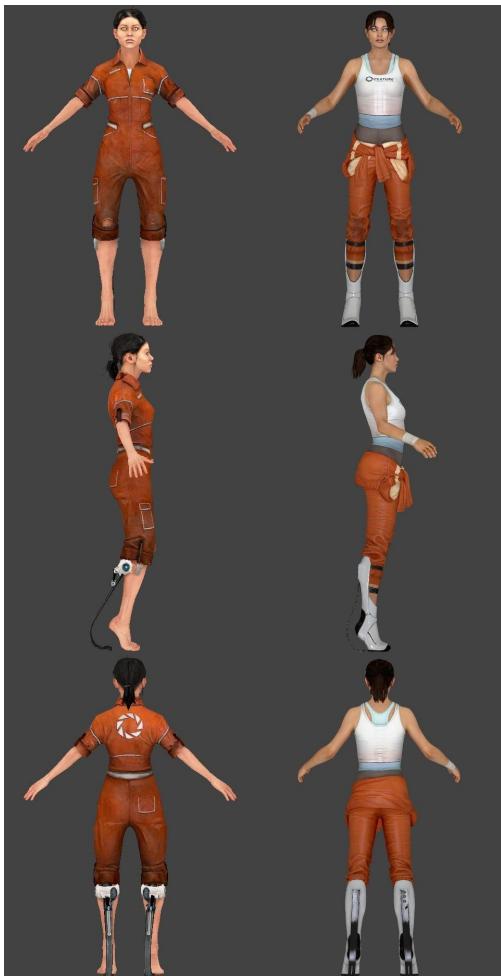


Connor McGrath
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10/11/2021

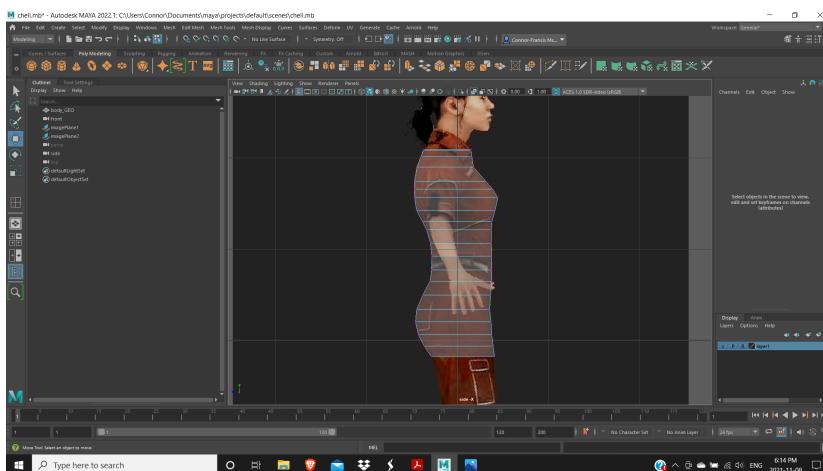
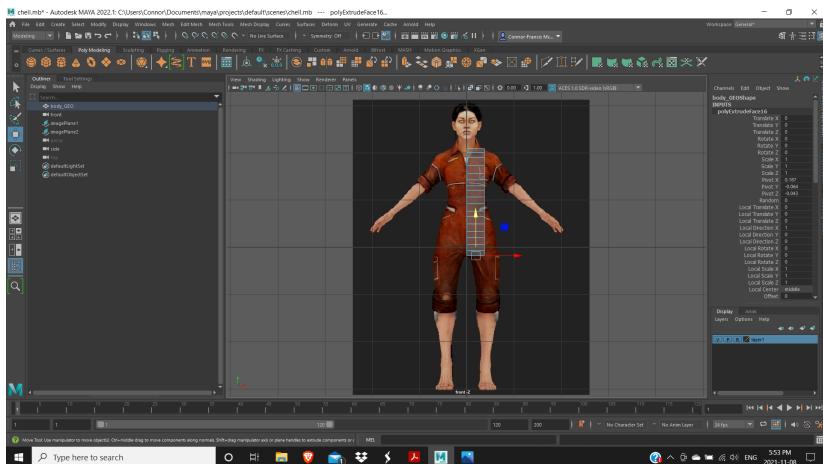
Project 2

In this project I attempted to make Chell from *Portal* (2007, Valve)



Ramberti, Magdalena. "Chell Reference Sheet, Both Portal and Portal 2." *Pinterest*, Pinterest, <https://pin.it/5CUkEqr>. Accessed 10 Nov. 2021.

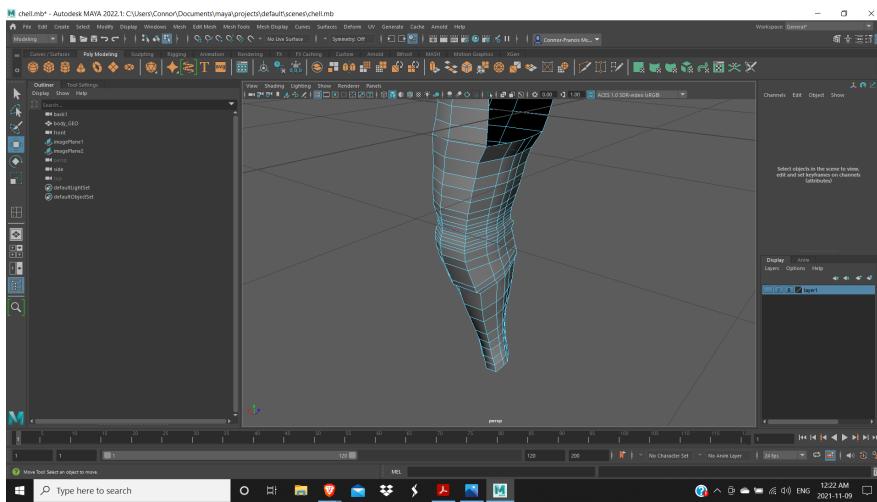
I started with a box and used that make the shape of the body



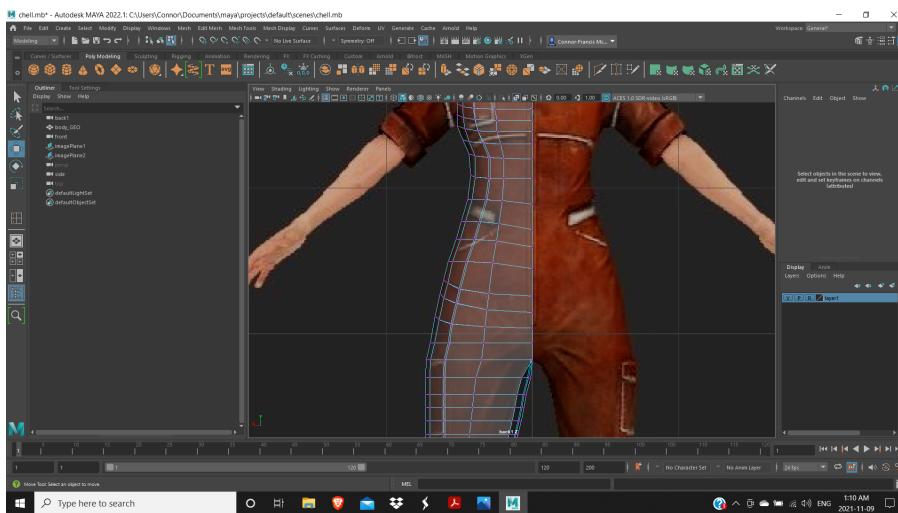
After I used the box model to make the body, I needed to round it out so it doesn't stay boxy, so I added in more edge loops

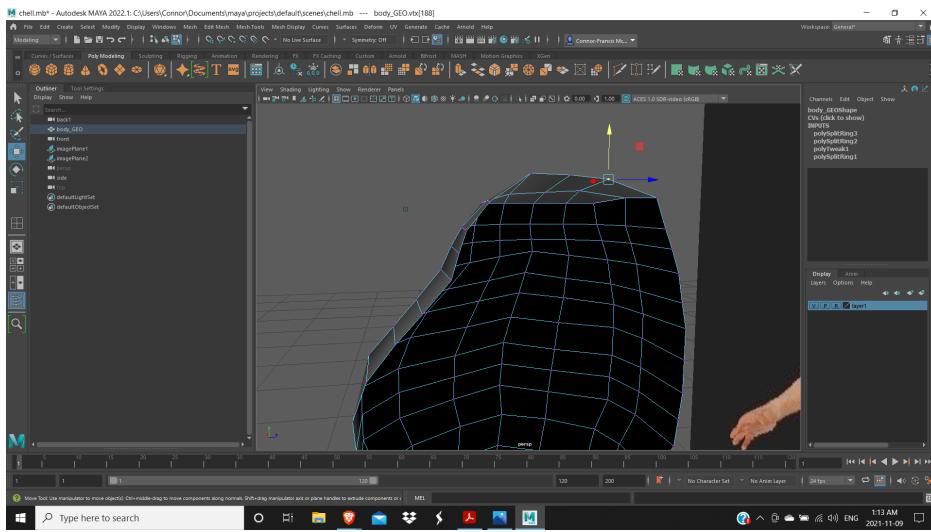
Then I moved the edge loops so that the leg appeared more rounded, I also needed to move around some vertices in order to straighten out the topology

This was challenging because when I would move an edge or vertex, when I moved the camera around the object it looked off and I had trouble finding the right placement

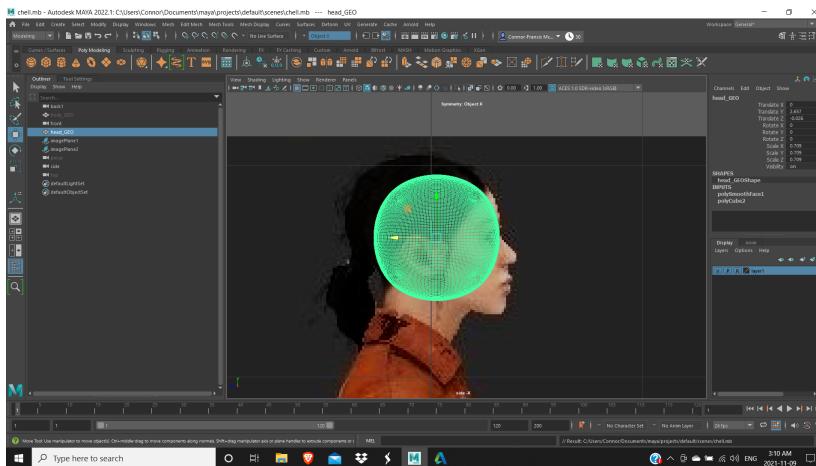
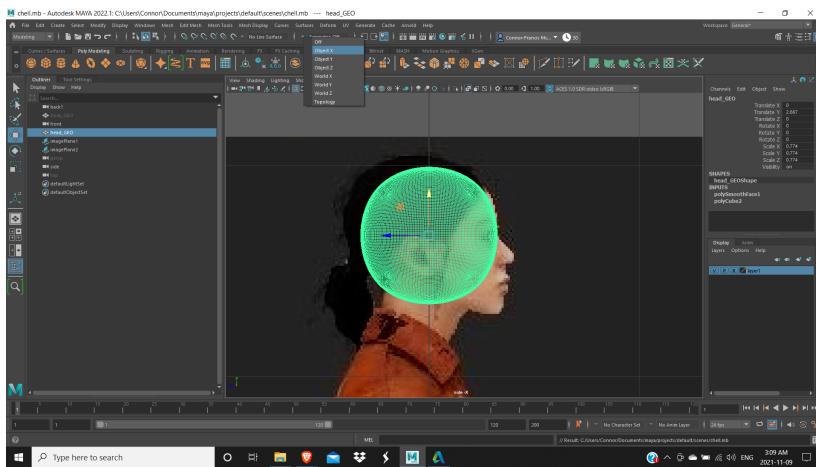


Then I retopologized to fit the curves of the body, especially around the hips and shoulders

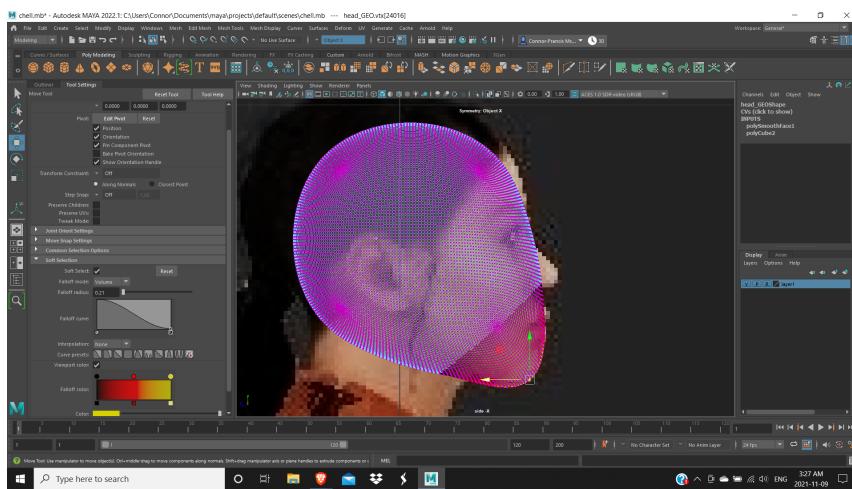




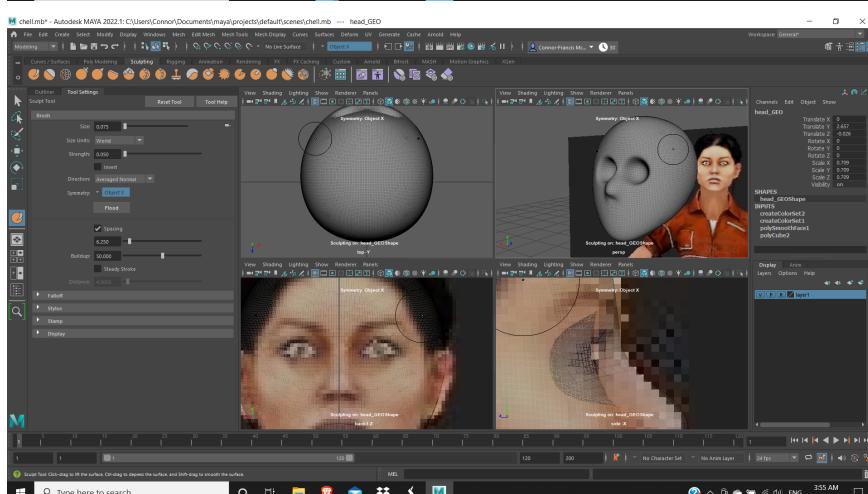
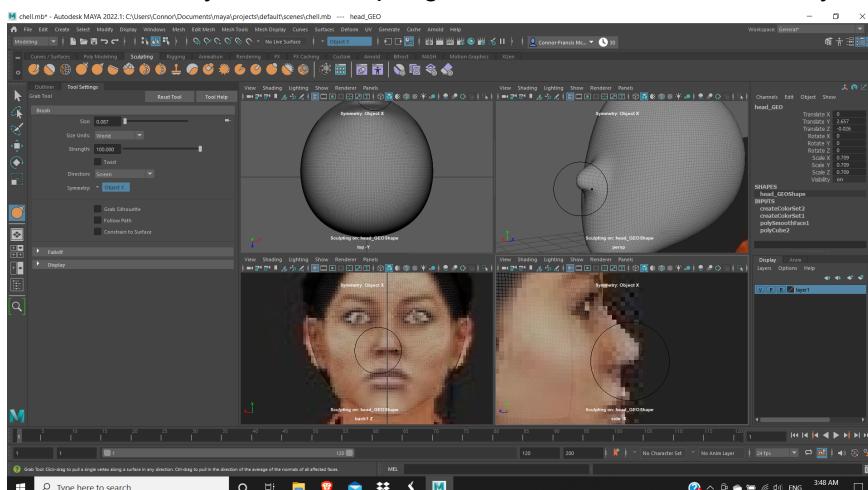
The next challenge was building the head. I decided to build the head before the arms because I wanted to give myself as much time as possible to sculpt and retopologize



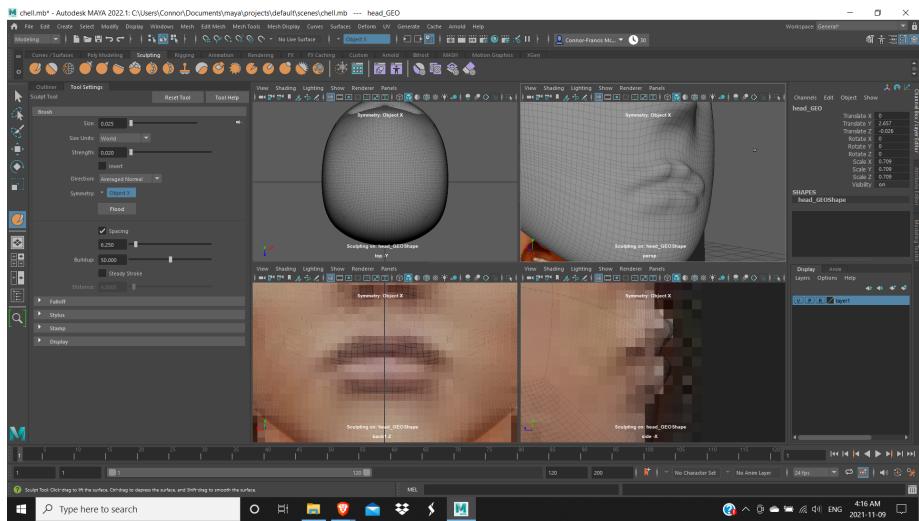
Then I used soft select to get the basic shape of the head.



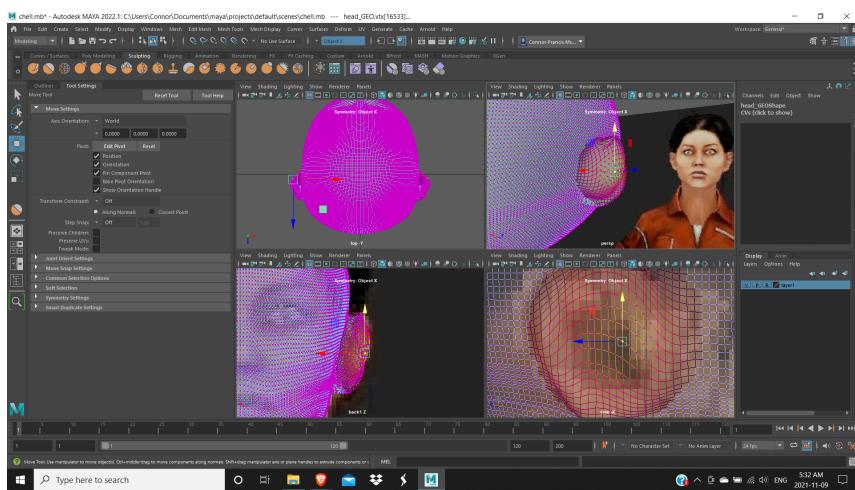
I was then ready to start sculpting, first the nose and then the eyes.



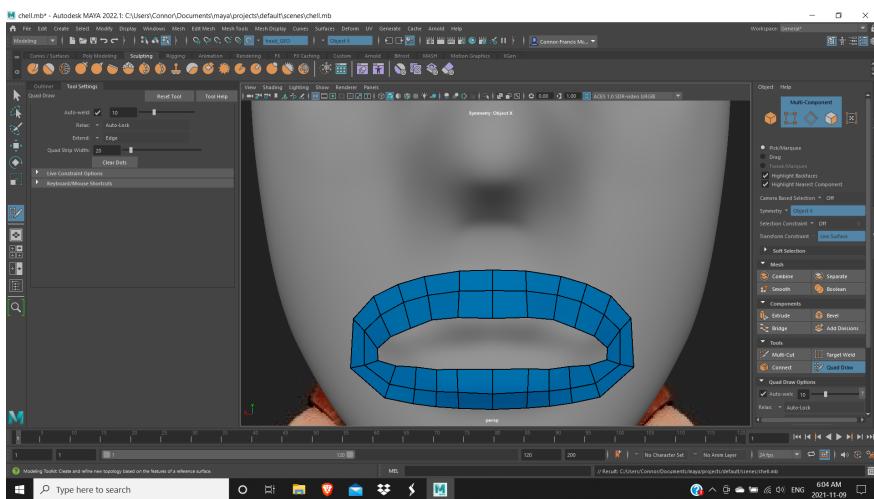
When building the mouth, I first inserted edge loops around the lip area



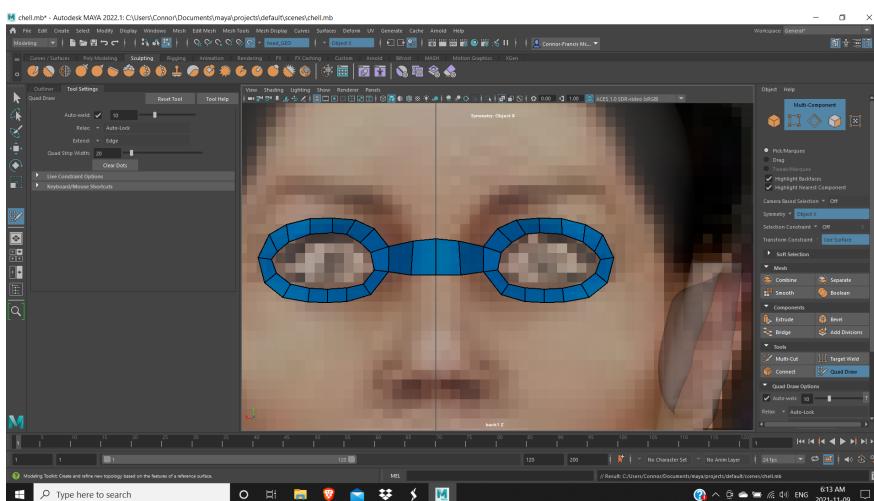
To build the ears I carved out the shape with the sculpt tool then use soft select to pull them out



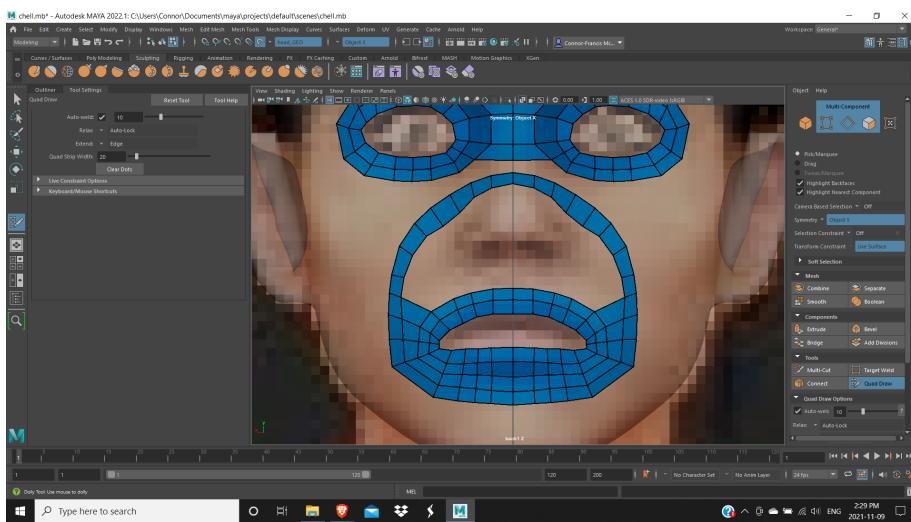
Then came retopologizing, I started with the mouth



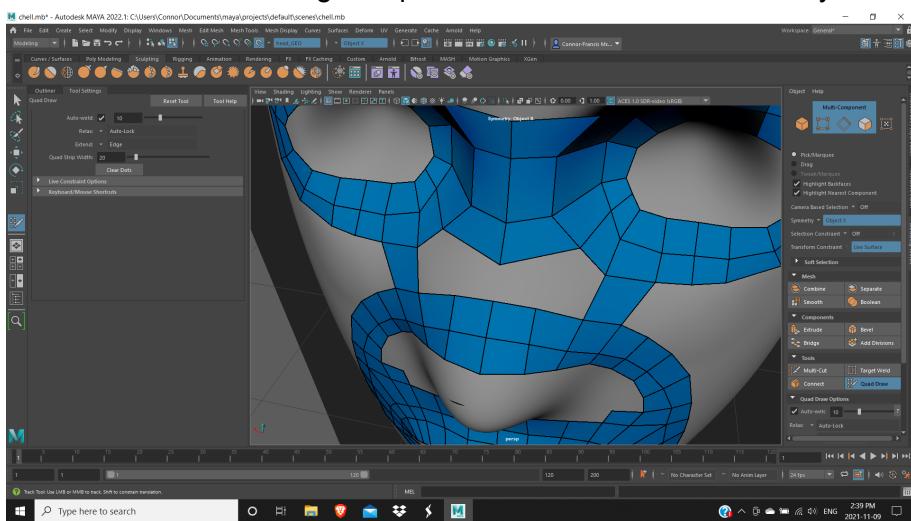
Then the eyes

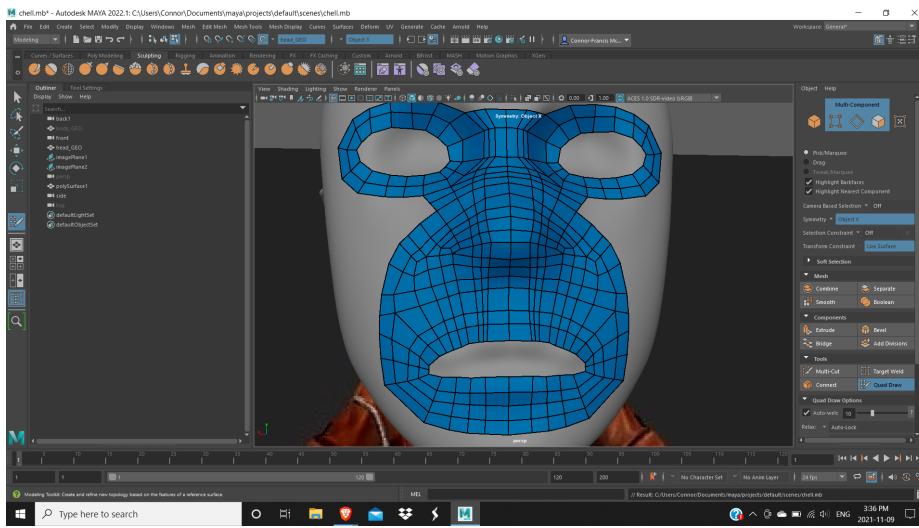


The the bridge of the nose



Then I started connecting the quads on the nose, mouth, and eyes

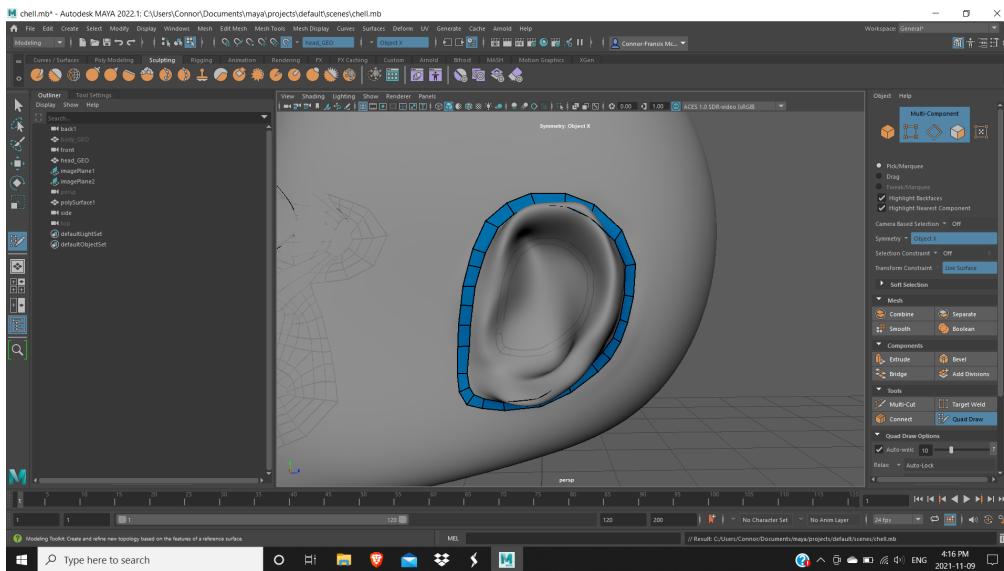




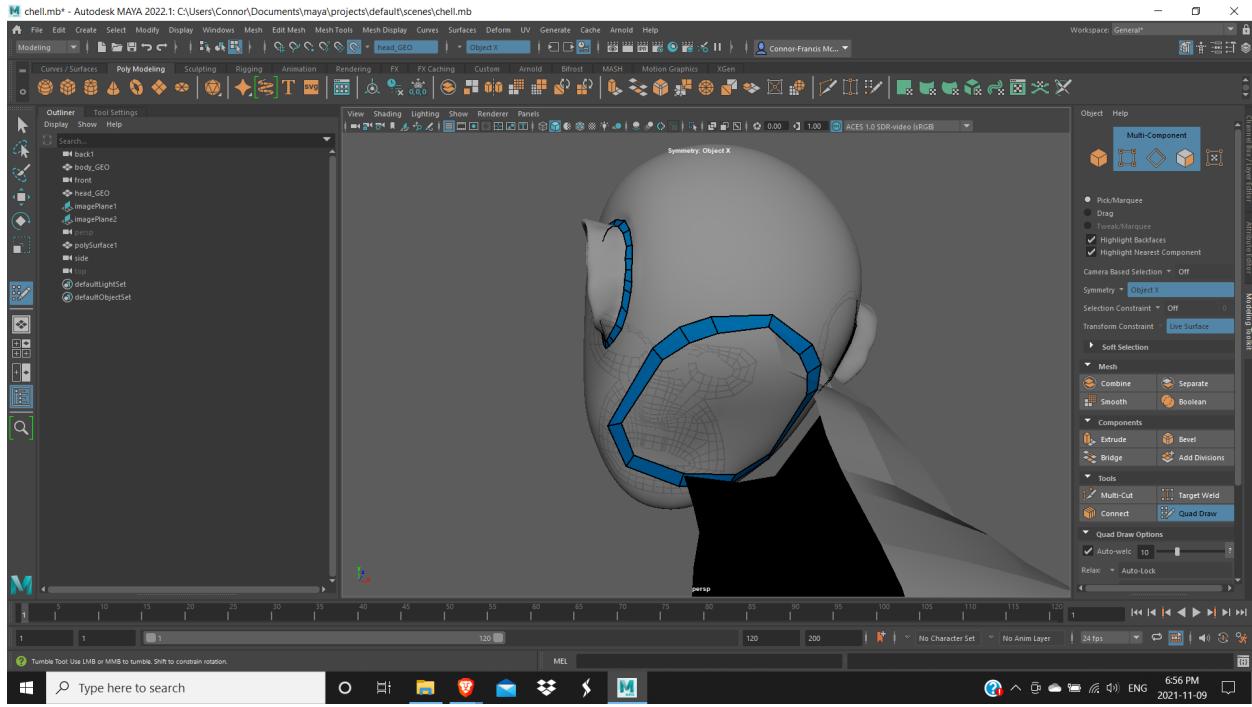
When it came to the nose I found it difficult finding out where to place the edge loops and the vertices so that they all connected to form quads

Throughout this process I was making sure the retopologized lines were as straight as possible in the front view

Then I started working around the ear by building the outside shape



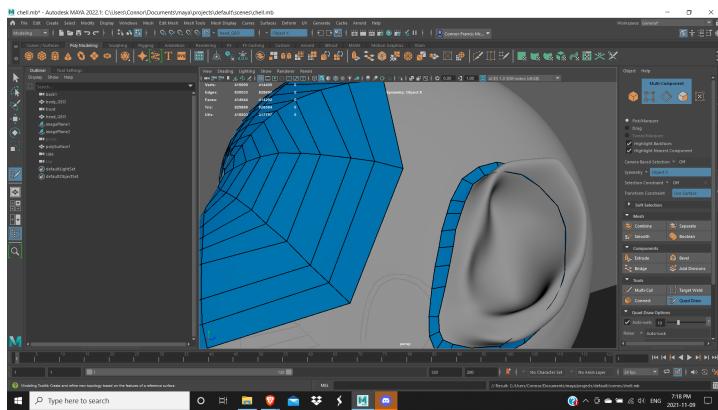
I retopologized the bottom of the head, where the neck will connect, to have the same amount of sides as the neck itself

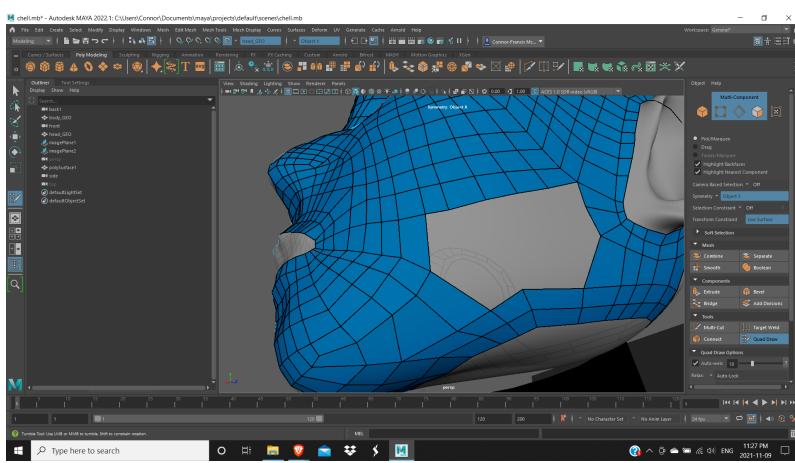
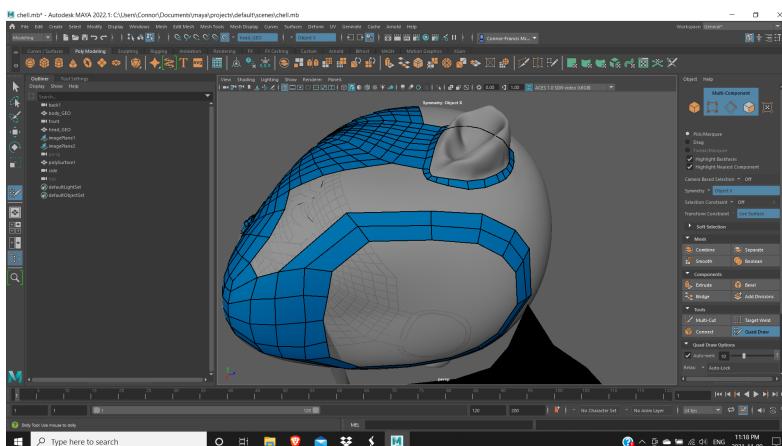
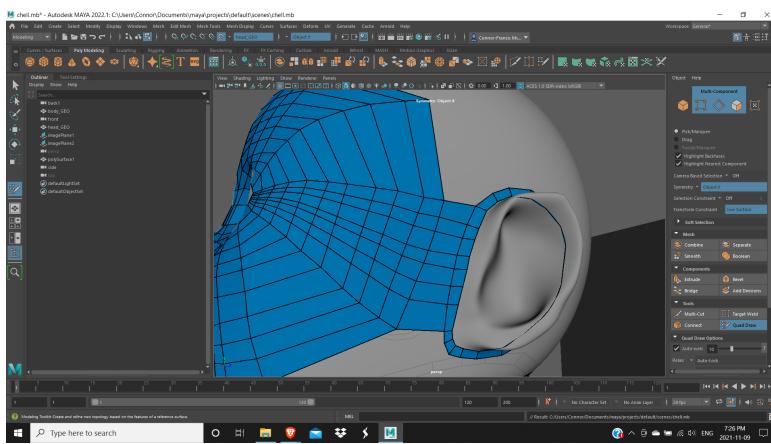


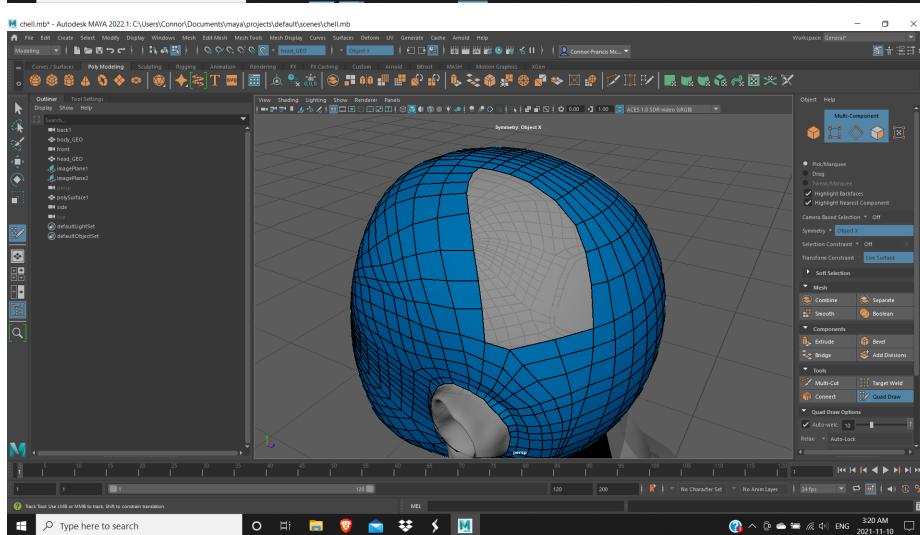
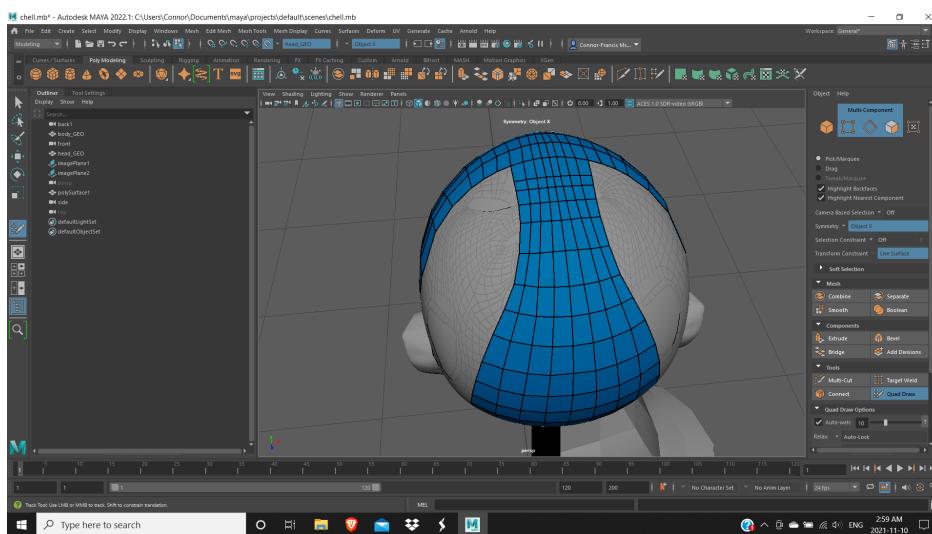
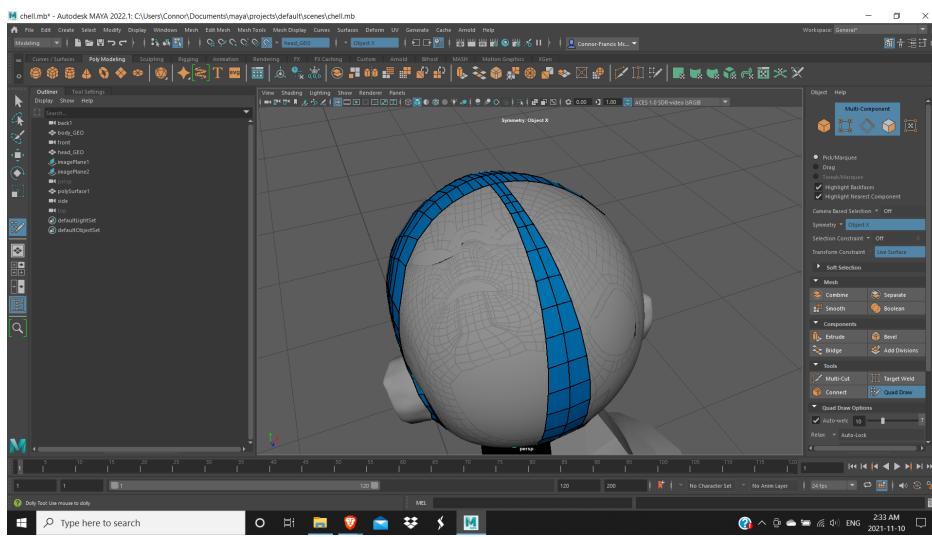
Afterwards I continued to work outwards on the model from the geometry we already had completed

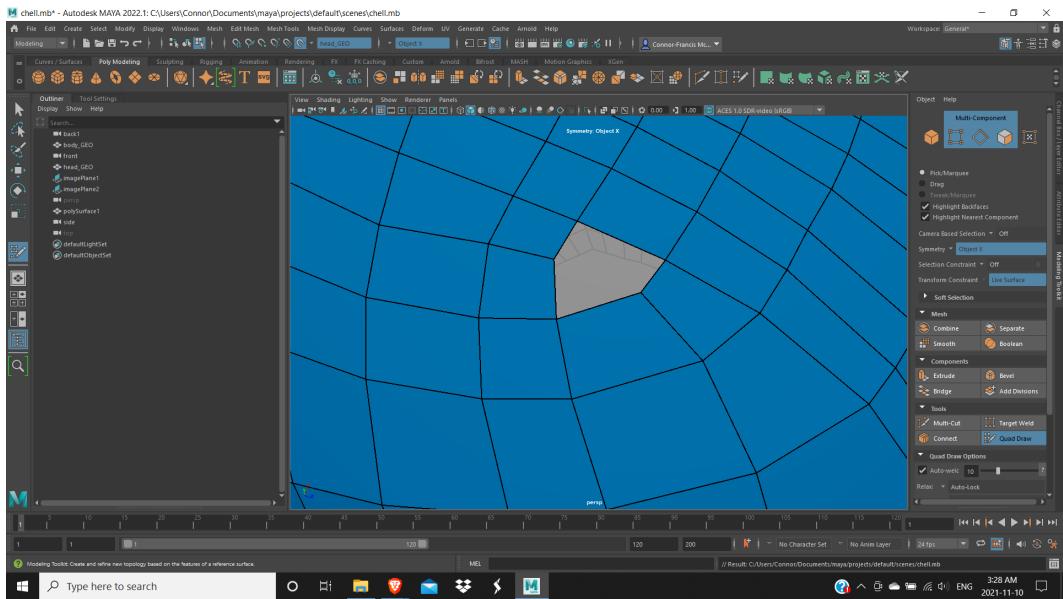
Once I got close enough to the ear I connected them

I needed to add several edge loops in order to connect the eyes and ears

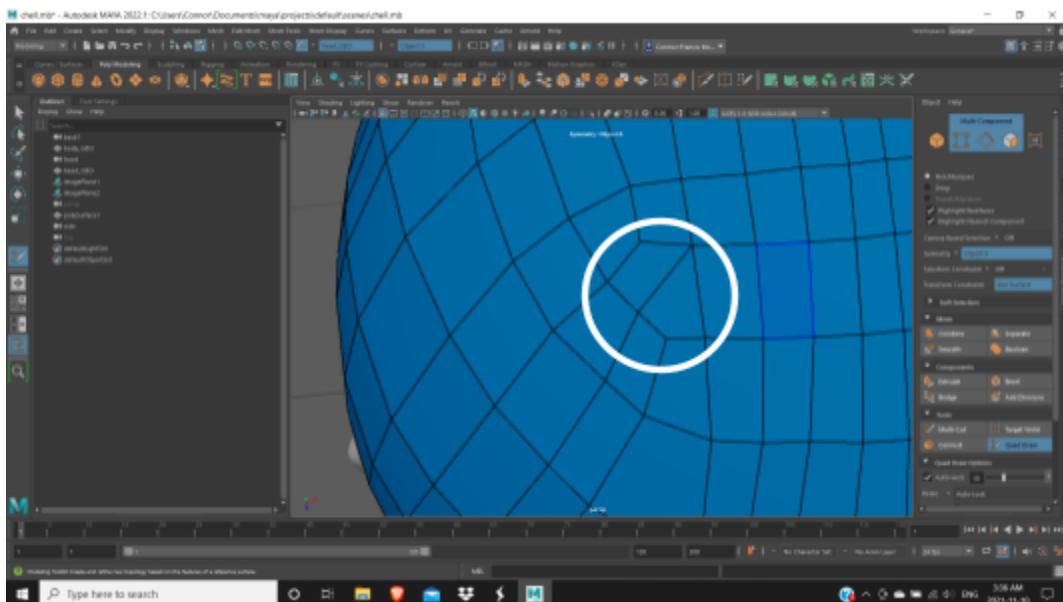






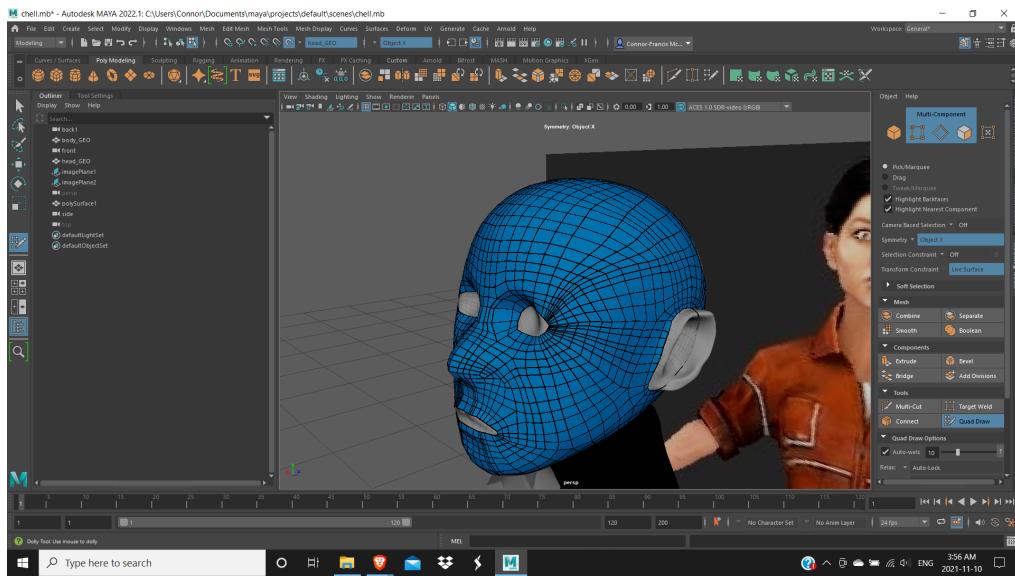


When I got to this last section I had trouble filling it in, as no matter what I tried, I ended up with a tri

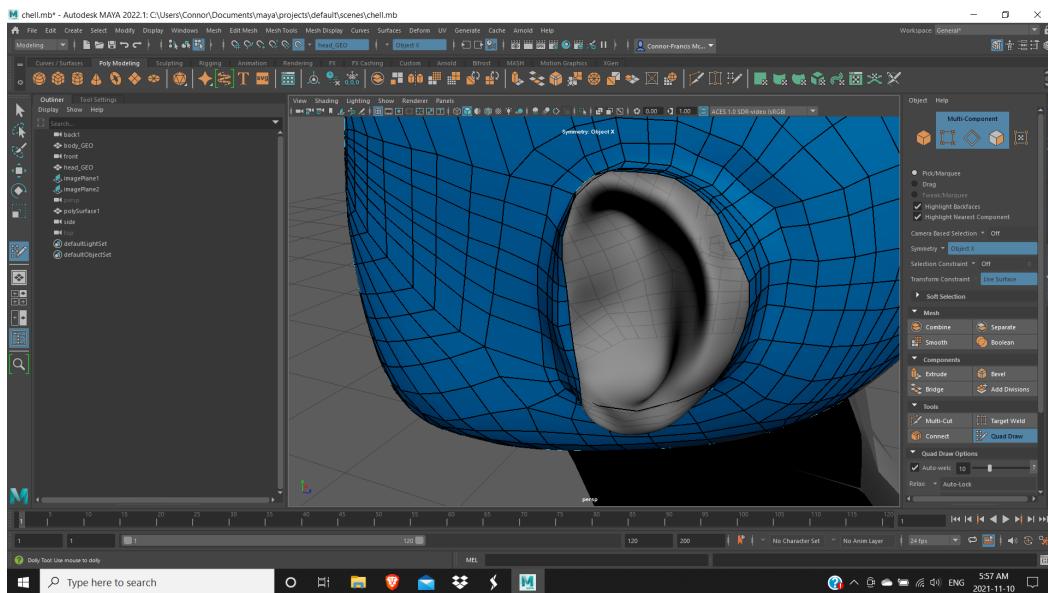


I fixed this by adding in another edge loop and moving the other vertices around until I got 2 quads

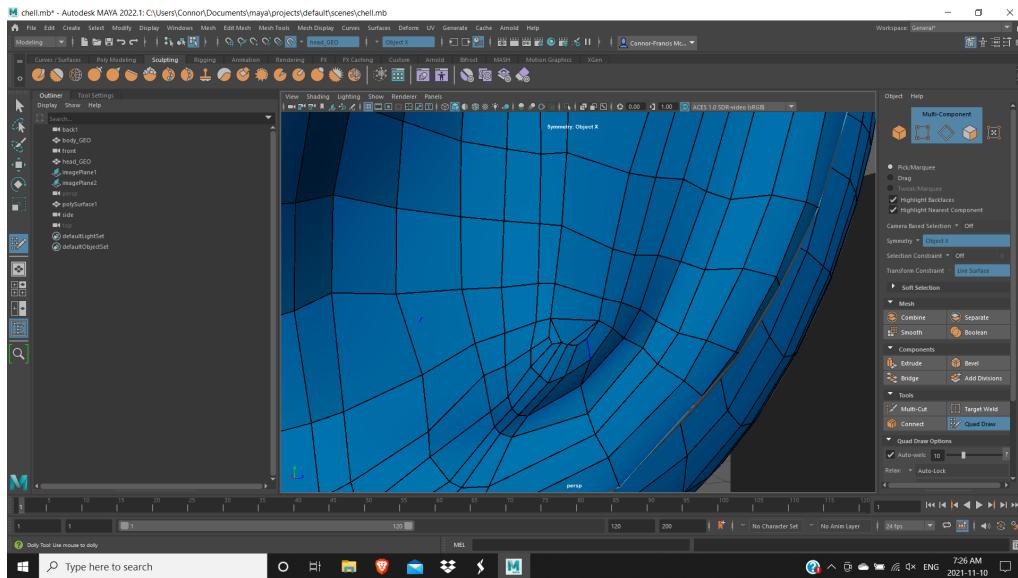
Once I completely covered the head in quads, I went back and adjusted the edges and vertices so that the topology was better. As well as adding in edge loops where the quads were too large



I needed to redo the ears so I used the grab tool to change the mesh and then the relax tool to smooth it back out

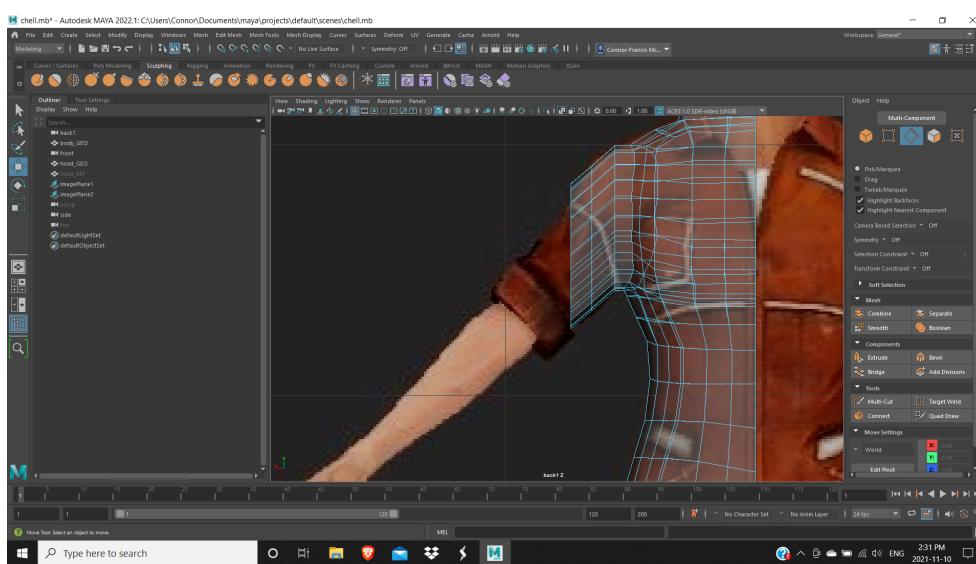


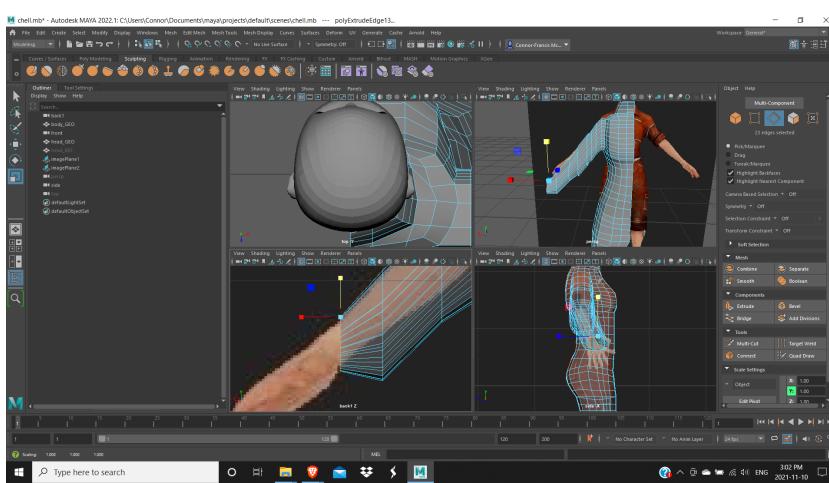
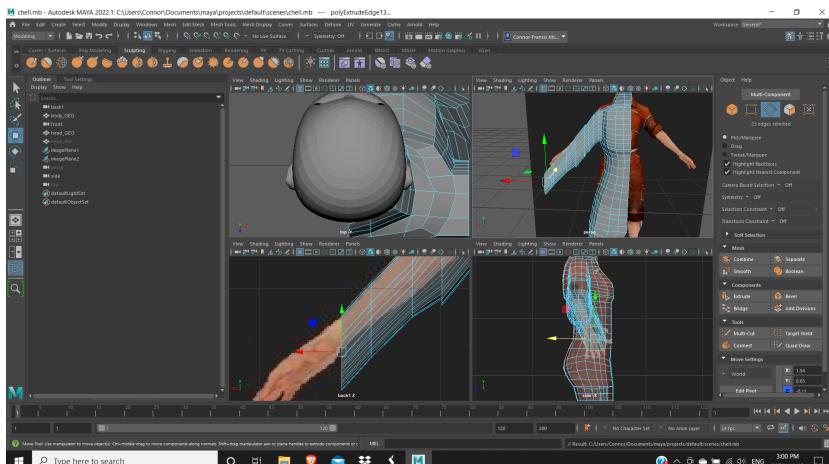
When retopologizing the ears, the edges in the corners of the ear were really tightly packed together, making it extremely difficult to place new quads

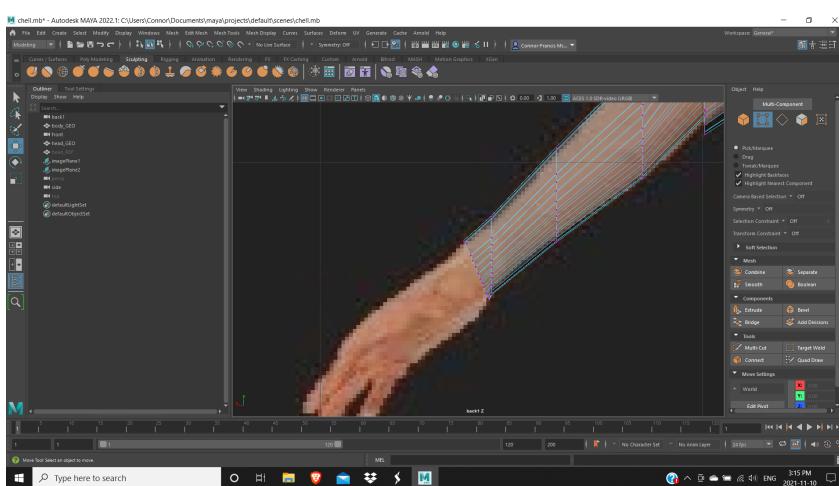
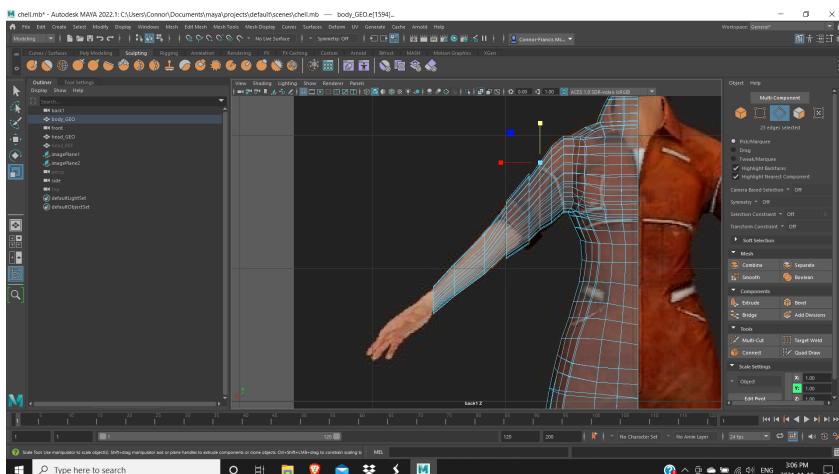


After finishing the mouth and the head I went back to work on the arms and feet.

Unfortunately due to the perspective and pose I misjudged the size of the shoulder hole, it needed to be much larger. So I had to undo a bunch of progress and go back.

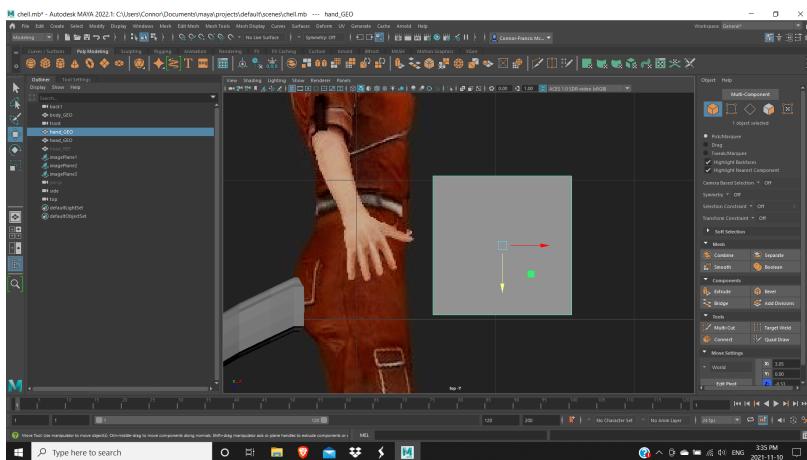


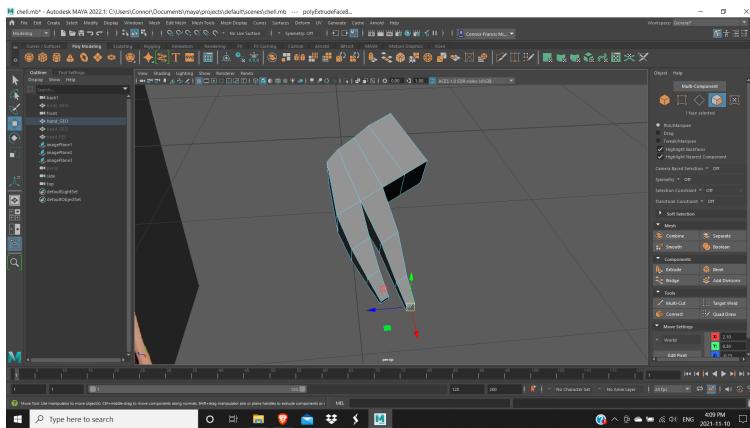




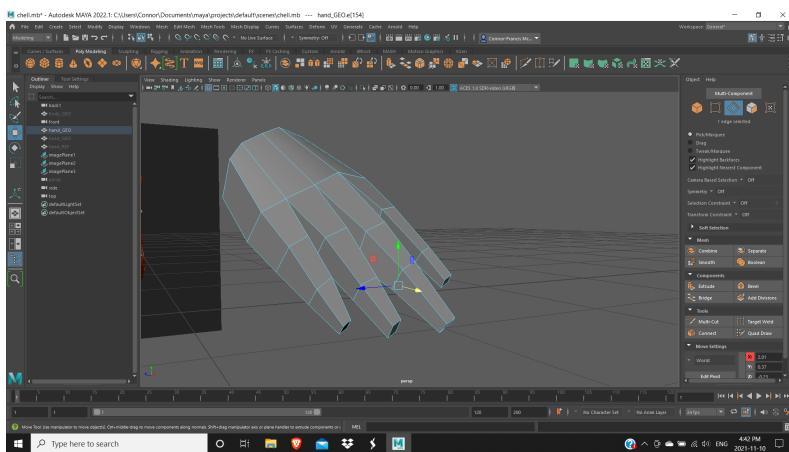
After I created the arm I went back and rounded out parts of the body that still looked boxy

I didn't have a top view of the model, so I was unsure how to model the hand at first. I then realized I could take the side view and place it in the top window, which gave me a bird's eye view of the hand





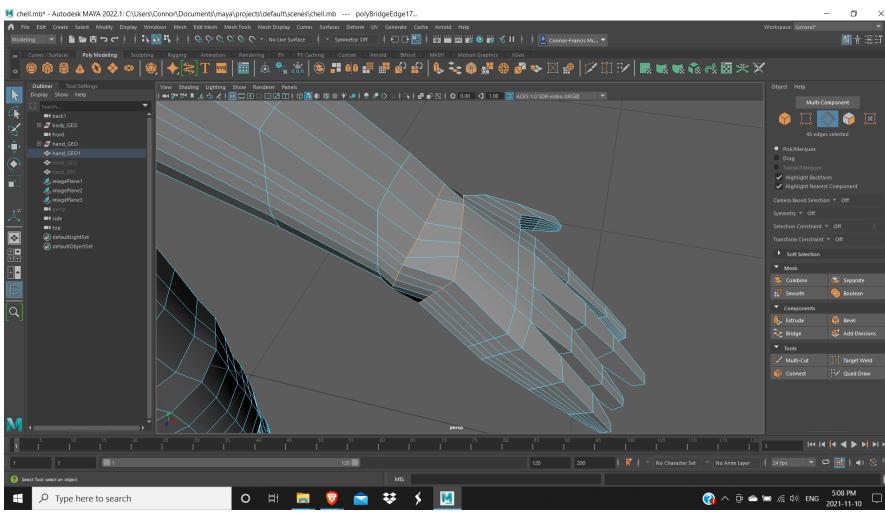
After the basic shape was built, I tapered the edges in order to make the hand feel more rounded



I needed to insert more edge loops into the hand so that I could bridge it to the wrist

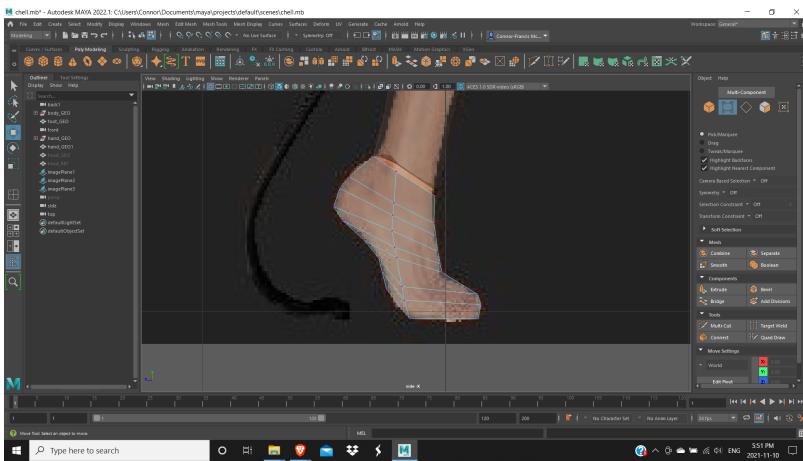
With these new edge loops, I was then able to round out the fingers more

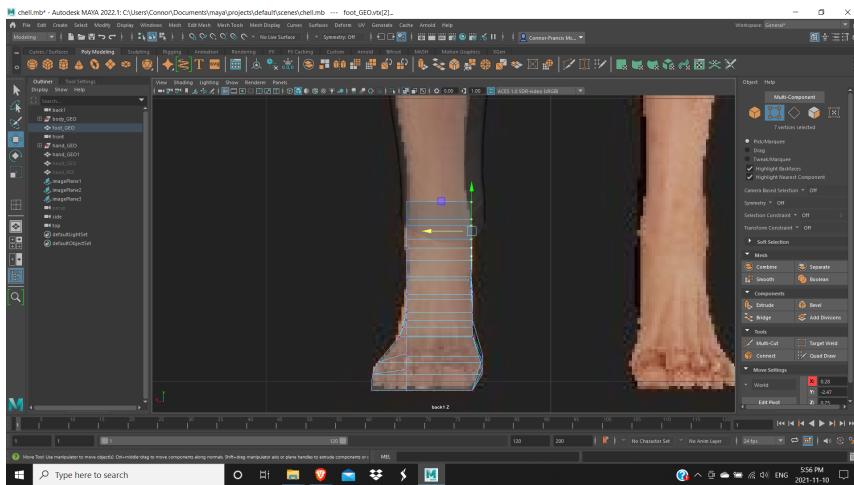
Then I combined them and bridged their edges together



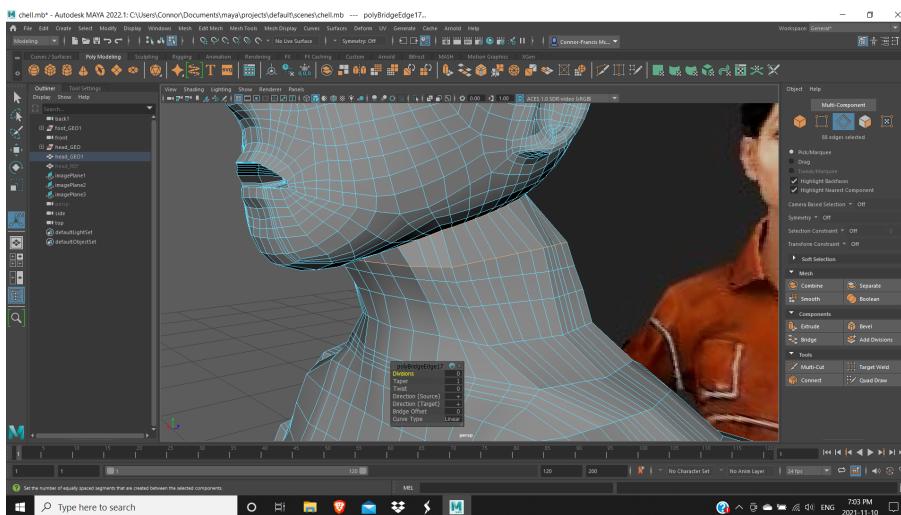
Then I manually fixed the edges and vertices

Then I worked on the foot



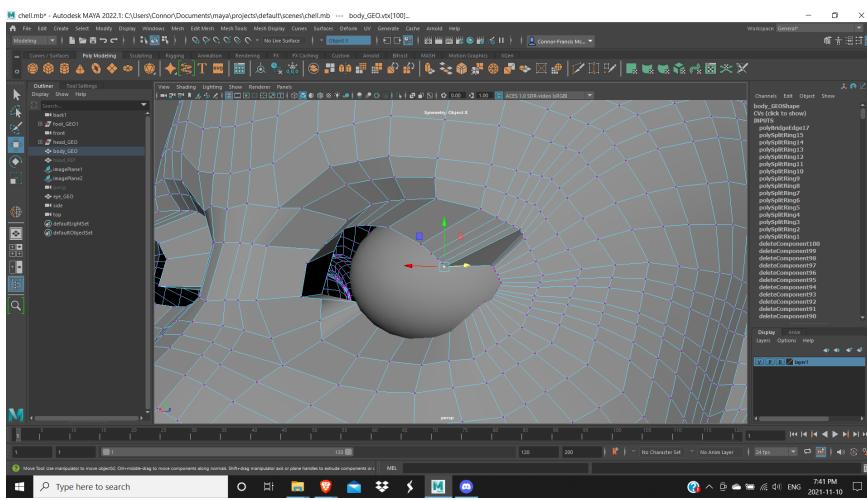
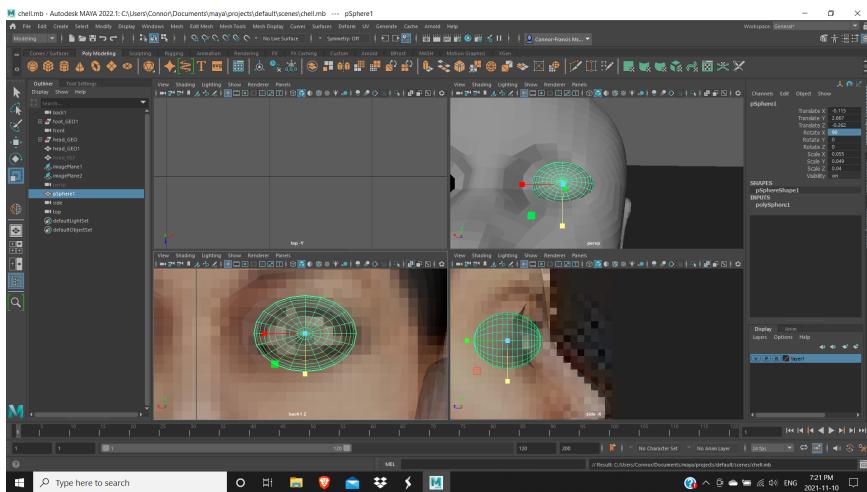
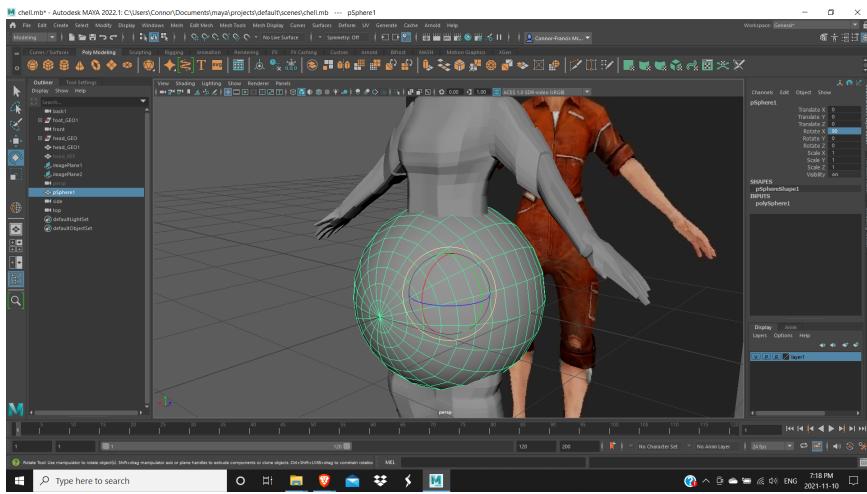


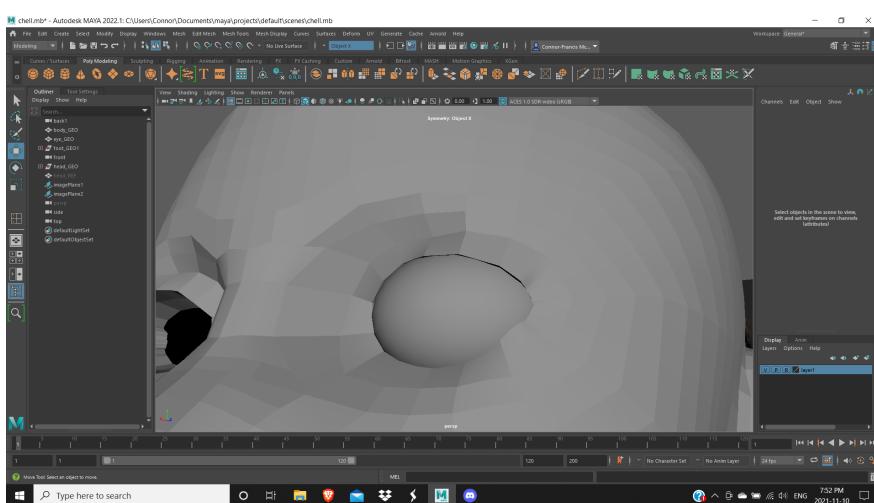
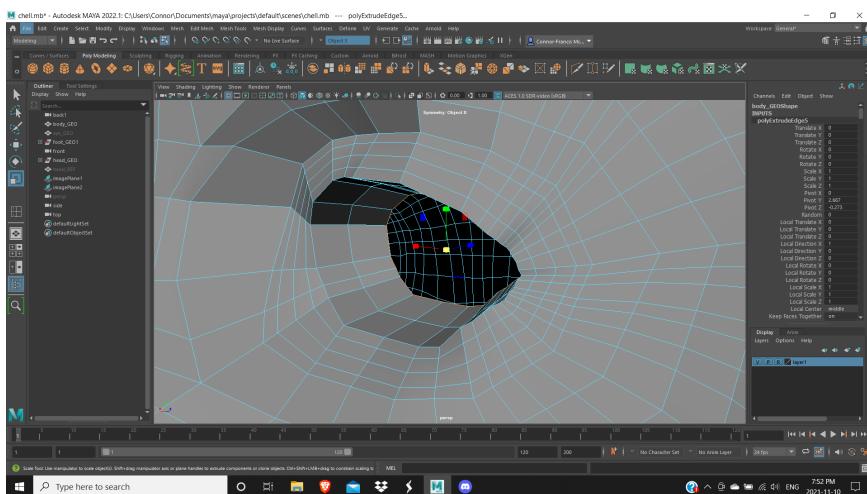
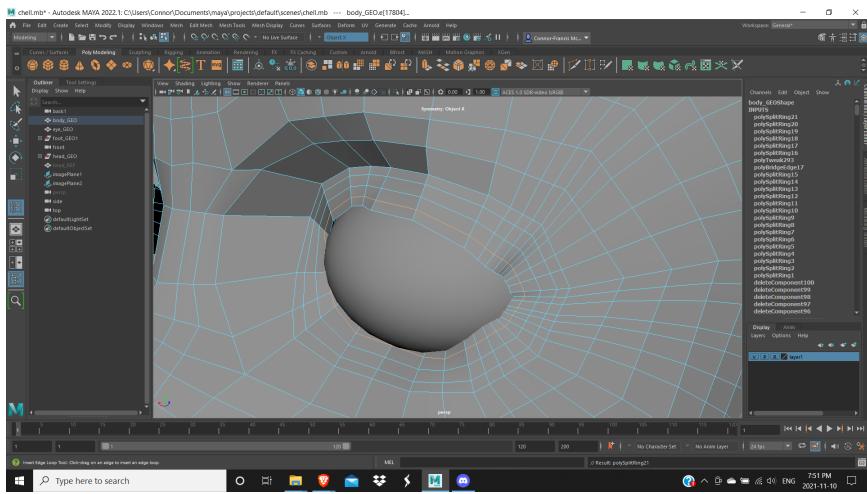
When I bridged the ankle and foot it caused a lot of the edges to be twisted, so it took a while to adjust them. It was challenging because when I would straighten out an edge it would change the shape of the entire leg, usually making one side too concave. This was especially frustrating as I would often not see the consequences of my actions until I rotated it in perspective view.



After that I went over the body with the smooth tool on low strength just to help the edges even out

Then it came time to make the eyes





Due to extruding inwards and shrinking the eye hole, the gaps in the eyelid were filled

Then I made both eyes separate by going to mesh → separate

After that was done I made sure the history was deleted for every object

I saw using the cleanup tool that I had some ngons, but I couldn't find them, so I learned that I could use the script editor to automatically select the ngon for me, I saw that it was between the fingers

In order to create the boots that she has, I simply extruded from the legs many times, rescaling the shapes each time

