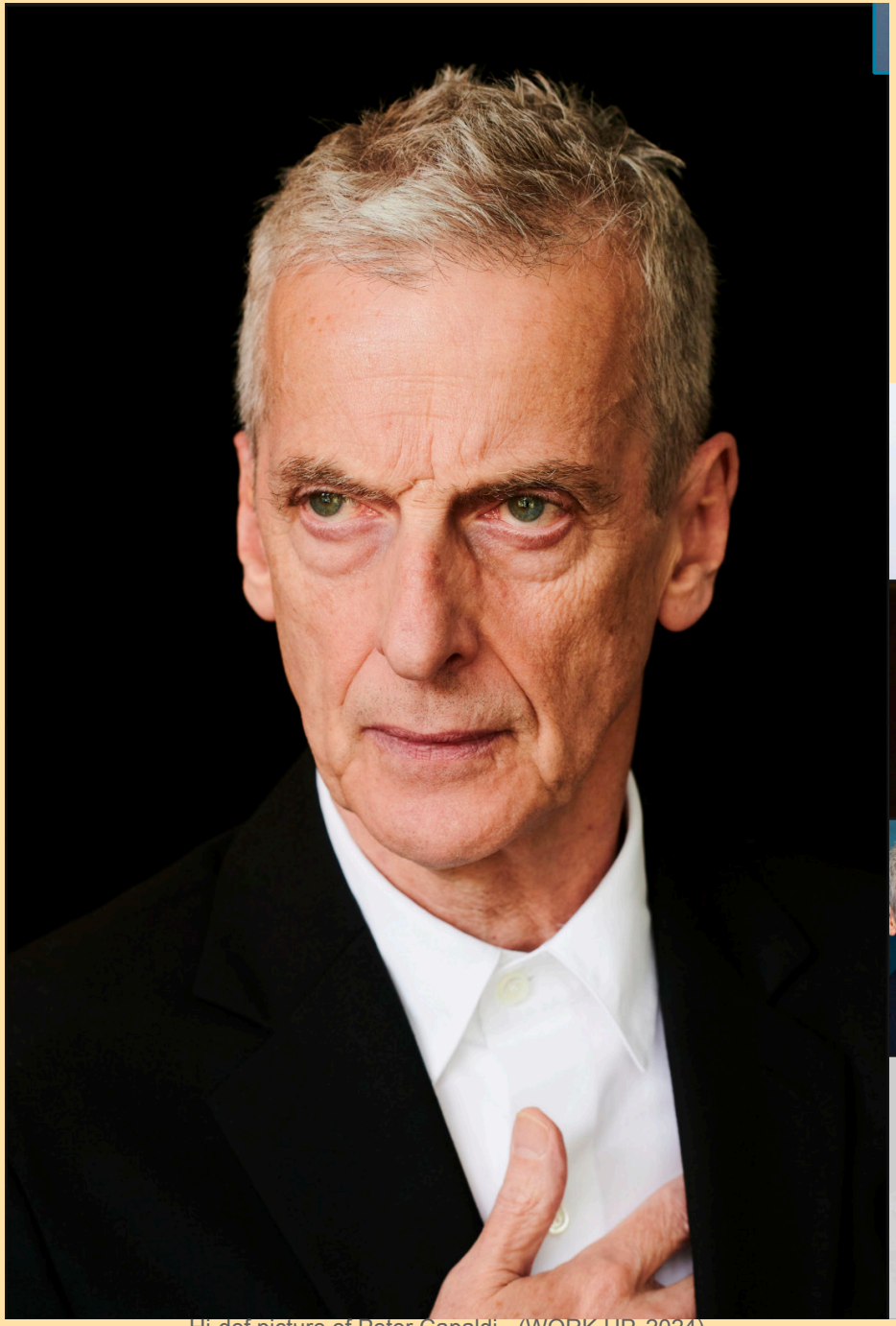
DIGITAL MEDIA PUBLISHING - Inspiration



When choosing my character I wanted to challenge myself with an older celebrity that I was familiar with. As I was currently watching Peter Capaldi's seasons of Dr Who when I chose this person, I felt it was a great start as I was familiarising myself with his face before sculpting the character. I feel this was important as I have only done drawings of people in the past, never anything 3D.

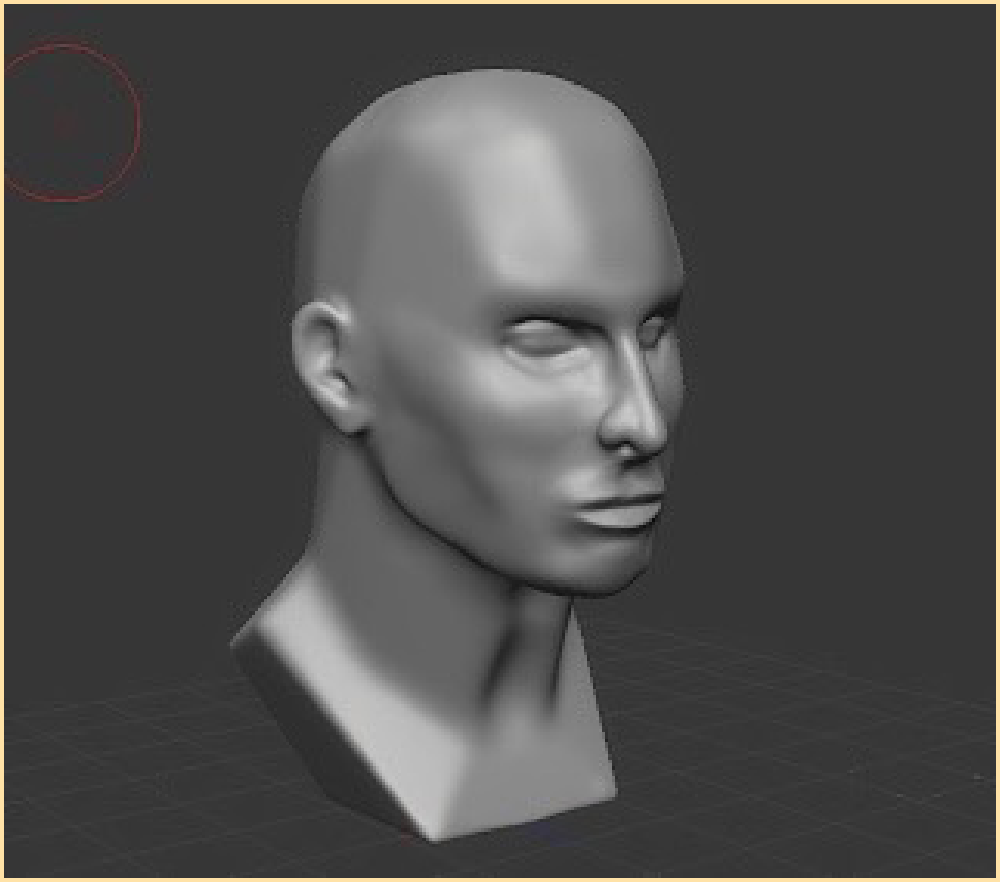
Peter Capaldi has an interesting face shape where he has a long and narrow face with strong cheek bones. Gravity has had an effect on his face over the years and it shows in his cheeks and mouth portion of his face. I started by collecting images of Capaldi and put them into a Pureref file, I also arranged them by position of his head so I could easily find an angle of his face if I needed it.

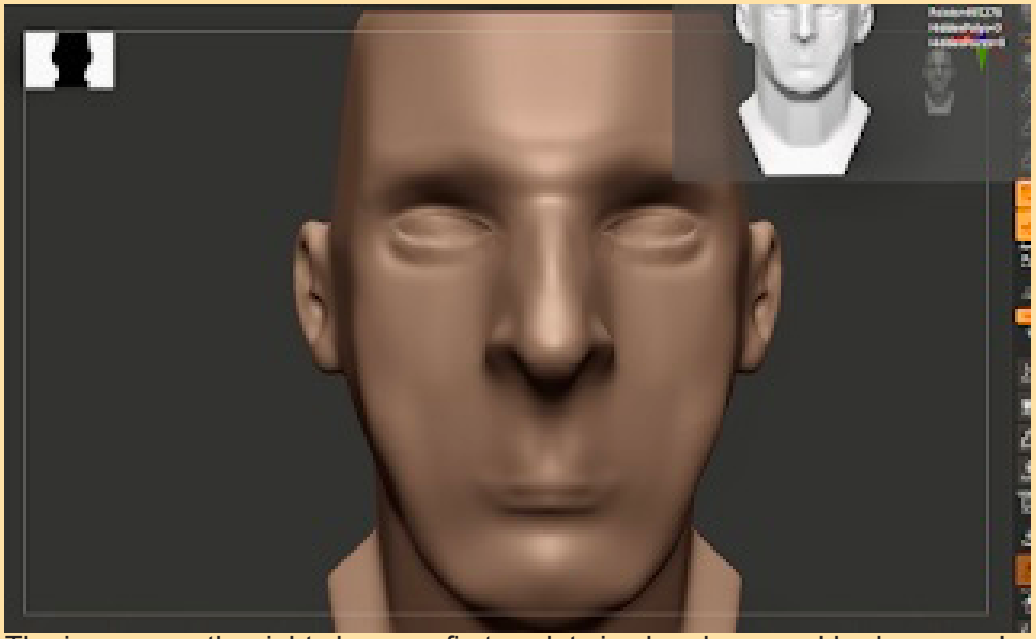
Hi-def picture of Peter Capaldi - (WORK UP, 2024)

Pureref screenshot of multiple pictures of Capaldi collected from various sources.

DIGITAL MEDIA PUBLISHING - Inital Practice

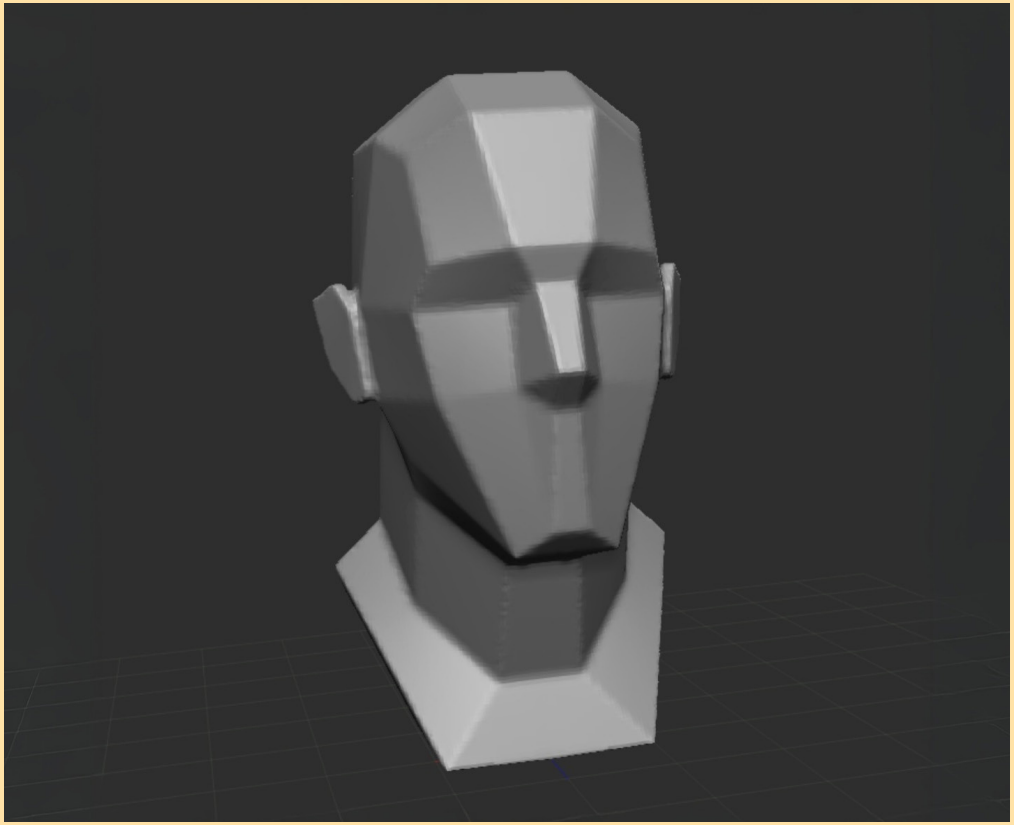
As access to Zbrush was limited at the start of this project it made it difficult to get started with the software. But fortunately the module leader was equipped with an insightful lesson using plasticine. This was particularly helpful as we tried to create faces without being able to seperate the plasticine from the rest of the model. This simulated the experience we would have had with Zbrush but in a fun different way. The images on the left show the difference between a 10 second, 30 second, and 5 minute sculpt of a face. It was not anyone in particular as it was a small piece of plasticine and we only had our hands for tools.





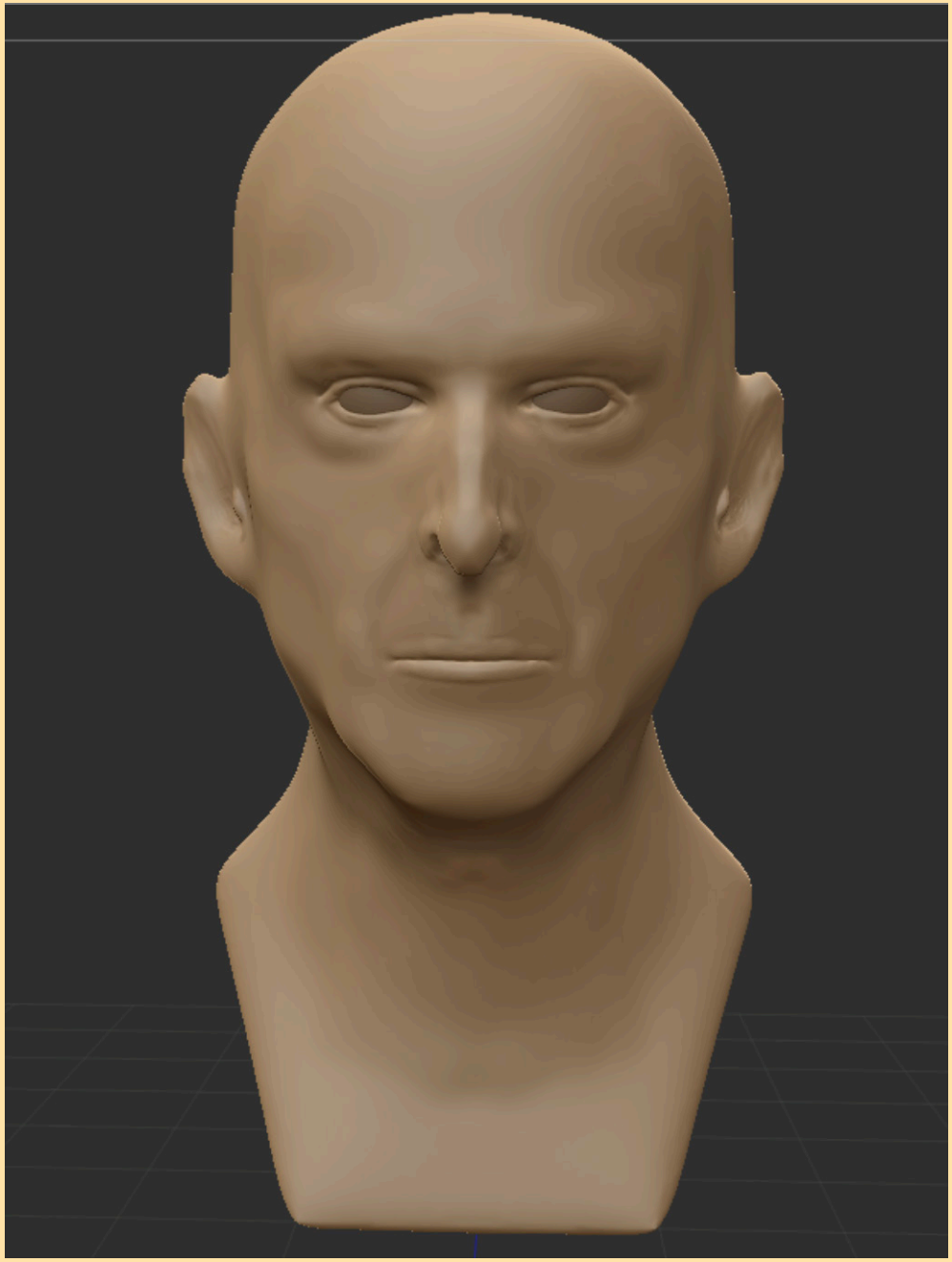
The images on the right show my first sculpts in zbrush - once I had access. I practiced with the preformed head and tried to create realistic features on the model. As this was my first time in the software I had a large learning curve moving into this as I have not had a similar tool before, this software was very freeing and was much easier to get the hang of. Through out the project I just used a mouse as I had practiced with, however I wish I had branched out and used the tablets, this would have added in a new skill that I unfortunately didn't take up.

DIGITAL MEDIA PUBLISHING - Primary Detail



After practicing with the plasticine and the software I started with my primary detail. I started with the base model shown above, I feel this was a good start to make sure my proportions were correct. Having the main features laid out indicated where I should start, I knew from drawing faces in high school this was something I struggled with and this acted like a guide to help keep me on track for my sculpt. If starting this project again I would look to start from a sphere as I have much greater experience with the software.

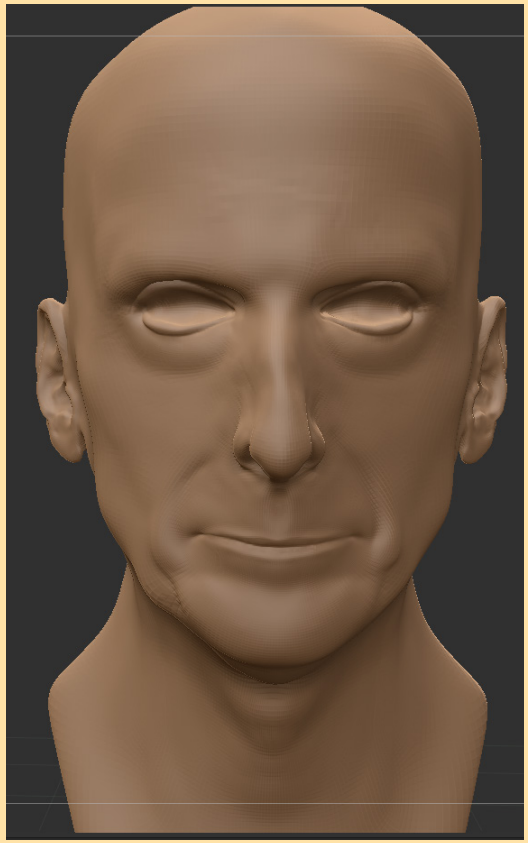
Another way I was able to get the basic layout formed was turning Zbrush transparent over an image of Capaldi face on. This helped me ensure everything was in the correct place and rough sizes of each of the features were correct. The face shown on the right shows my progress before secondary detail begun.



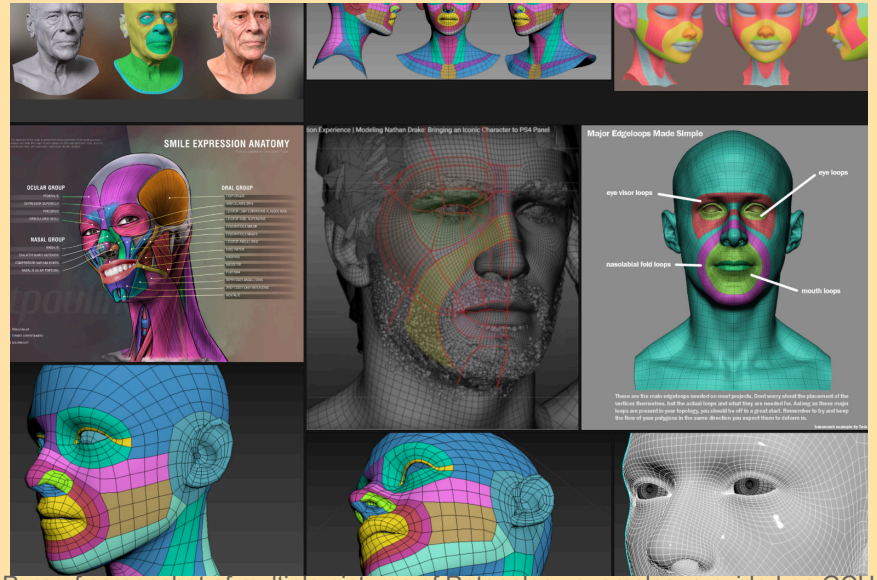
DIGITAL MEDIA PUBLISHING - Secondary Detail

Secondary detail at first I found came to me quite easily, after completing primary detail I found this is where I could really get into creating the model's likeness.

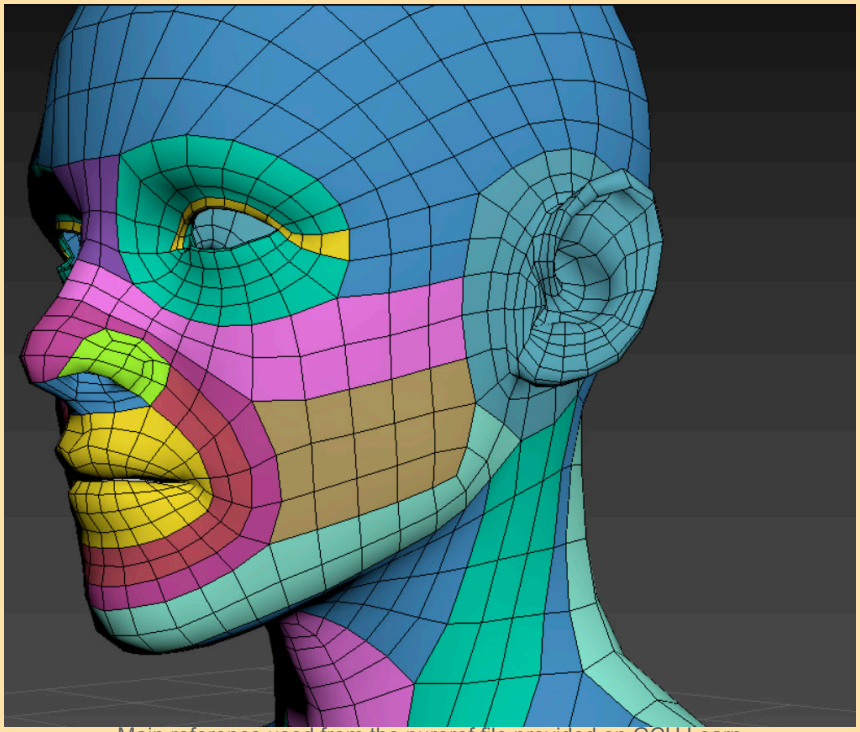
Issues:
I modelled the ears curves and got them looking as best as I could but then realised that they were still welded to the head. Trying not to alter the detail I had just completed I used the dam standard tool to carce into the back of the ear to try and seperate it from the head.
Lips were a learning curve for me, as Capaldi has smaller lips it was harder to sculpt. They were modelled and smoothed over multiple times until I tried using the dam standard tool again to carve in further where the gap was and then use it again but inverted to create a subtle peak where the outline of his lips were. I felt this gave off the exact look I was going for.
I also struggled with going in with too much detail at this stage, I kept wanting to get more and more detail in the model before retopologising, this wouldnt have made a large difference to the retopology however it was important to get this step done and projected on as shown in the pipeline in class.



DIGITAL MEDIA PUBLISHING - Retopologising

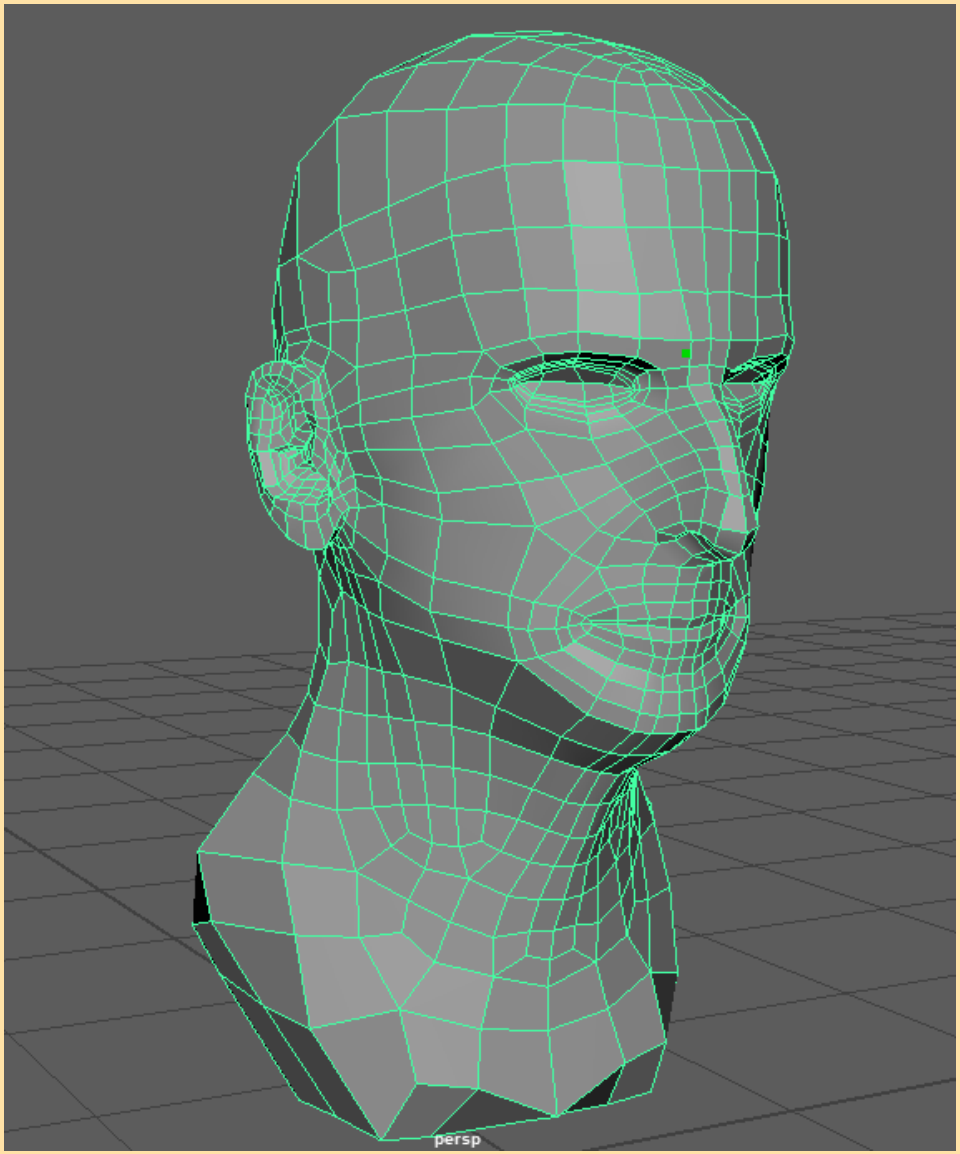


Pureref screenshot of multiple pictures of Retopology examples, provided on GCU



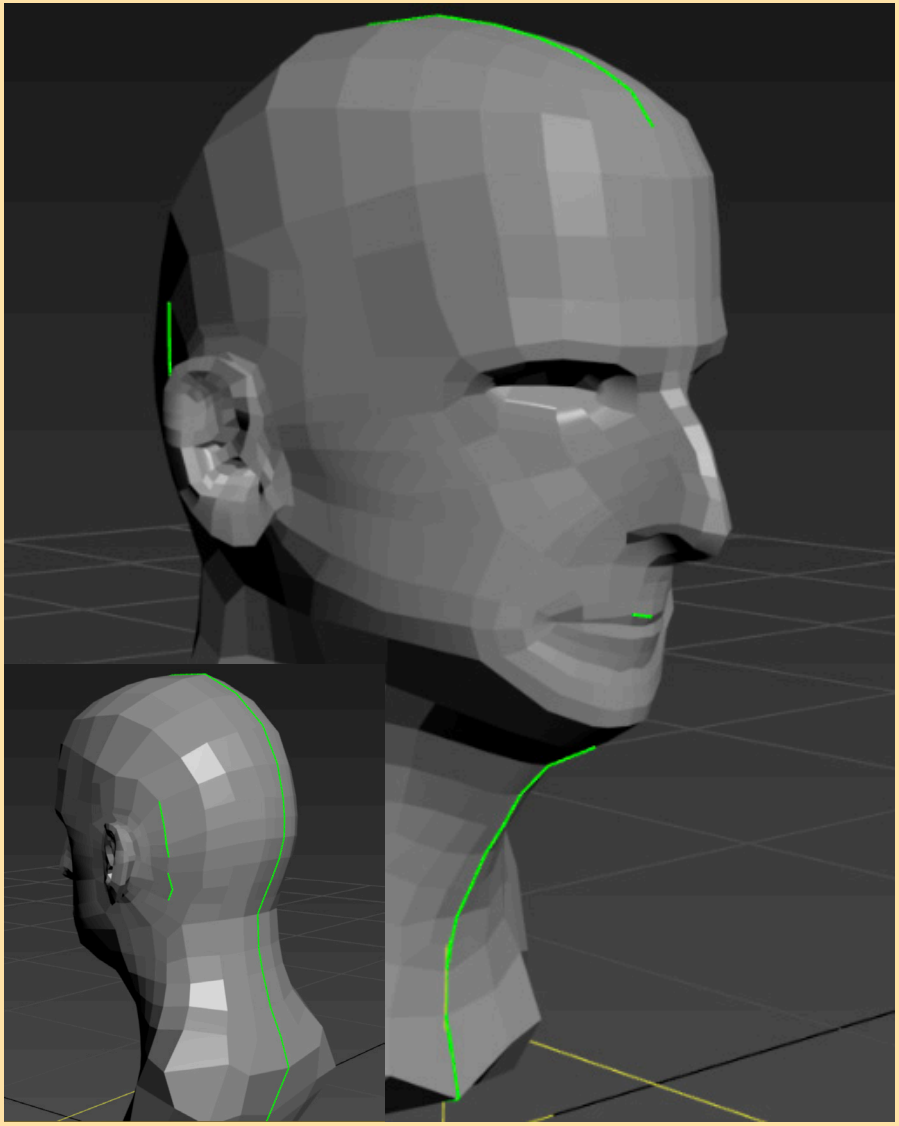
Main reference used from the pureref file provided on GCU Learn

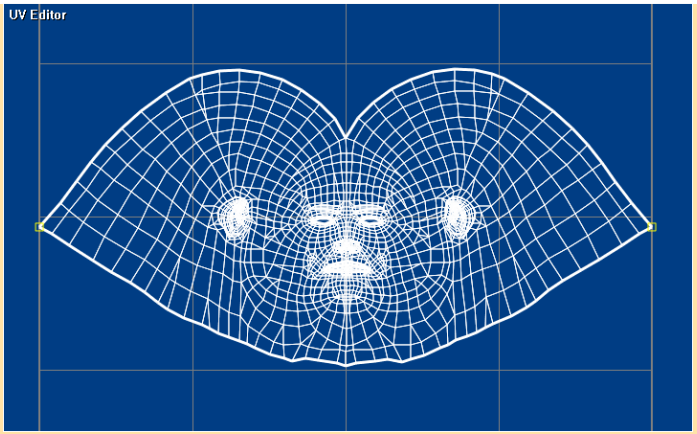
Although I have previously used Maya - not to great extent - I was introduced to a new technique I had not used in there before. I used quad draw to retopologise my model, I started by understanding how typical face shapes are done and why this is. I mainly followed the image show above on the right as it kept the model concise.



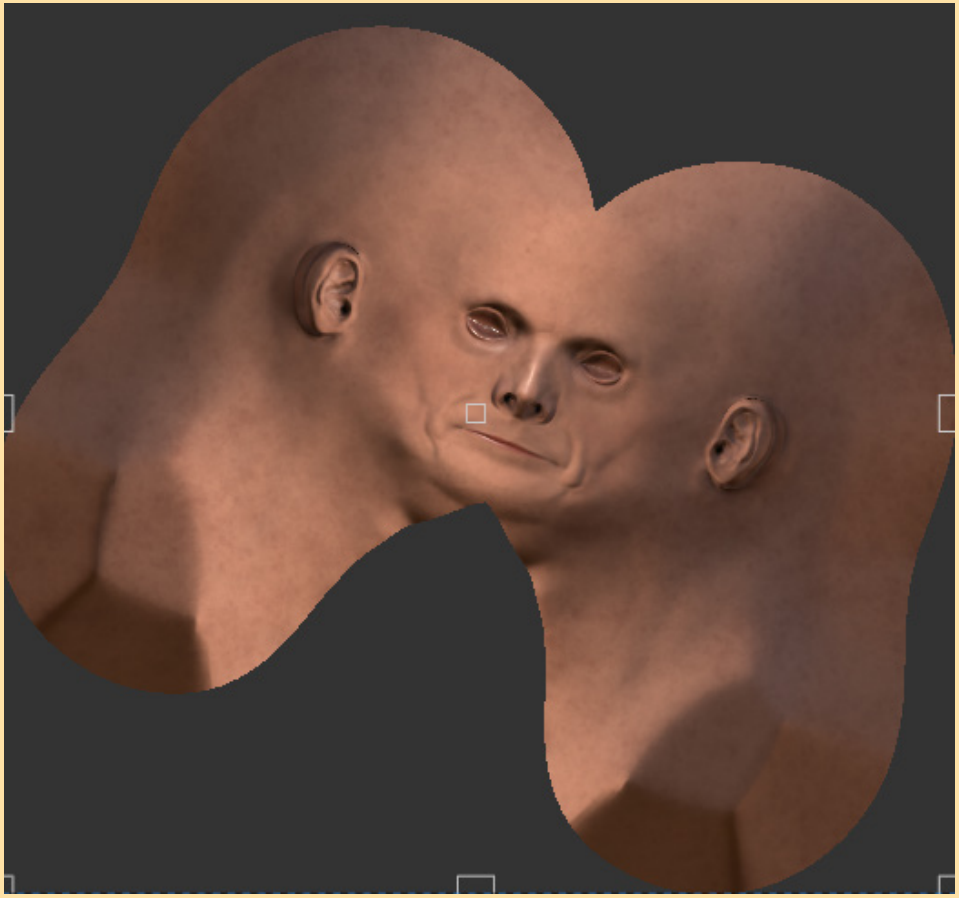
DIGITAL MEDIA PUBLISHING - Unwrapping

After retopologising the model I exported it and brought it into 3DS Max as I am more familiar with this software. Initially I found there were gaps in the model where I had not correctly connected them in Maya. However this was easity fixed and the model was fixed of these holes before unwrapping. I took some references from other unwrapped faces like shown below and replicated this for my own project.



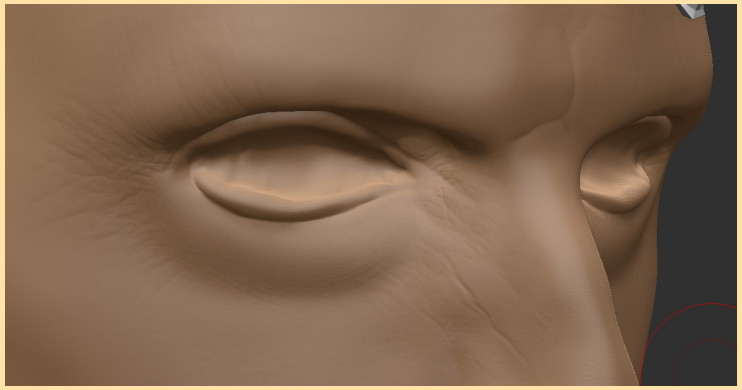


Example of unwrapped head sculpt - (Ultimate Unwrap3D, 2025)



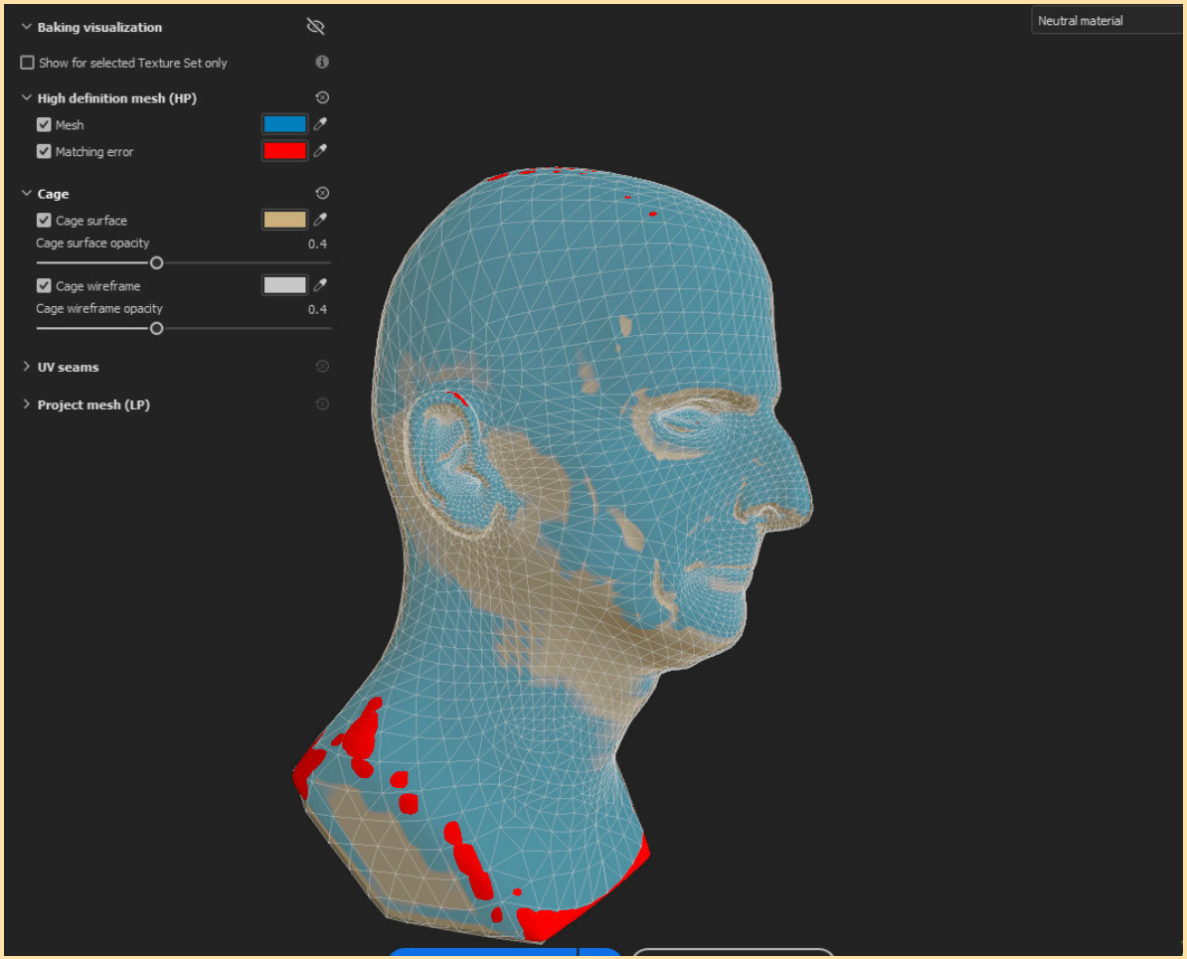
DIGITAL MEDIA PUBLISHING - Tertiary Detail

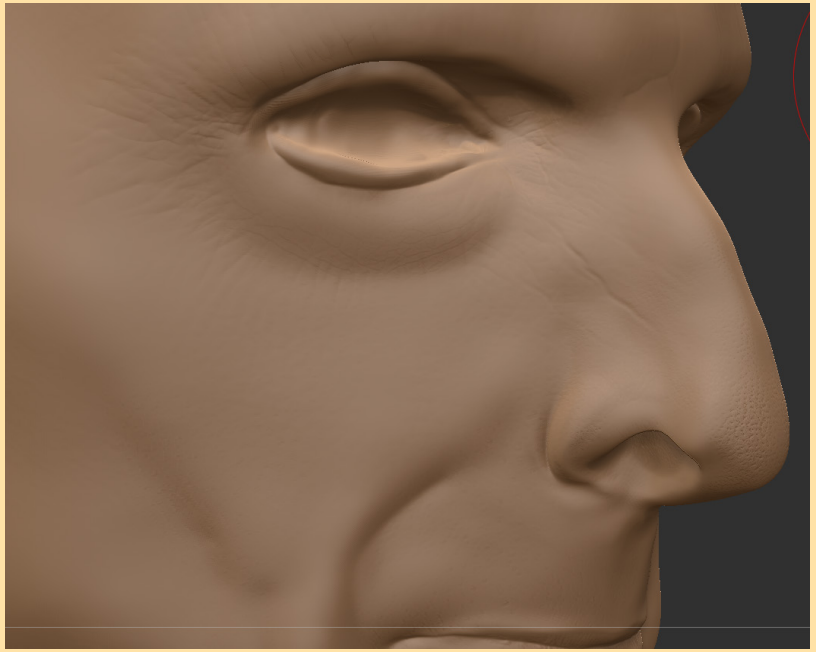
To get the tertiary details looking right, I used a mix of custom alphas and hand-sculpting to add pores, fine wrinkles, and surface texture. I kept it pretty subtle so it wouldn't overpower the main form, just enough to give the surface some life and break up the smoothness. I gathered alphas from Artstation marketplace, Assuncao (2025) provided these.



DIGITAL MEDIA PUBLISHING - Substance Painter

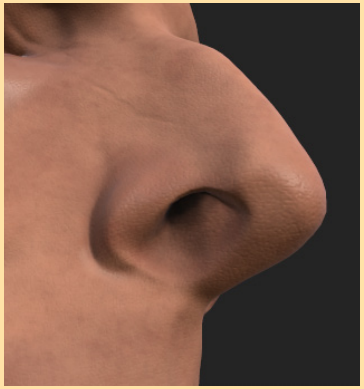
Moving the model into substance painted was difficult at first and was not projecting the tertiary detail on properly and left a large amount of it out. I found that the main issue came from the lower part of the model, there was no work carried out that far down as it acted more of a base than part of the model. the detailling stopped just after the neck, this is why I was happy in the baking process to stick to the original retopologised version where the red was sticking through as it helped get some tertiary detail back into the face.
Unfortunately not all tertiary detail would come back without having a lot of interference, if doing this workflow again I would go into deeper detail when doing my Zbrush sculpt so it can be carried forward after baking.

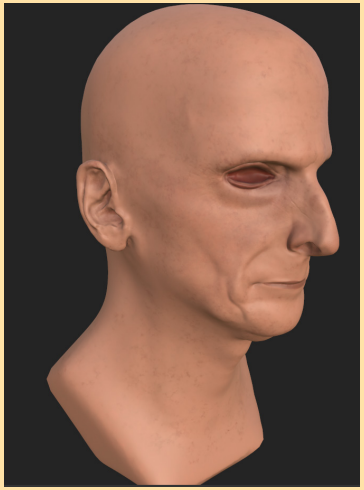


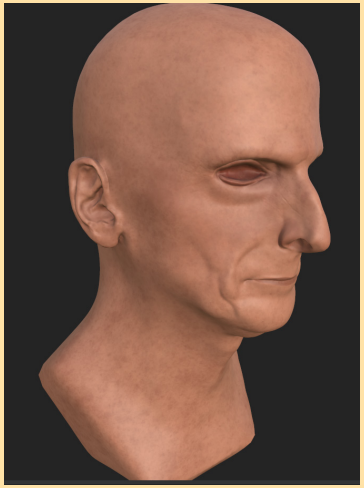


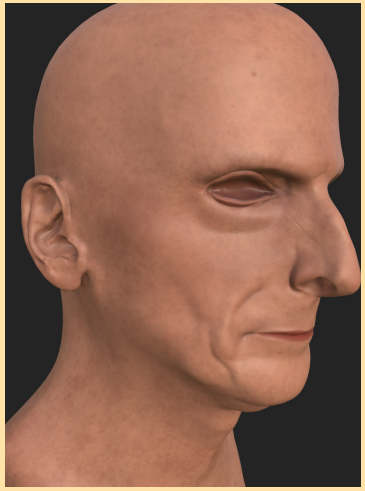
DIGITAL MEDIA PUBLISHING - Process Shadows/Skin/Lips

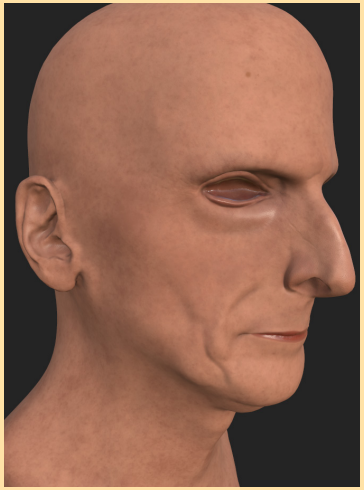
I followed a tutorial for the skin, Hill (2021) provides a detailed layering technique starting with the blood layer, then dark areas, skin, and finally imperfections on the skin. This was a good process to follow and through out the video the youtuber provided insight into the brushes and what he was doing as he progressed through the stages. I used the tutorial to follow through the different stages but often found myself taking my own spin on each of the sections as I went along.

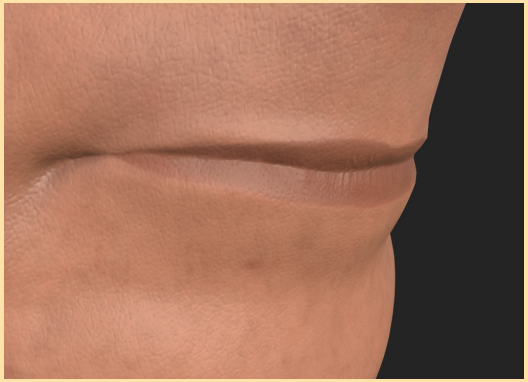


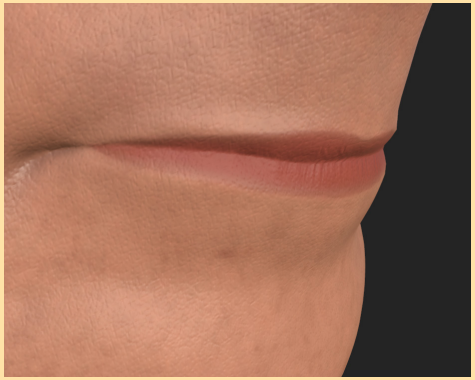


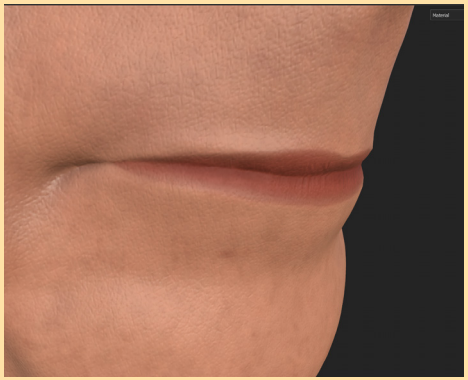






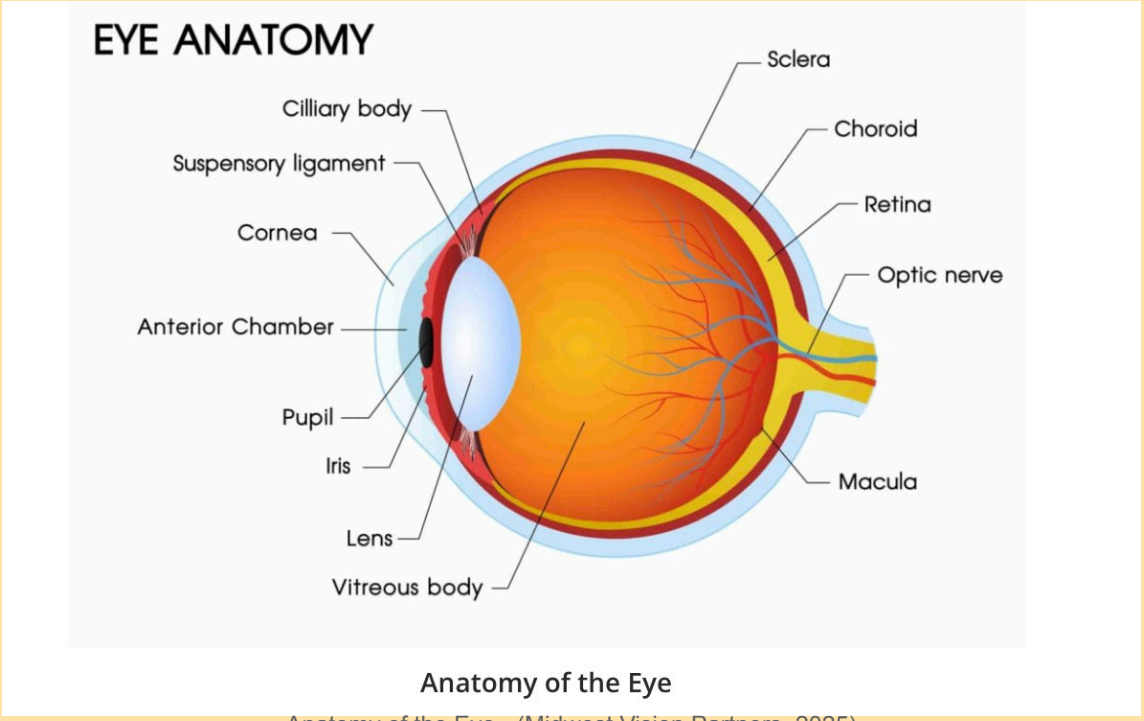






DIGITAL MEDIA PUBLISHING - Final Texture

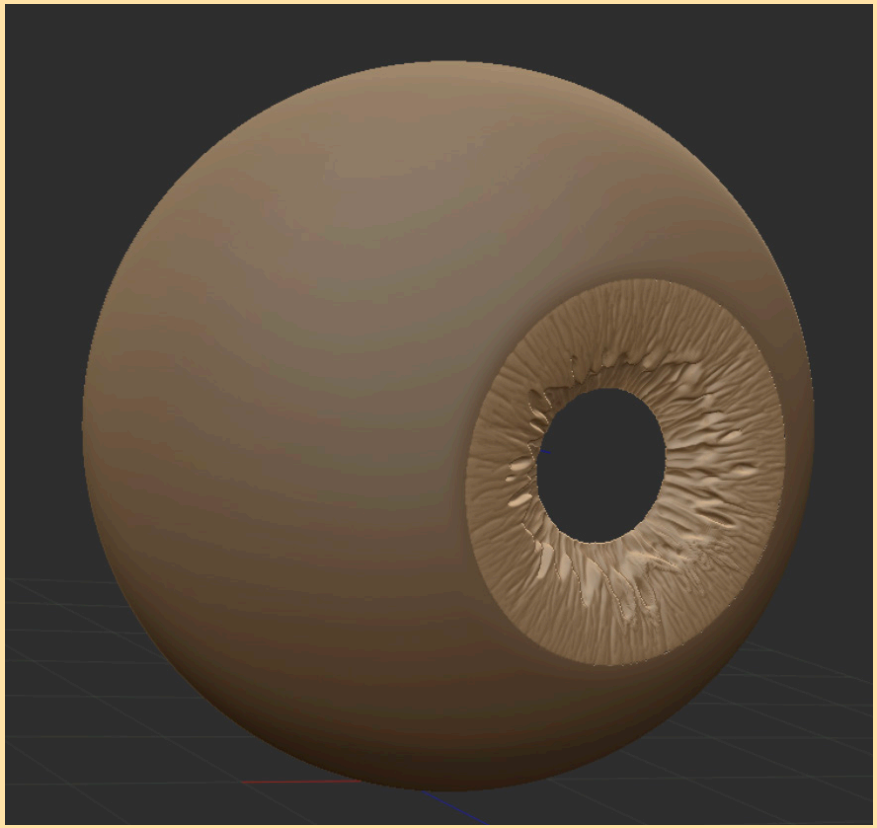
DIGITAL MEDIA PUBLISHING - Eye Modelling



Anatomy of the Eye - (Midwest Vision Partners, 2025)

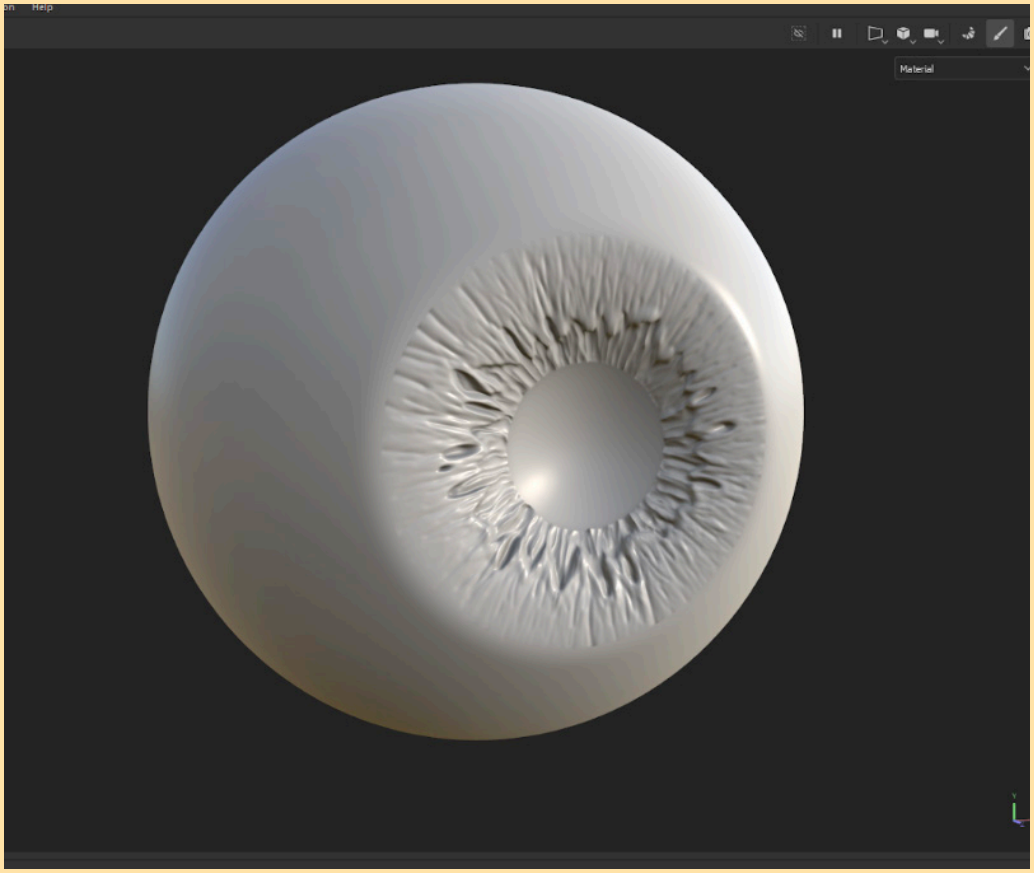
I started with understanding the anatomy of an eye to understand what the different parts of the eye were and what parts would be visable in the model. I then followed the tutorial video from 3D Mutiny (2025) to help get started on crafting the eye. He suggested getting references to compare against, I couldnt locate any decent images of Capaldi's eye, so I looked to find sources with simialr features to his. Capaldi has a small, common form of heterochromia, where he has blue eyes but with a ring of brown in the middle of the iris. I located an image with similar colourings to use as my main reference.

Main Eye Reference Image - (Creative-Volume-2145, 2023)



Modelling the eye was something I was struggling with and made me feel slightly uneasy doing so. Although I could have included more detail using the bars that are shown in the youtube tutorial, I feel I had enough detail in my eye to move onto texturing. This process was done solely in Zbrush, and was interesting to be able to learn new techniques with the software that I had not previously know, especially using the masking tool to seperate the object into multiple subtools.

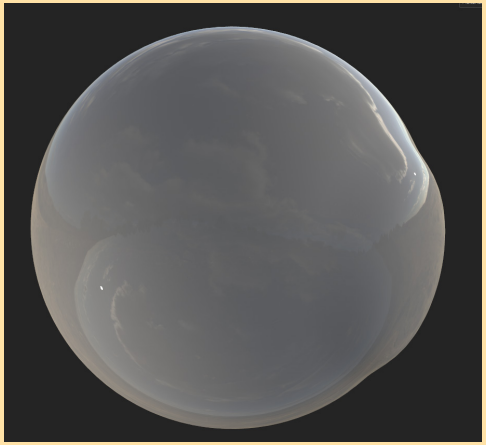
DIGITAL MEDIA PUBLISHING - Eye Texture



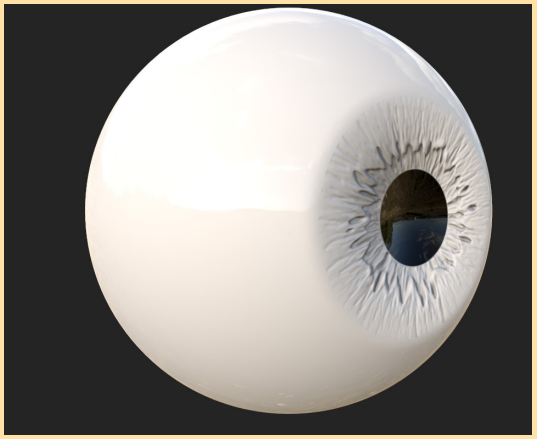
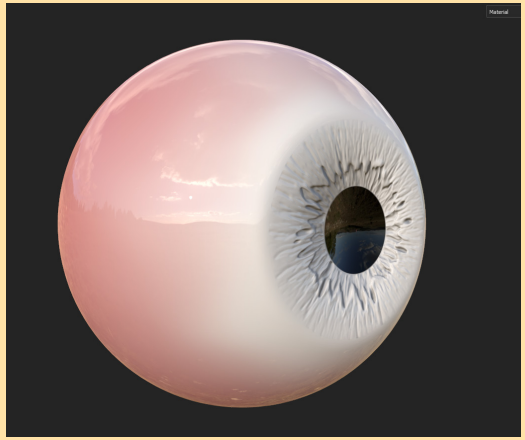
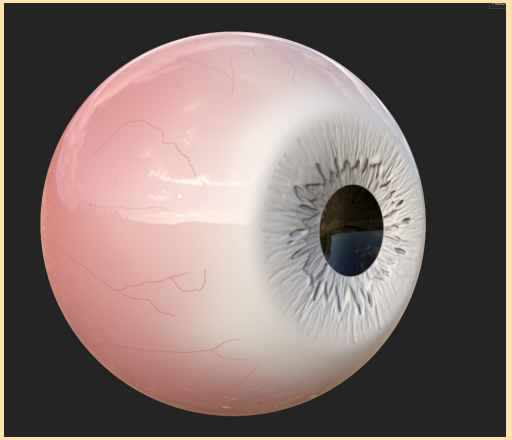
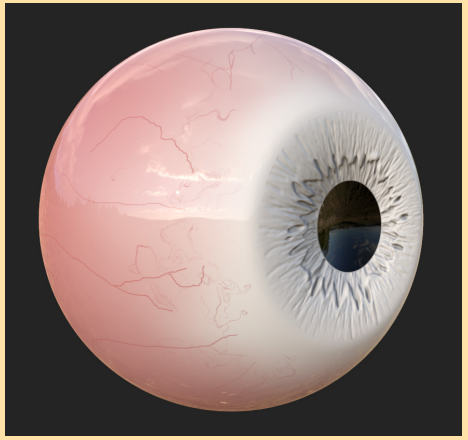
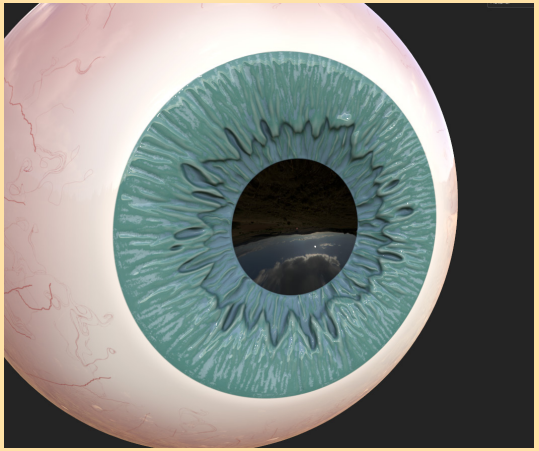
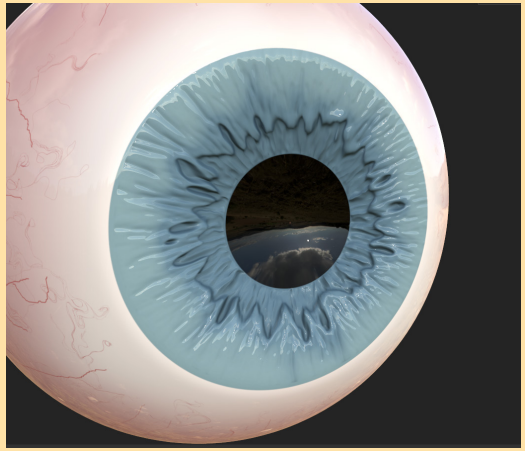
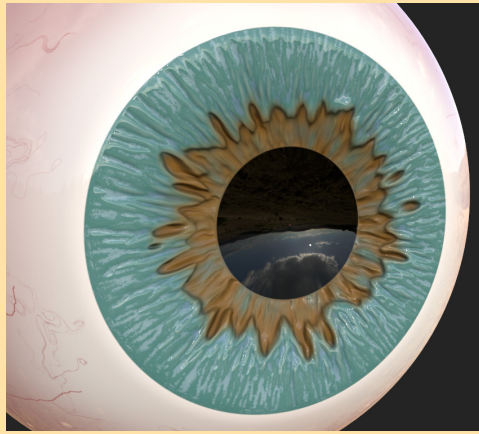
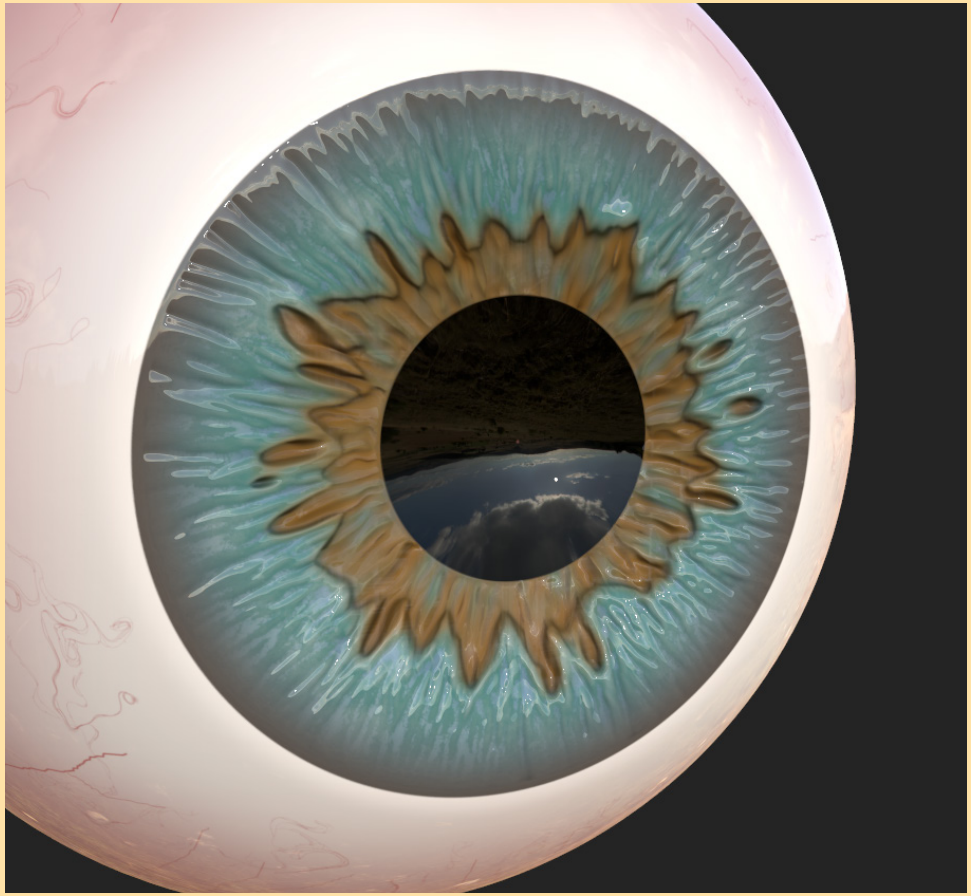
Above are a collection of images I used to help with applying texture to the eye. I started with following a tutorial to get started (3D Mutiny, 2025) however they looked to apply images over the eyeball to add the detailling in. However I wanted to try create my own texture set and build up the detail using that process. I built various layers to try and get the effect I wanted, the 'Vein' brush was particularly useful for the veins on the eye as they randomly generated different veins across the eye when used and they helped keep the veins different around the eye. I still refered back to my reference images of Capaldi to make sure I wasnt straying too far from his eyes. I am overall happy with the eye, however it feels drastically brighter than the model in the final render. I would like to go back and dull down the eye slightly to account for this.

Pureref screenshot of multiple pictures of Eyes collected from various sources.

I modelled the outer layer in the first steps of the modelling, however I textured this seperately to the rest of the eye. This was mainly so I could apply a transparency on this part of the eye without it affecting the rest of the eye. I also followed a tutorial on youtube from On Mars 3D (2020) for this. Applying the texture for this was relatively easy as it was just changing the roughness and turning the colour output off.

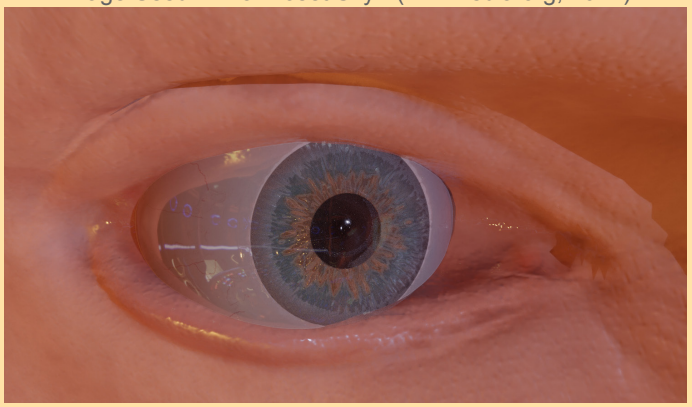


DIGITAL MEDIA PUBLISHING - Eye Texturing Process

DIGITAL MEDIA PUBLISHING - Marmoset

Image Used in Marmoset Sky - (Wikimedia.org, 2024)



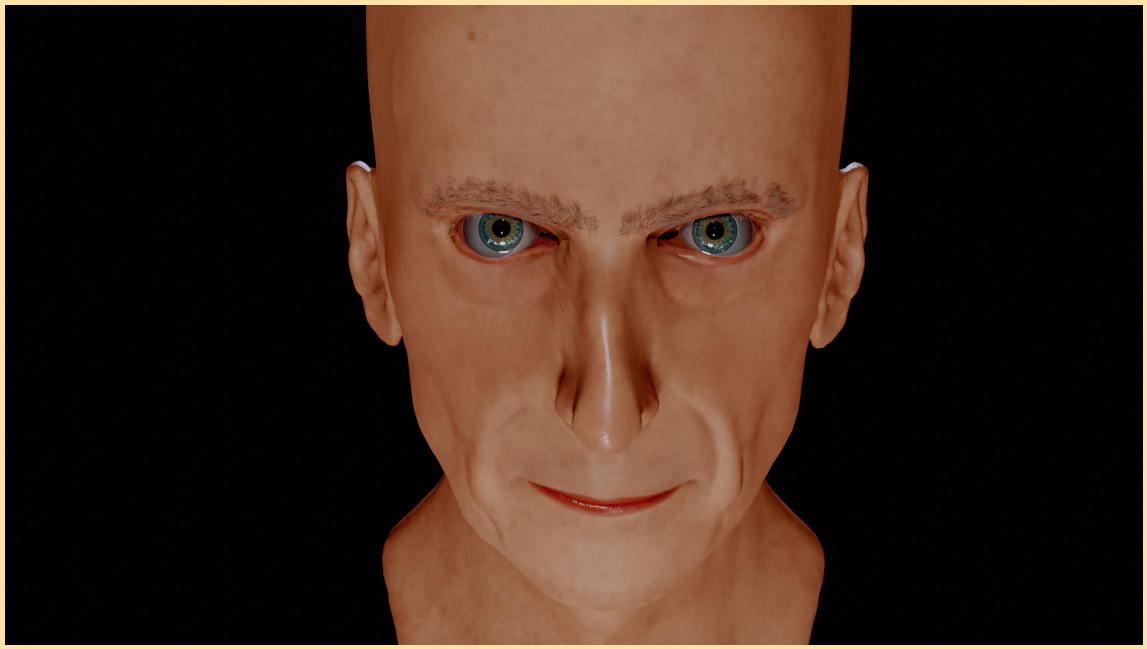
Using marmoset came as second nature to me after using different rendering systems in the past. I set up a standard 3 point light setup for this project and tried different colours of lights. I struggled with loading an orange light on the model and kept appearing as just a normal warm light, it was only when turned yellow or a deep red before it would change.

I started with just a black background and this helped keep the whole model equally lit. I added in a sky background for the model on a blur, I used an image from the actors show to put on the sky, the aim of this was to get different colours projected onto the model as well as have a reflection in the eye. This brought the model to life more so than the dark background.

I created many different light setups, but unfortunately I was not satisfied with them and went back into the software on a different day and adjusted the lighting to get my final renders. Below are images from those previous renders.

DIGITAL MEDIA PUBLISHING - Final Outcome

Overall I am happy with the character, I feel it has accurate details from my celebrity, I feel I have captured the look of Capaldi quite well and people without knowledge of my reference can guess who it is. I am not entirely happy with the model as when I went back and fixed the eyes to look more sunken but forgot about the inner corners of the eyes and has resulted in a large gap in the inner corners of the eye that's not present in the celebrity. While I am not happy with parts of the model. I am still impressed I have managed to create a lifelike model of a human face as well as using new software I had not previously used.



DIGITAL MEDIA PUBLISHING - Final Outcome

DIGITAL MEDIA PUBLISHING - Final Outcome

DIGITAL MEDIA PUBLISHING - Final Outcome

DIGITAL MEDIA PUBLISHING - References

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