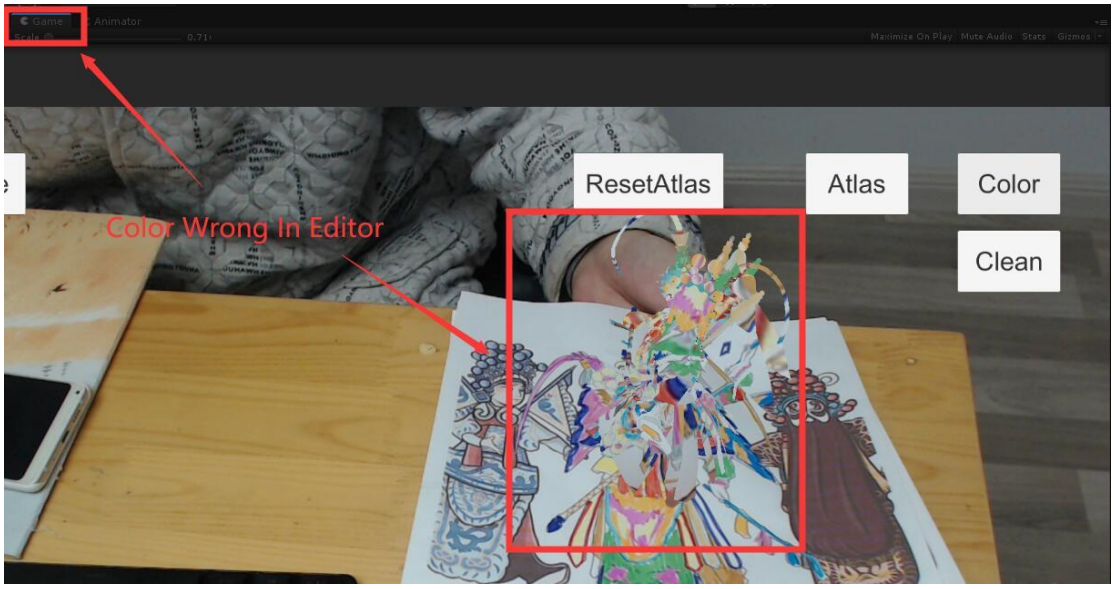
Track image is not placed at the origin(0,0,0).

Solution : Track Image has different names in different ARSDK, such as ImageTarget in Vuforia. Select it and change the position in the transform component to (0,0,0).

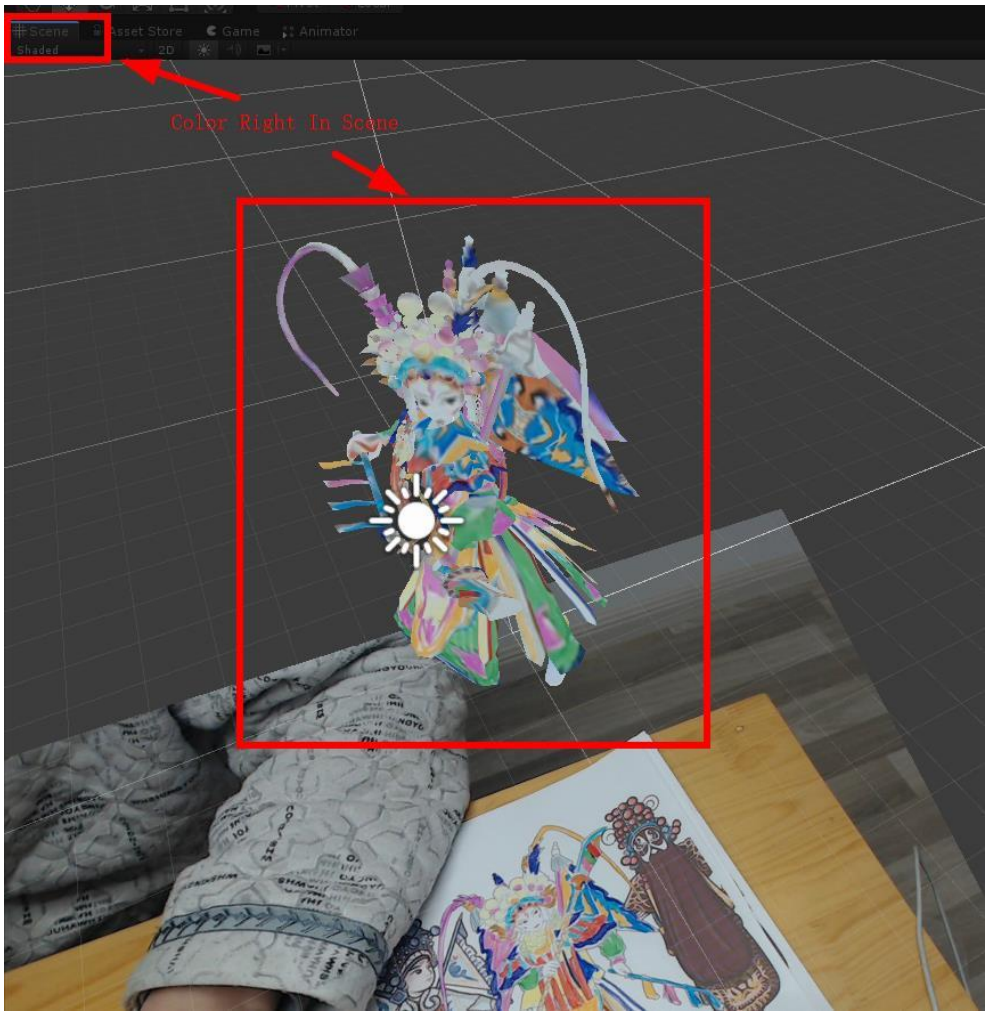
Rendering error in Editor Mode

Solution : Please check in the scene panel. If it is normal in the scene panel, it means the painting is correct. there is only a problem with rendering in Unity Editor mode. After Android app or IOS app are released, it will display correct.

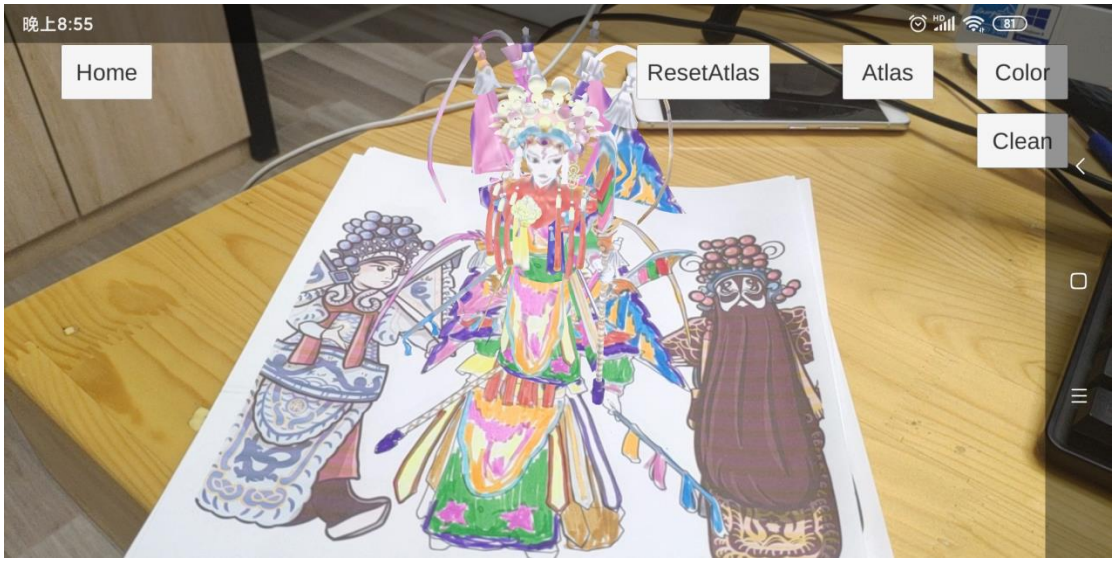
Color wrong in Editor Game panel:



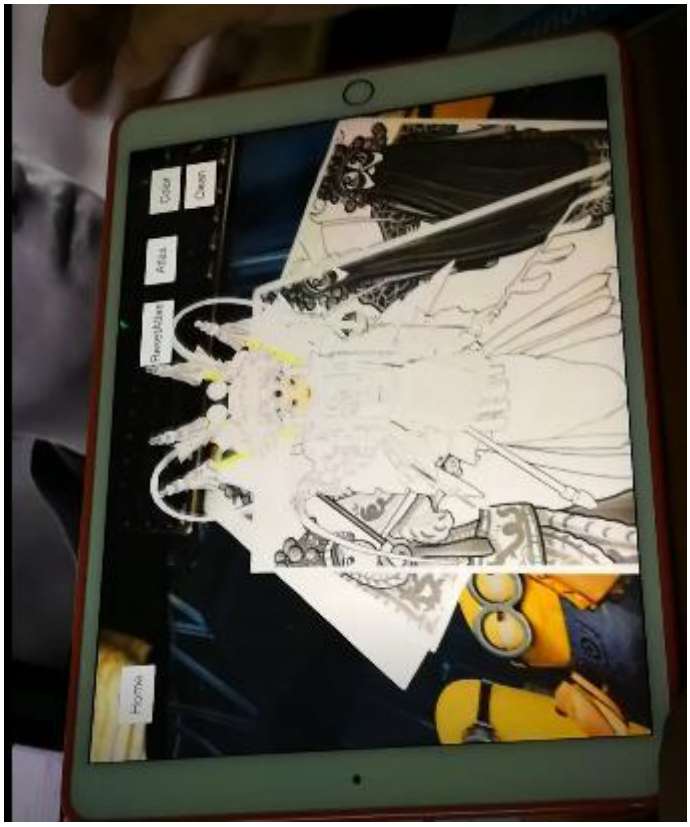
At the same time color right in Editor Game panel:



Color right as Android app



Color right as iOS app



Abnormal color on the model(Overall positional offset)

Reason:1. Check whether there is bending problem in the paper color card when taking ScreenShot. It is recommended to use hard and not easy to bend paper to make products. 2. check whether the model is correct in UV assignment.

Failure to recognize the target image, resulting in failure to display the corresponding model

a. Because the resolution of the camera of the computer is generally low, the slice that can recognize the picture on the mobile end is sometimes not recognized on the PC .

Solution : **Replace higher resolution camera hardware**

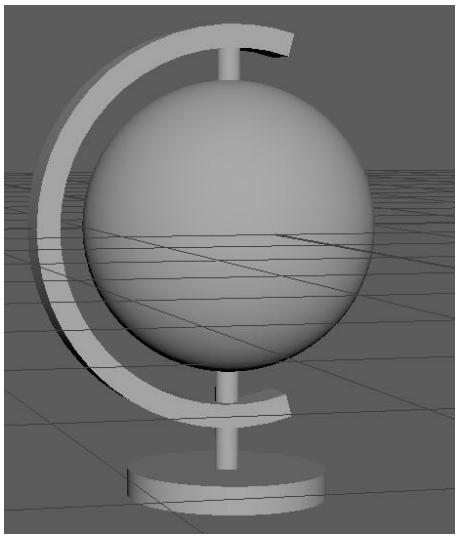
b. Check whether the printed paper is flat or not. If the paper curls, it may affect the recognition effect.

Solution : **Place the paper flat**

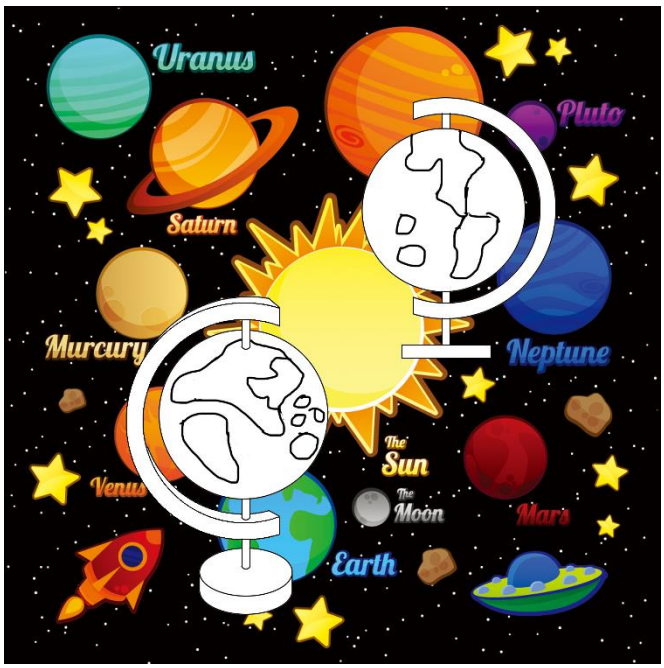
4.How To Make Your Own ARColor

You need to know the principle of this kind of AR。

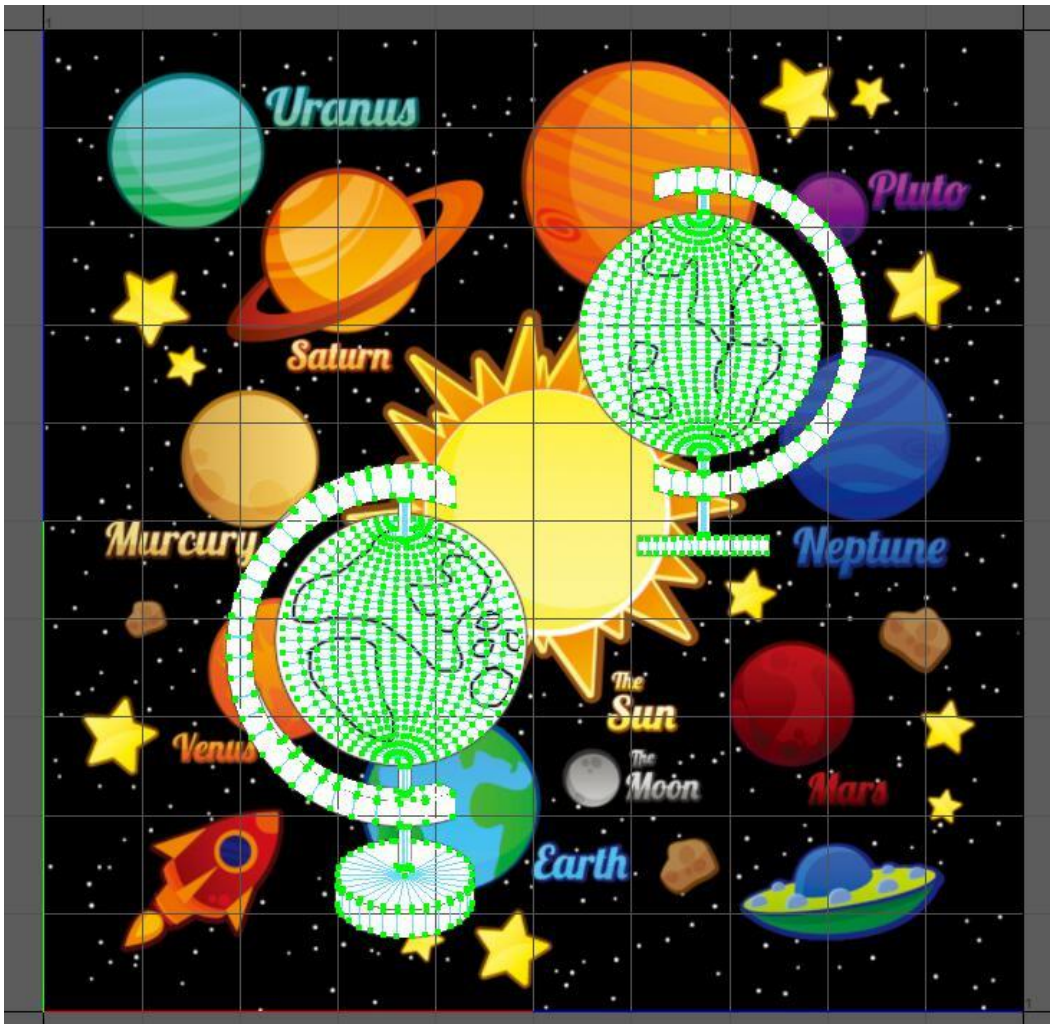
Prepare a 3D model.



Make a picture you like (or your child likes), the picture content needs to be related to the model.The model part of the pattern blank, the background as complex as possible. This is a picture used to paint ,also as a Track card.



Let the UV of model itself match the pattern on the image.



In the unity, give the model a transparent map. To prevent effects on

screenshots

Use the Script and shader in this pakage. Take the screenshot as a Texture of the model, correctly calculate the rendering method.

5.principle of this kind of ARColor

1. The content displayed on the model is represented by a texture.
2. The correspondence between the texture and the location on the model is determined by the model UV.
3. The color of the reality is displayed on the virtual model because the screenshots are passed as a texture to the model.
4. But the correct corresponding to the UV need to AR through the screen and the relative position of the camera to calculate. And by the shader to adjust the rendering.

5. About Scan Frame

Commercial products tend to automatically color the model by scanning the frame range. By judging whether or not the screen coordinates of the card are within the screen coordinates of the scanning frame.

6.About Rectangle Picture

There are many ways to achieve this effect, but we recommend using the way in this package. The square is formed by adding a white portion to the

rectangle.

Because the pure white part does not participate in the AR calculation as the identification information, the middle rectangular portion can be used when making the painted image.