AR.js Trigger Images Best Practices

Creating a Custom Trigger Image

In previous handouts, we've been using preset trigger images, but custom markers can also be made for your own use!

You can find the code for a working example of a custom image trigger at:
https://github.com/Pratt-Institute/VR-Workshop/blob/master/AR-Workshop/ar-custom-marker.html

Below is the site where you can generate your own marker to use to trigger your AR scene. Notice the "UPLOAD" button in the upper left hand corner of the site. This is where you will upload your inner image. Go to the link below:
https://jeromeetienne.github.io/AR.js/three.js/examples/marker-training/examples/generator.html

Refer to "Best Practices for Trigger Images" (below) to determine how to design your trigger.
Once you upload your image, it will appear within a black frame, and you can use the toggles below the "UPLOAD" button to determine the thickness of the frame and the resolution of your trigger image. A preview image of your marker should be generated onto the screen.
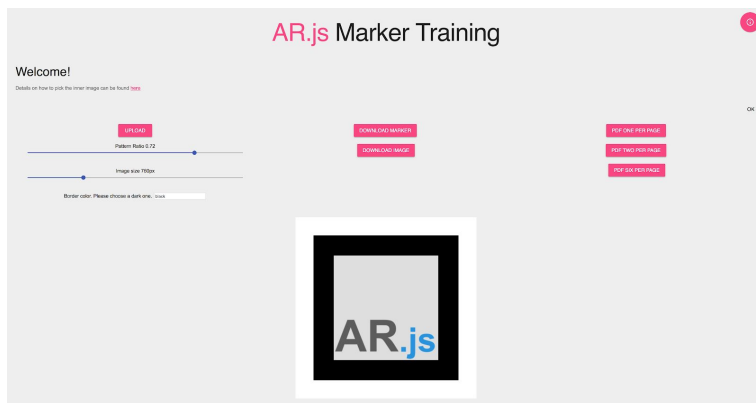
Next, download the marker. Click the top middle button on the site "DOWNLOAD MARKER" to download your complete marker. This is not the actual marker image, this downloads the code that pairs with your marker.
Then, download your marker image by clicking the "DOWNLOAD IMAGE" button .

The center image may be different, but your marker should look something like the above photo: a white outer frame, black inner frame, and an image inside the two. Like the assets you have dragged and dropped into glitch before, do the same with the marker image. Drag and drop the file into your assets tab.

We've previously established that the below yellow highlighted text is our preset marker. SInce we are going to be using a custom marker, highlight this line of code in your own html tab, and delete it from your code.

```
<a-marker-camera preset= "hiro"></a-marker-camera>
```

In the same place/line where you've deleted the above code, replace it with the code below.

```
<a-marker-camera type="pattern" url=""></a-marker-camera>
```

Like with the previous assets, go to your assets tab, and Copy + Paste the url of your marker image. Paste the url in between the quotations of (url=""). This will allow the program to know to use your custom marker as a trigger for your AR scene!

```
<a-marker-camera type="pattern"
url="https://cdn.glitch.com/88846d9a-8534-415f-a918-fc842e843364%2FMarkerImage.png?v=158
0750670866"></a-marker-camera>
```

Discover your Augmented Reality scene using your custom marker! In the upper left hand corner, click the "Show" drop down arrow, click it and select "In a New Window." This will open your completed AR scene. Hold your custom trigger image (preferably printed out) up to the camera of your device, and view your augmented reality scene.

Best Practices for Trigger Images

You can upload any image you want to use as a marker, but keep in mind that using high contrast values, or colors with bold and clearly defined patterns/logos, will be easier for the program to register and trigger. On the other hand, images without clear lines and definition, such as photos or intricate illustrations, will be difficult for the program to pick up.

Your trigger image should not have any white in the design. Due to a new   update, AR.js does not recognize white and will have trouble picking up trigger images   with white or transparent values in them.

Instead of these values, use a light gray - we recommend #f0f0f0 as a light   gray that the AR.js camera will pick up fine.
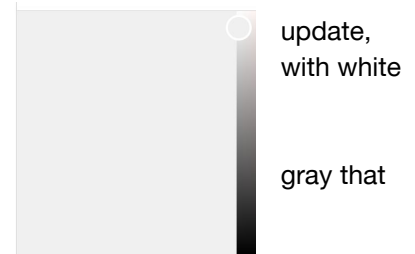
A-FRAME UPDATE

An updated version of A-Frame has recently been released. Read about its new features here: https://aframe.io/blog/aframe-v1.0.0/

Check out the code & examples here: https://github.com/aframevr/aframe/

To take advantage of this version's new features, replace your old <script> tag with the following:
```
<script src="https://aframe.io/releases/1.0.4/aframe.min.js"></script>
```