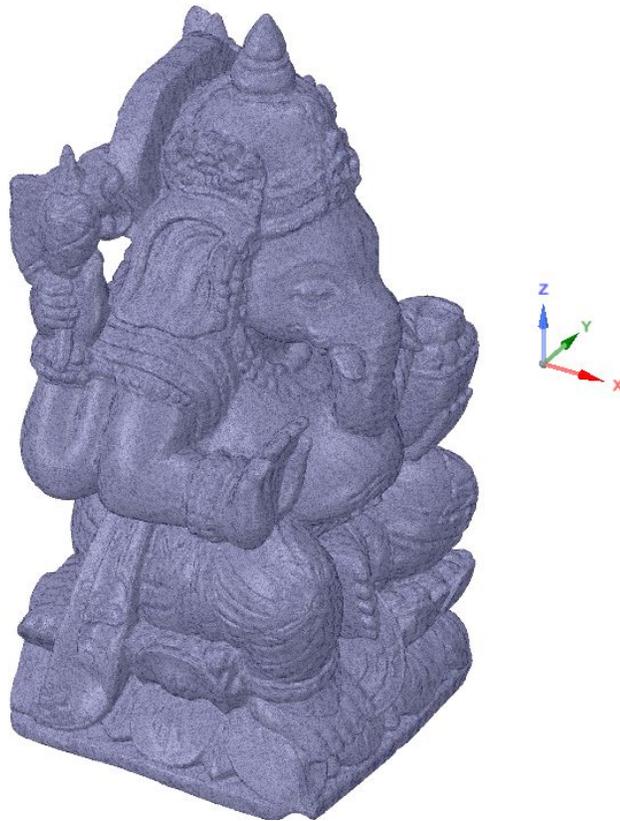


Keyshot 6 Tutorial

Updated 10/20/17

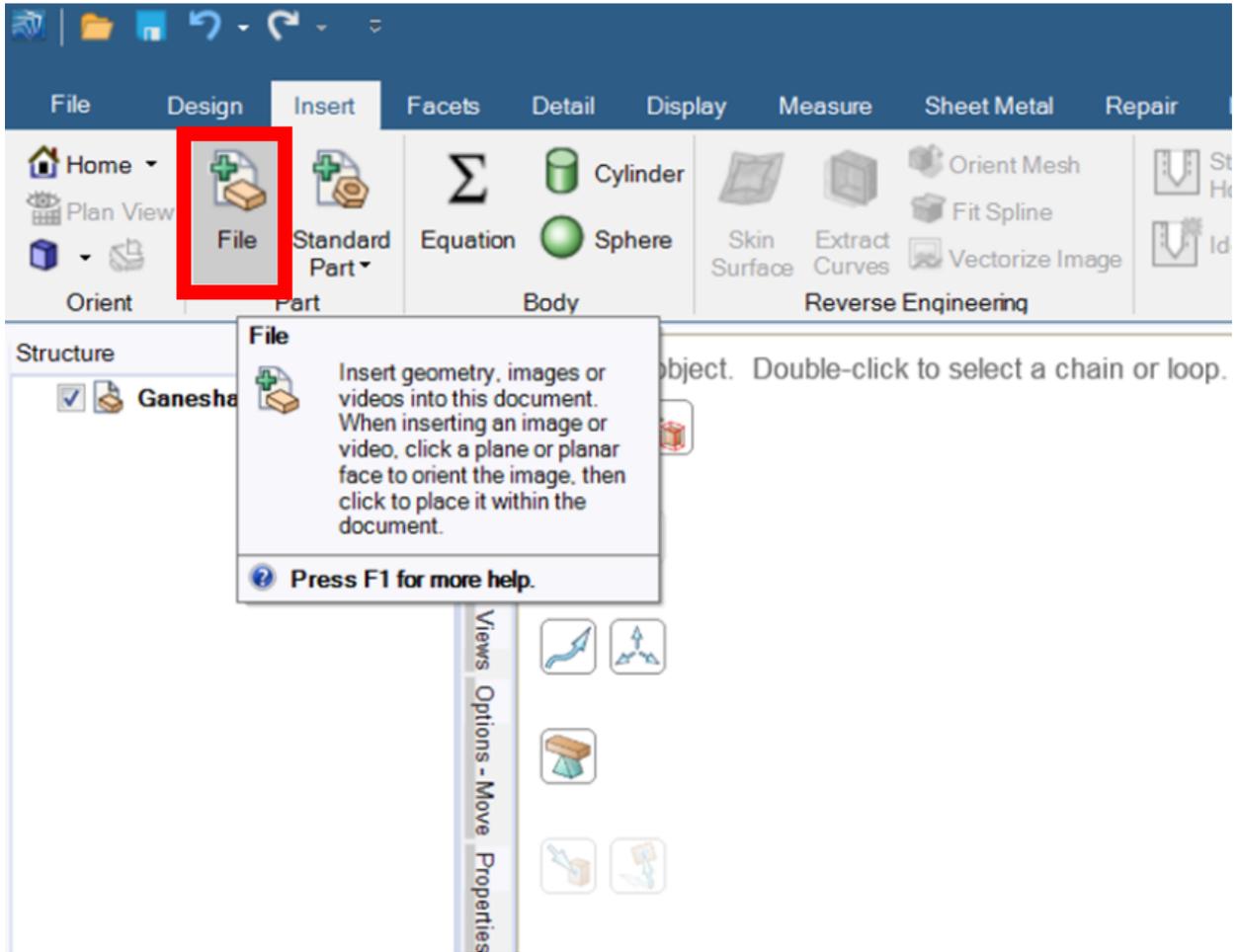
Objective:

This tutorial will teach the reader how to successfully make a turn table animation of an STL file.



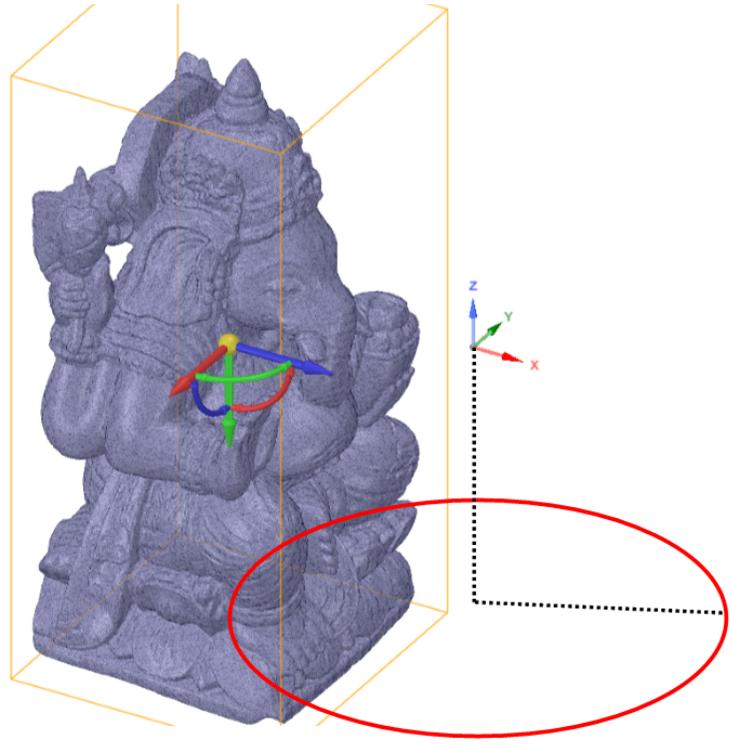
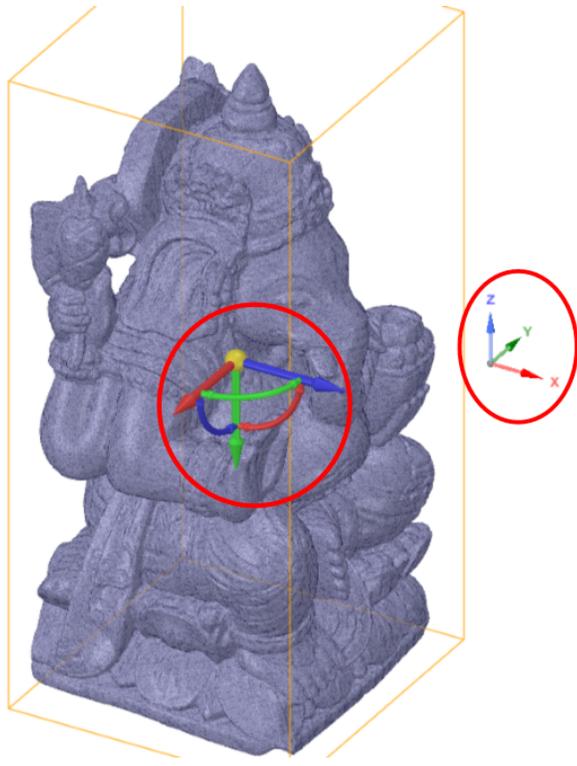
Setup:

The features of Keyshot are accessed through Spaceclaim. This is where you insert your model and orient where you want it placed, so we are first going to insert our model. Go to the Insert tab and select File.



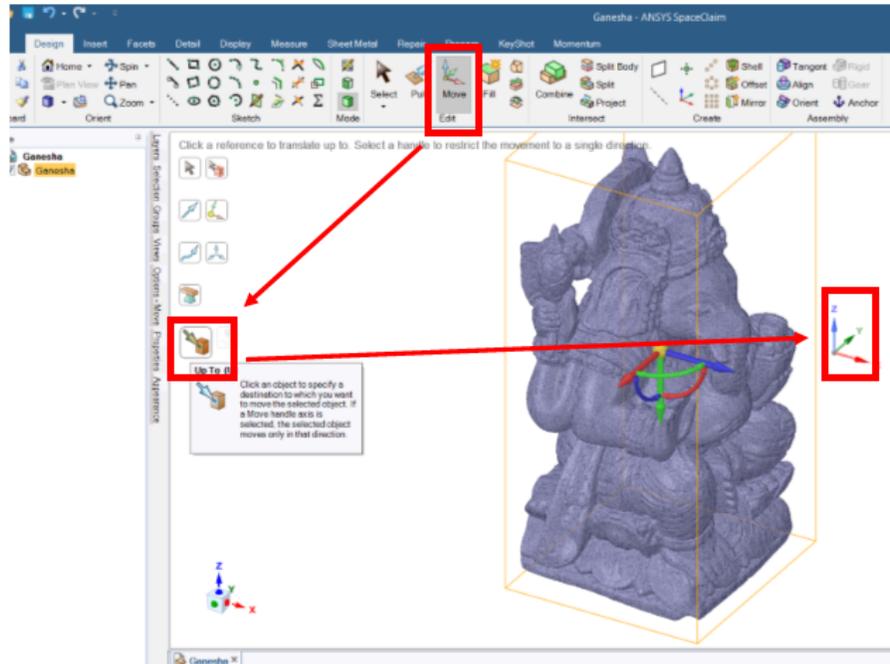
Now we orient our model. The orientation of your part is very important to get a good-looking animation. When we are later setting up our animation, we will be prompted if we want our animation to be centered around the **model** or the **environment**.

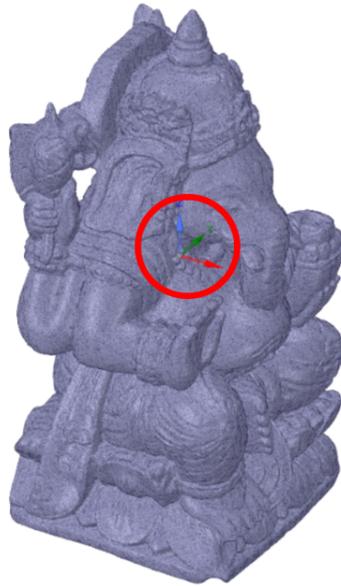
In the image below, we see two origins: model origin to the left and the environment origin to the right. If we were to render a turntable animation with the center of the environment, the model will revolve around the point of interest rather than rotating about its own center.



Another important note is that **+Z** is up. When you open Keyshot from Spaceclaim, you have the option to set ground shadows for the model. The ground will be positioned in the **-Z** direction.

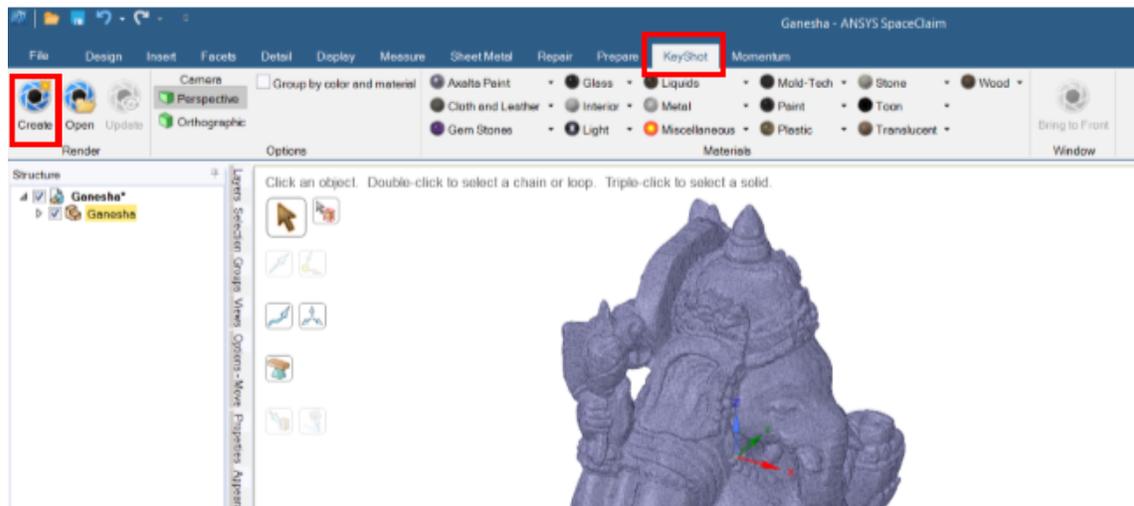
For this model, we are going to move the model to the center of the origin. Using the Move command under Design, position the center of the model to the environmental origin. We can use the Up To command and click on the origin to move the center of the model to the environment's.



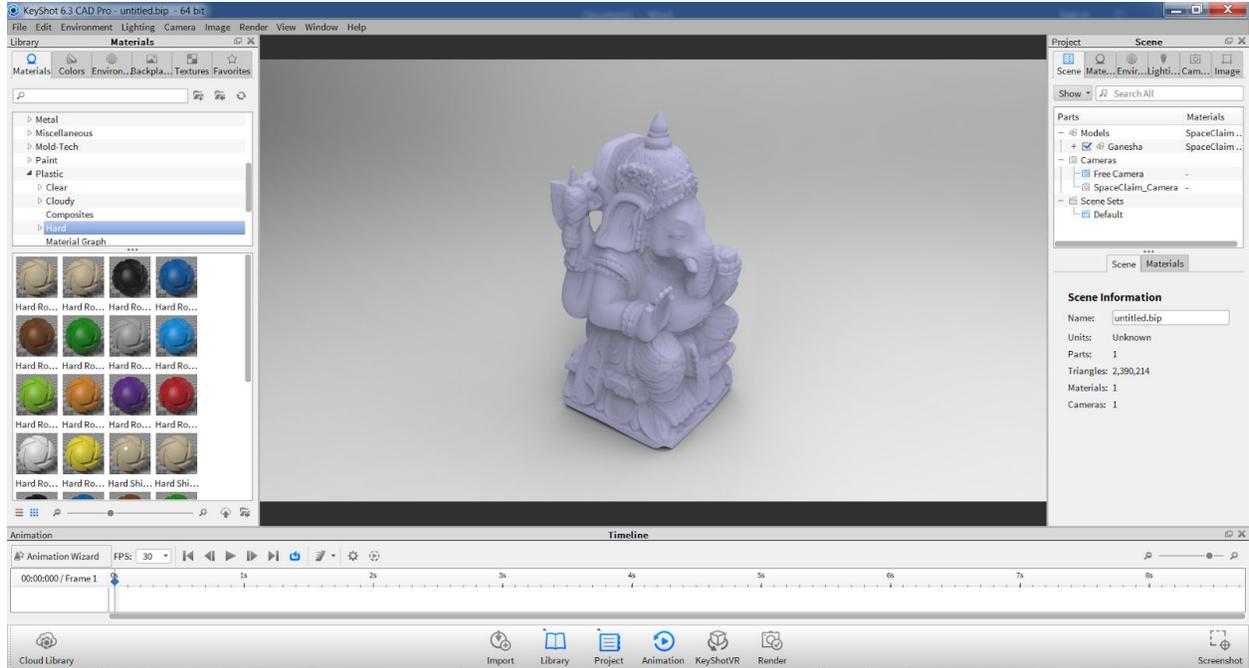


Keyshot:

To open the model in Keyshot, go to the Keyshot tab and click Create.



Keyshot will open to this window.

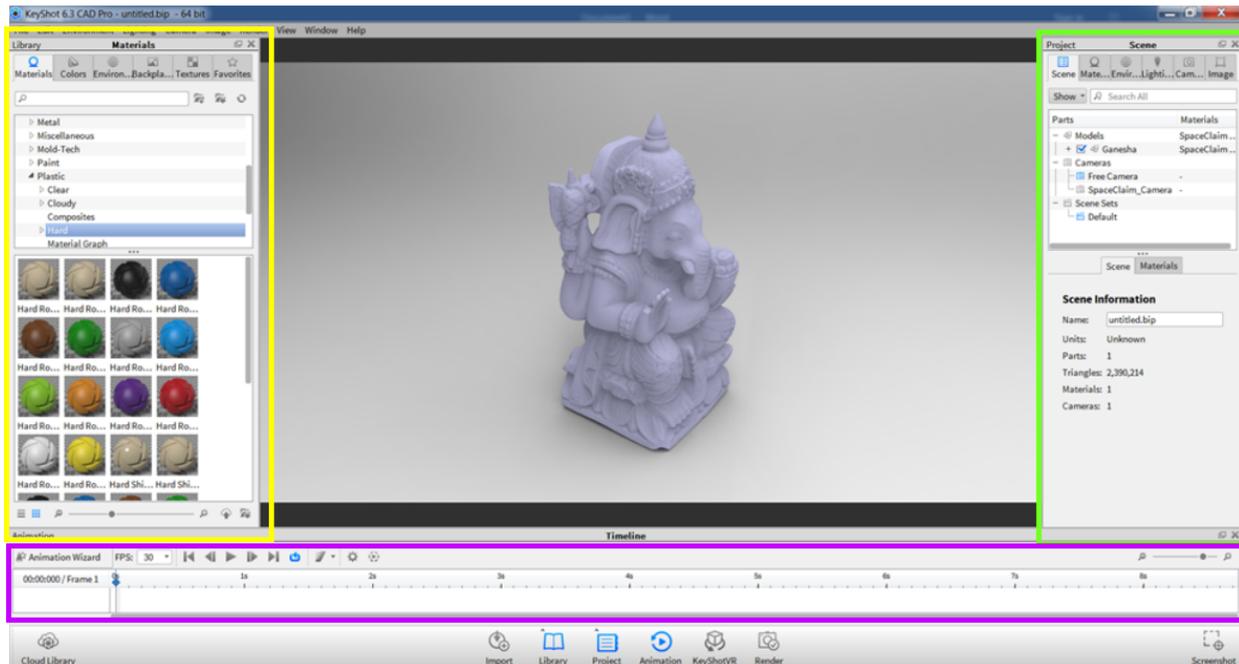


Layout:

Library – This has all our materials, environments and textures we want to apply to our model.

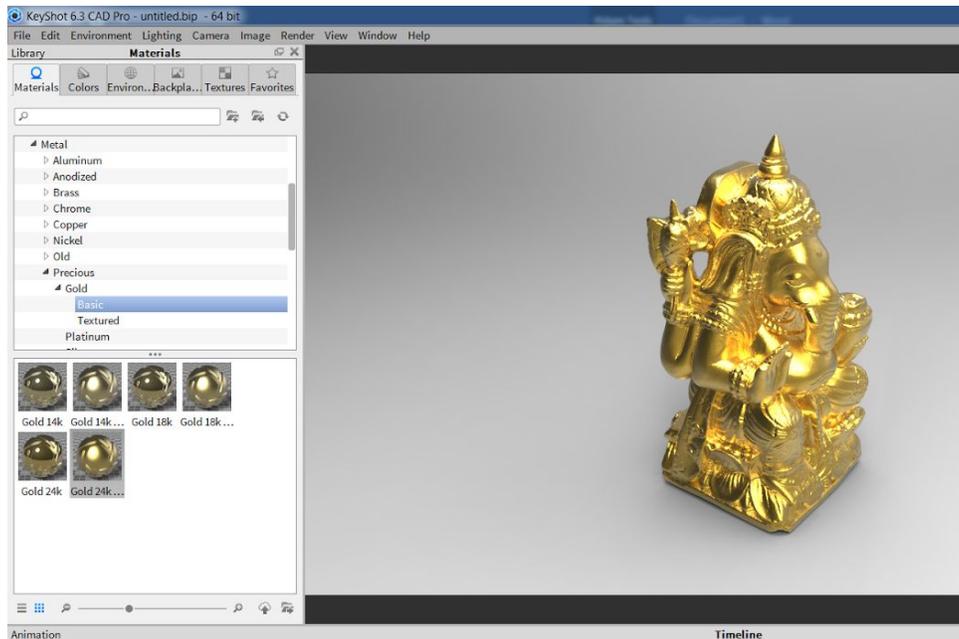
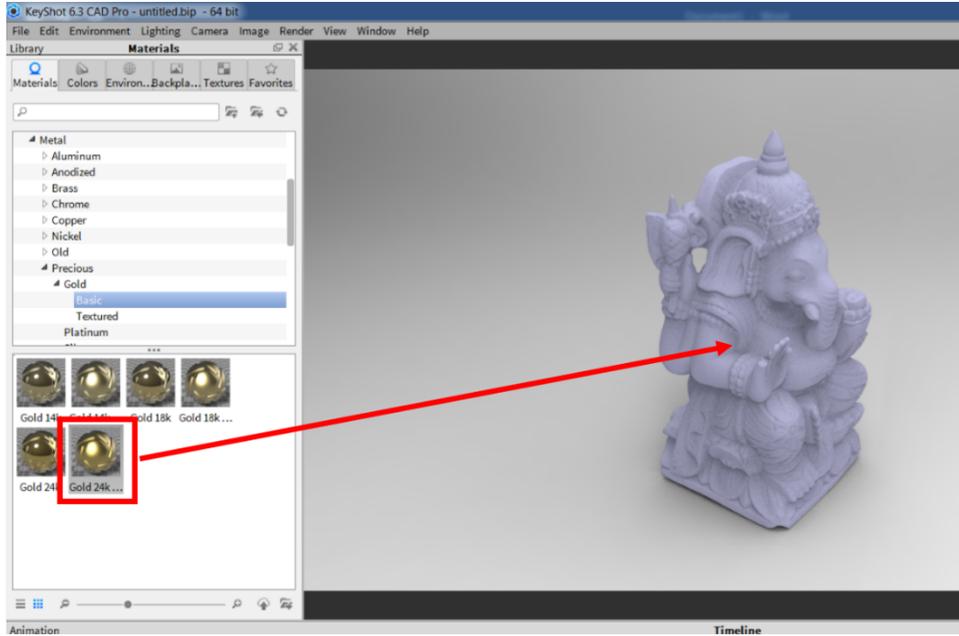
Project – We can edit our project from this window.

Timeline – We will setup the animation in this window.

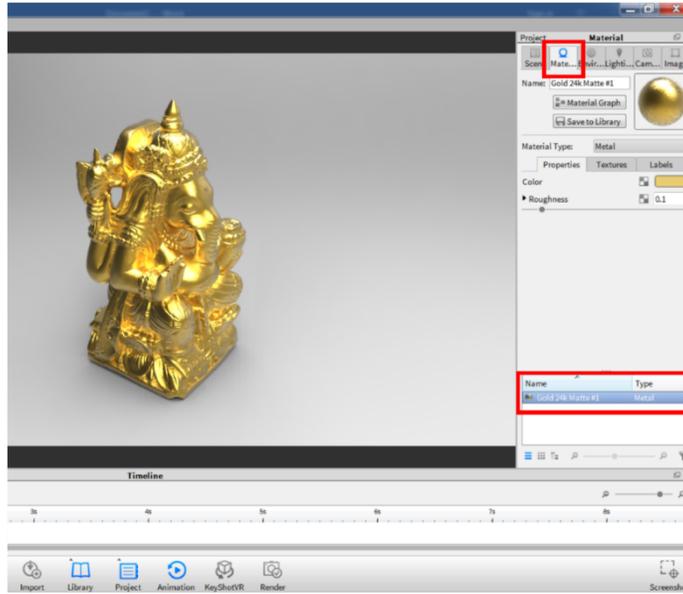


Material:

To apply a material to the model, browse through the library and select the material you wish. Then, click and drag from the Library to the model.

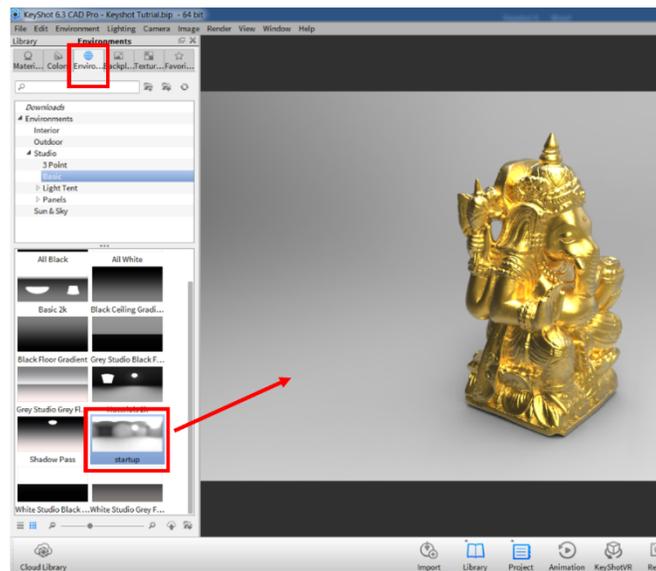


Go to the Project window to the left, go to the Materials tab and click the material we just applied. Here you can edit the material and save a copy to the Library.

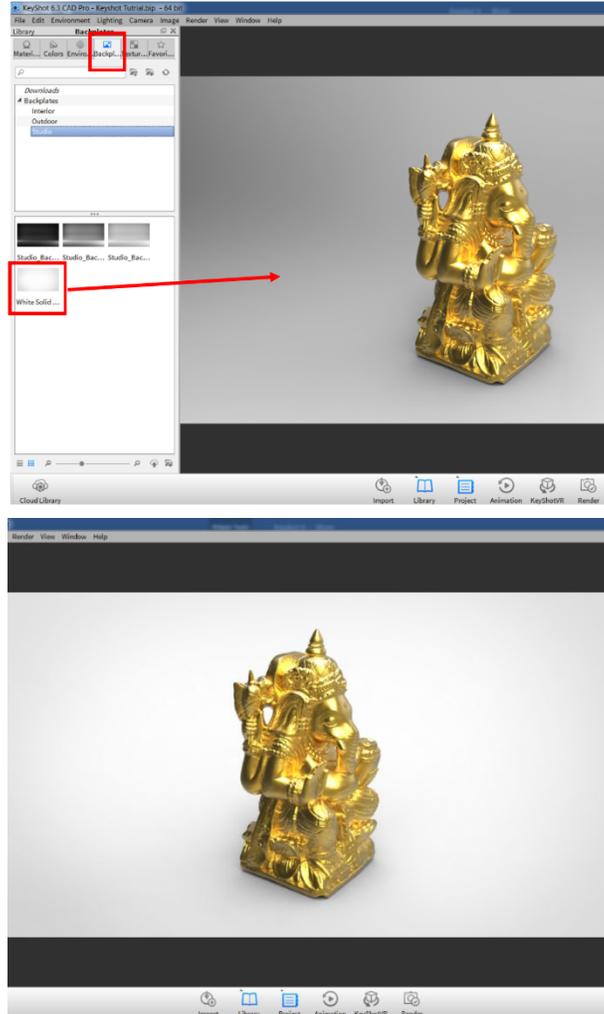


Environments:

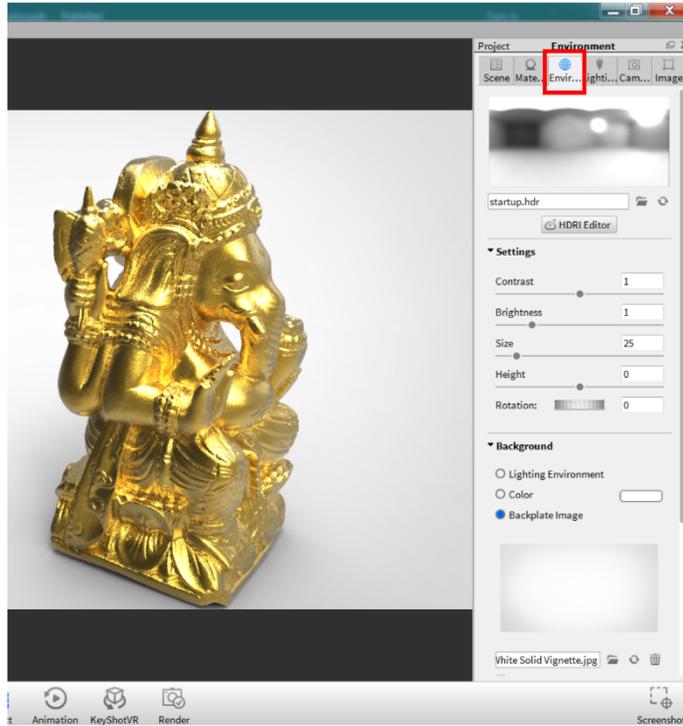
Environments select the lighting for your scene. The default environment is called *startup.hdr*, which tends to be a good for turntable renderings. If we wanted to select a new environment, simply select and drag to background of your model.



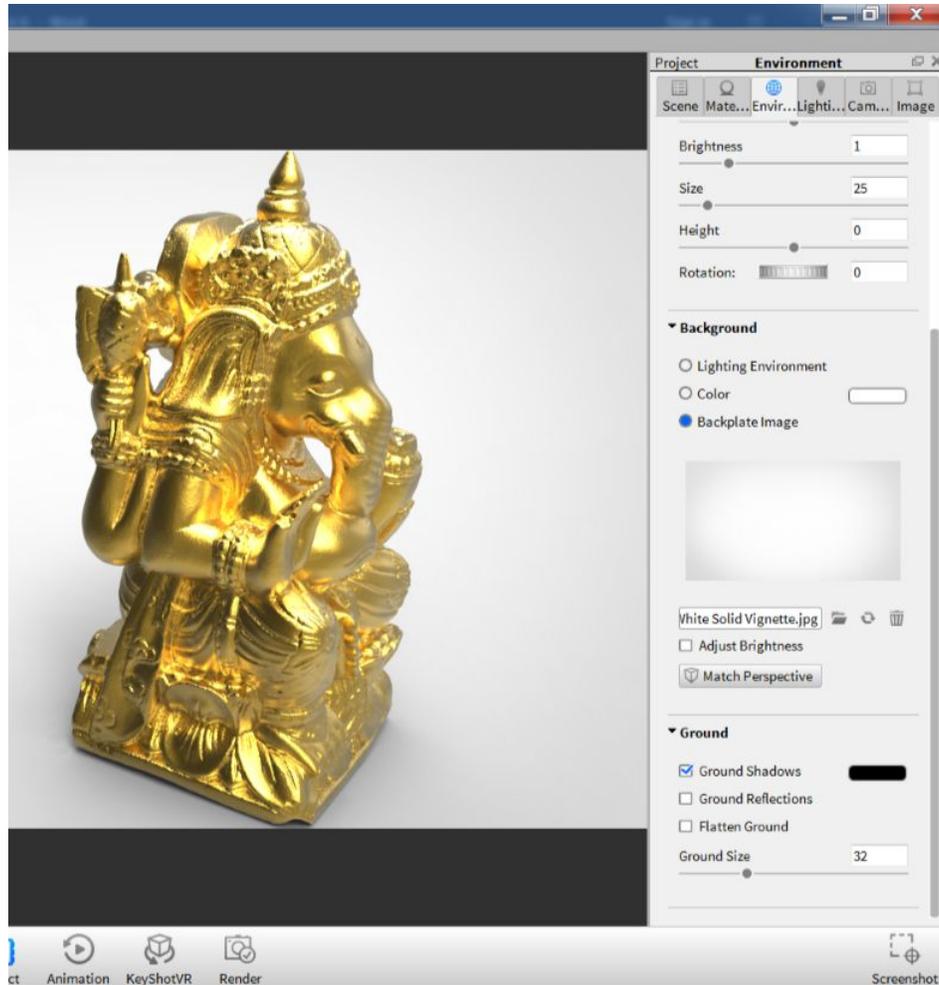
If we want to keep the lighting, but change the background, we can drag and drop a backplate to the background of the model. The Backplates tab is located next to the Environments tab in the library.



If we go to the right side in the Project window, we can edit our environment in the Environments tab. The settings adjust the lighting and we can experiment with them to get the best-looking image. Underneath is Background where we can set the background to either our lighting environment, a single color, or a backplate image.

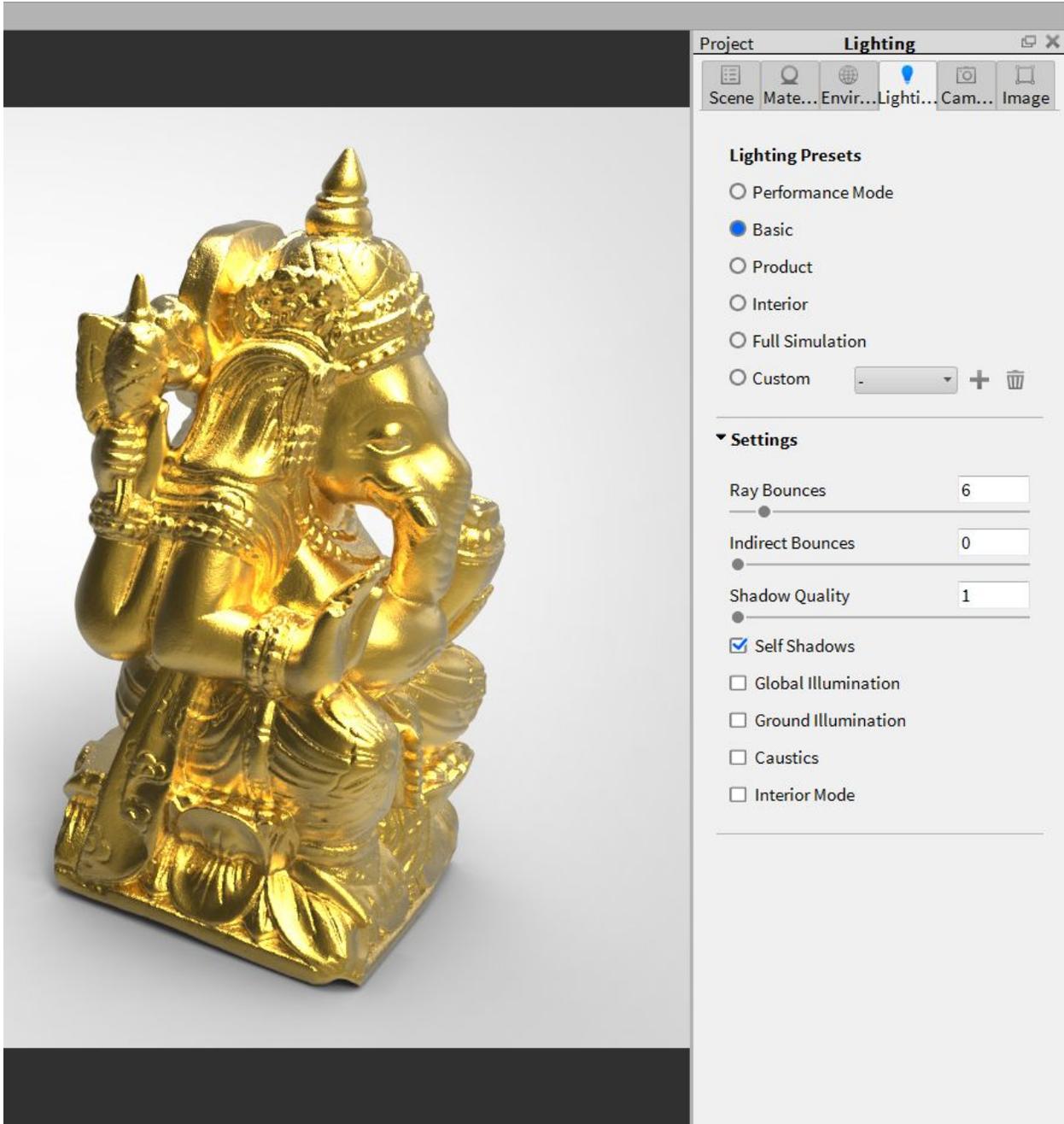


Underneath are the Ground settings where we can toggle shadows and reflections.



Lighting:

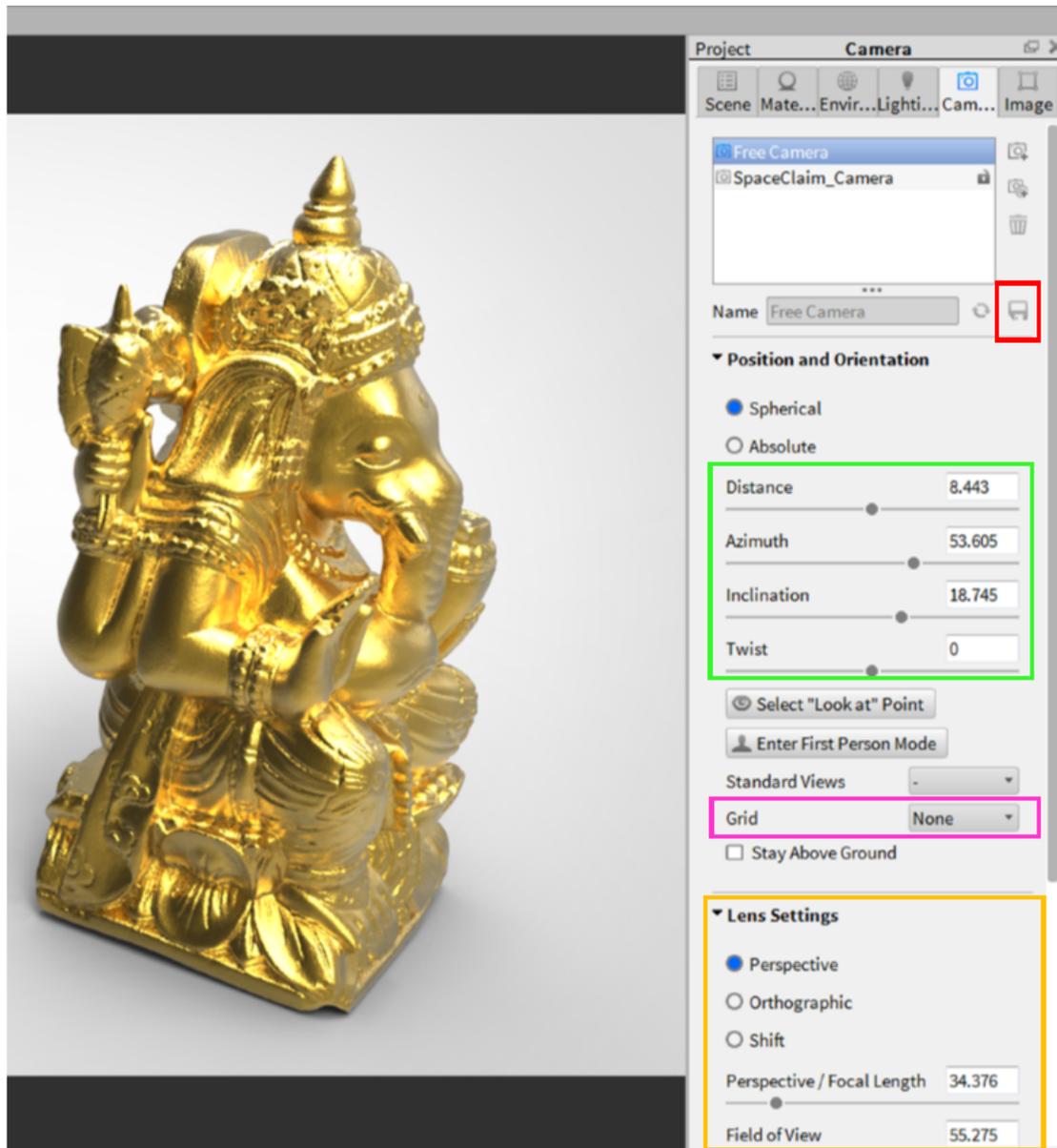
Under Project > Lighting, we can adjust the lighting to different presets. This has the potential to prolonging the rendering of an animation. It is best to leave at **Basic**, but they can be experimented. **Settings** can be left as is.



Camera:

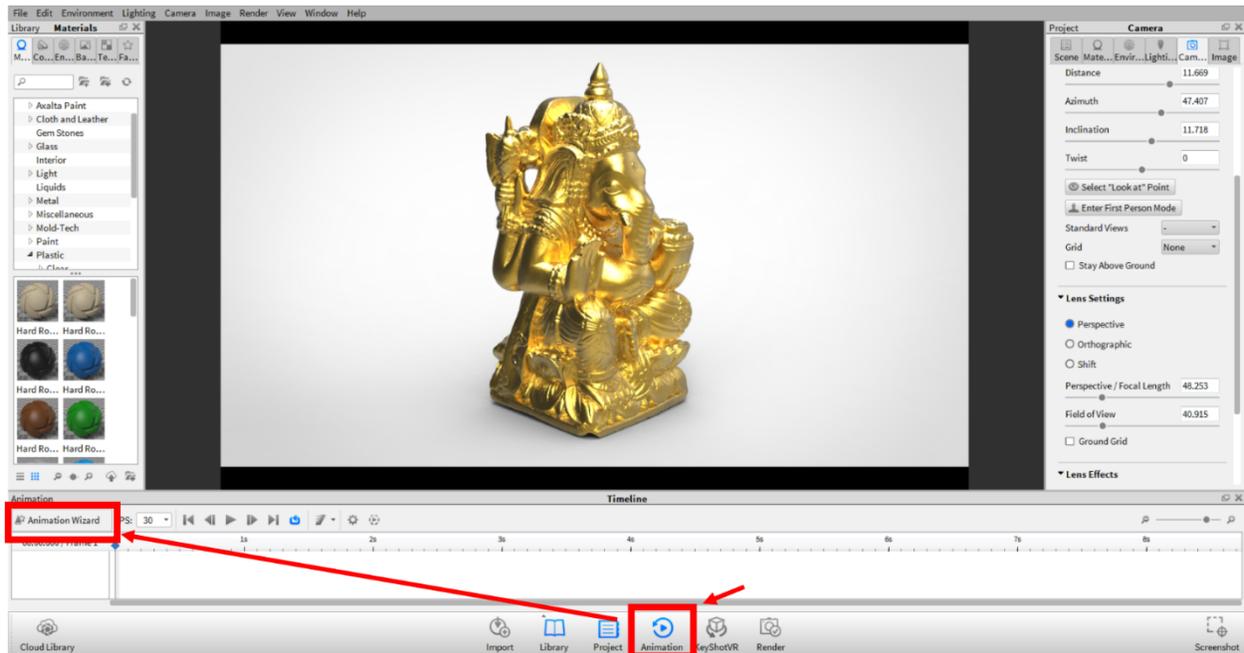
Under **Project**, we can access the **Camera** tab. We can **save camera views** for different positions. We can change our view of the model under **position and orientation** either by the slider or by clicking and dragging in the window. In the same section, we can add a **grid** to the window to help center our model in the frame. The **lens settings** allow us to change the perspective of our image. These can all be adjusted to give the best looking image we need.

**As mentioned before, it is important to orient the model to the Z axis or else you will have issues orienting your camera view.

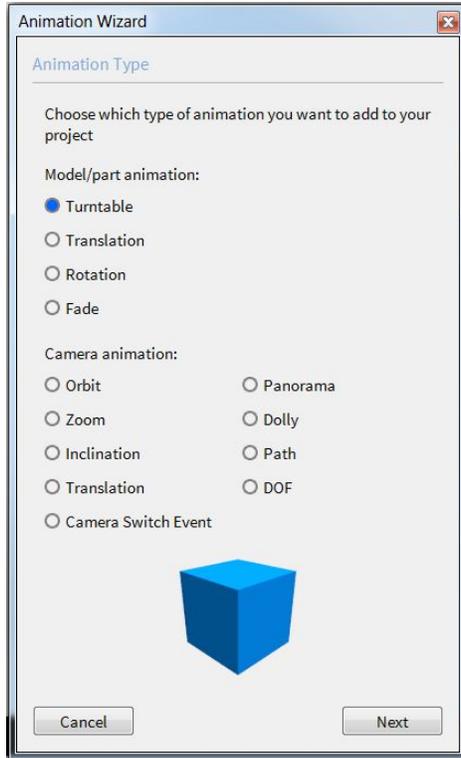


Animation:

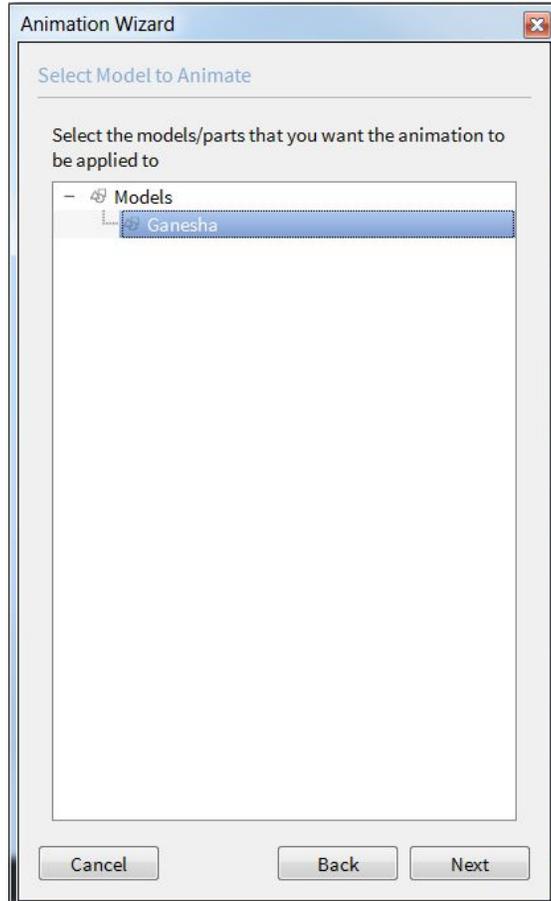
At this point, we should have the image of our model set up the way we want. We can now set up the animation. To do so, we click on **Animation** down at the bottom. The Timeline will appear. To the lower left, click on the button labeled **Animation Wizard**.



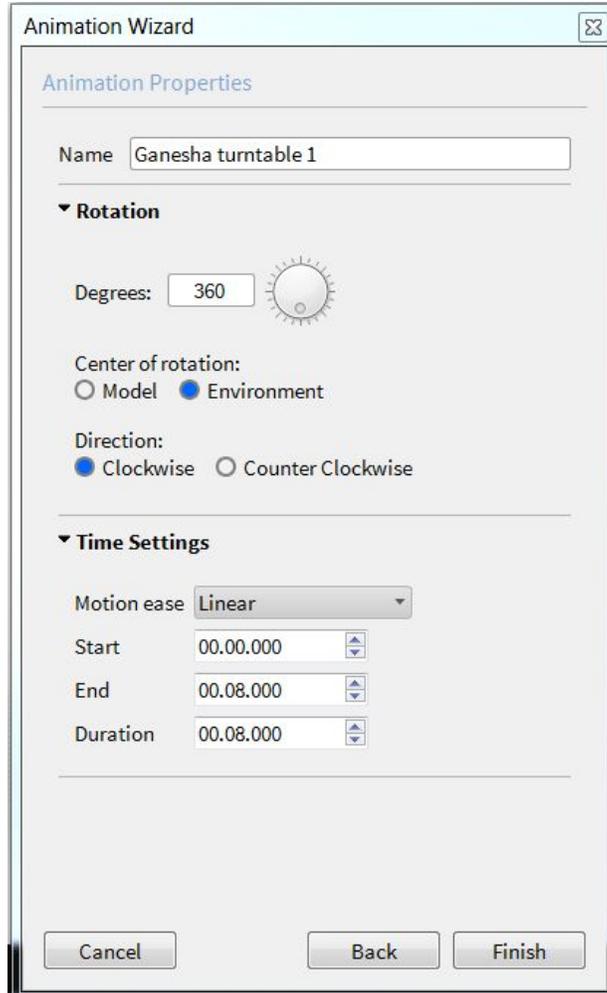
The Animation Wizard window will appear and we can pick the movement of our model and the movement for our camera. For our purposes, we will pick the **Turntable** model animation and not select anything for the camera animation.



Next, we want to select the model we want to animate.

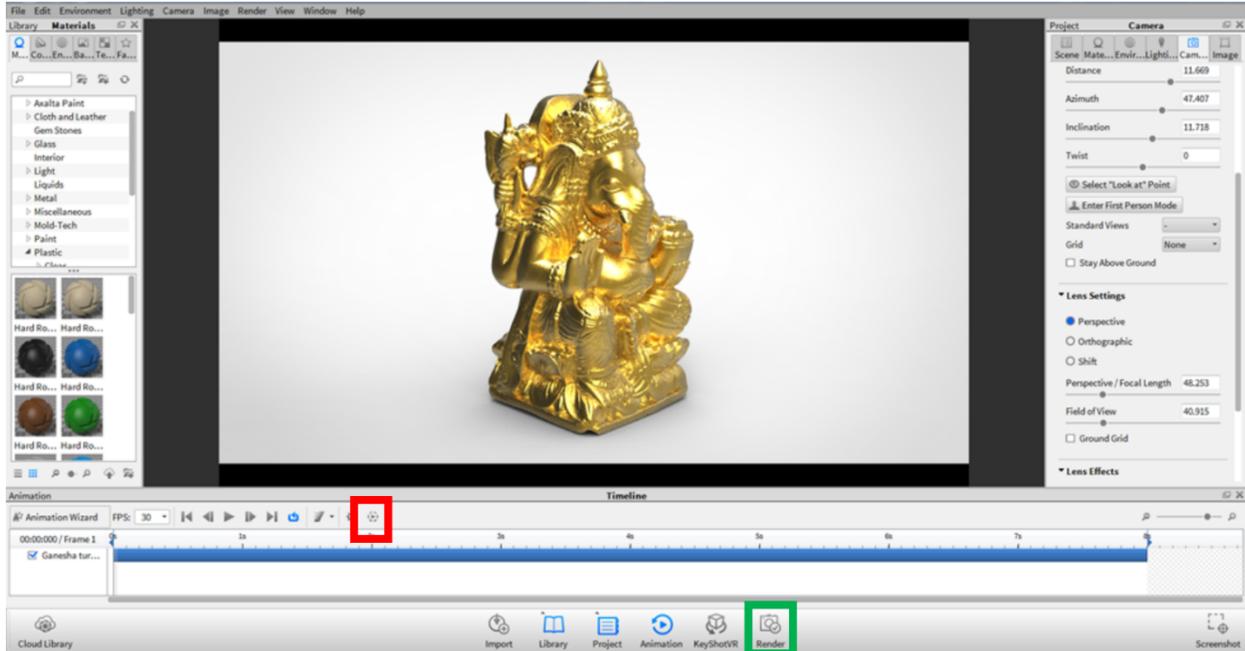


Finally, we can adjust our animation properties. We can change the name and the amount of rotation, but it is usually best to leave at 360 degrees. Since we aligned our model to the center of the Spaceclaim project, we should select the **Environment** as our center of rotation. We can adjust the time settings. We will only change the duration to 8 seconds. Click **Finish**.



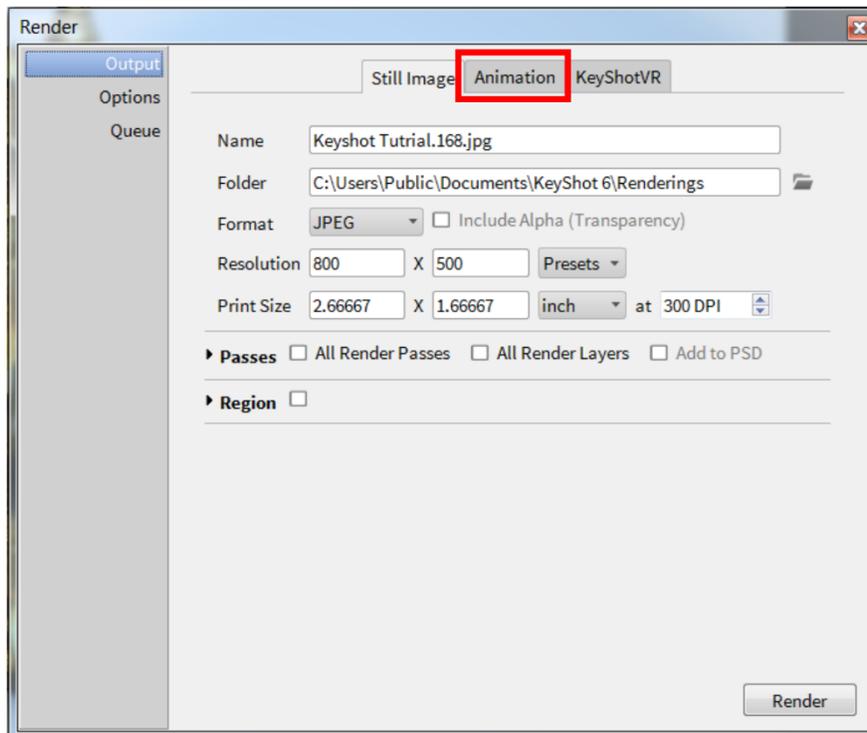
Our animation should appear in the timeline of our main workspace. From here we can generate a quick **preview** of the animation located above the timeline. This will be a quick check to see how your model looks when it is rotating.

We will go straight to **rendering** our animation located at the bottom.

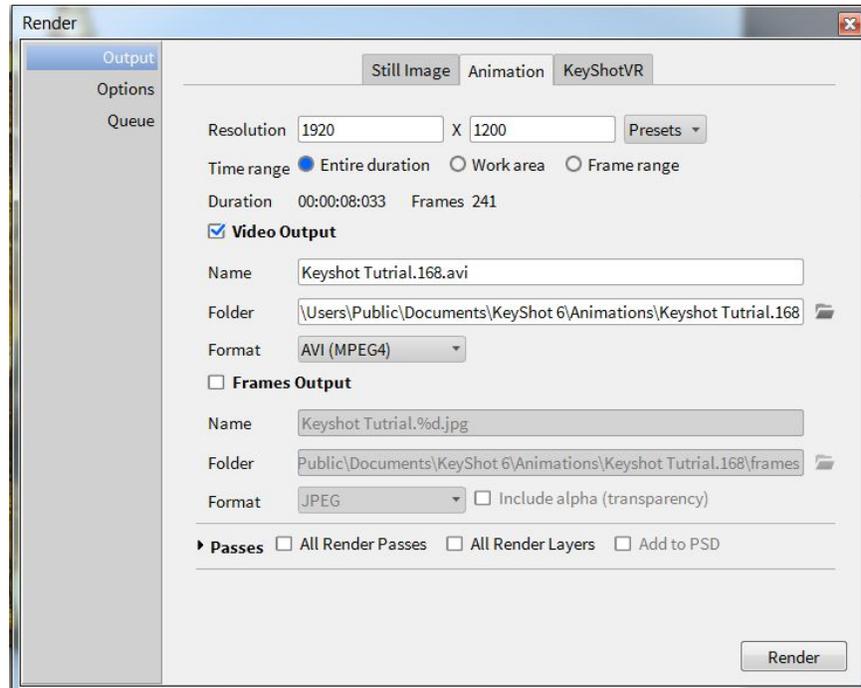


Render:

The **Render** window will appear and we will next select the **Animation** tab.



At this point, we set our resolution, name the file, locate the folder it will be saved and select the video format as seen in the image below. Your resolution will depend on the customer's needs. For this animation, the time difference between 720p and 1080p will be about 3 hours versus 4 hours. In addition, we want to uncheck the frames output and the passes or it will export each rendered frame individually. Once that is complete we can click **Render**.



Once it is done, we can open the file from the directory at which it was saved and view the video from there.

