## Rationale

Over the 2021/22 holiday break, I thought about working more on the CGI Cyberthug model that I made last semester.

The version included in that assignment was hastily put together mainly due to time constraints and proof of concept. This time I gave more consideration to the technical process behind it, such as topology and UV mapping.

I didn't want the character to match the physical model completely. There's a clear difference in realism between your average Pixar movie and the CGI characters seen in that 2017 Planet of the Apes movie, for instance. I wanted to find a good half-way point where the character would look detailed enough but not to the point of over-doing it.
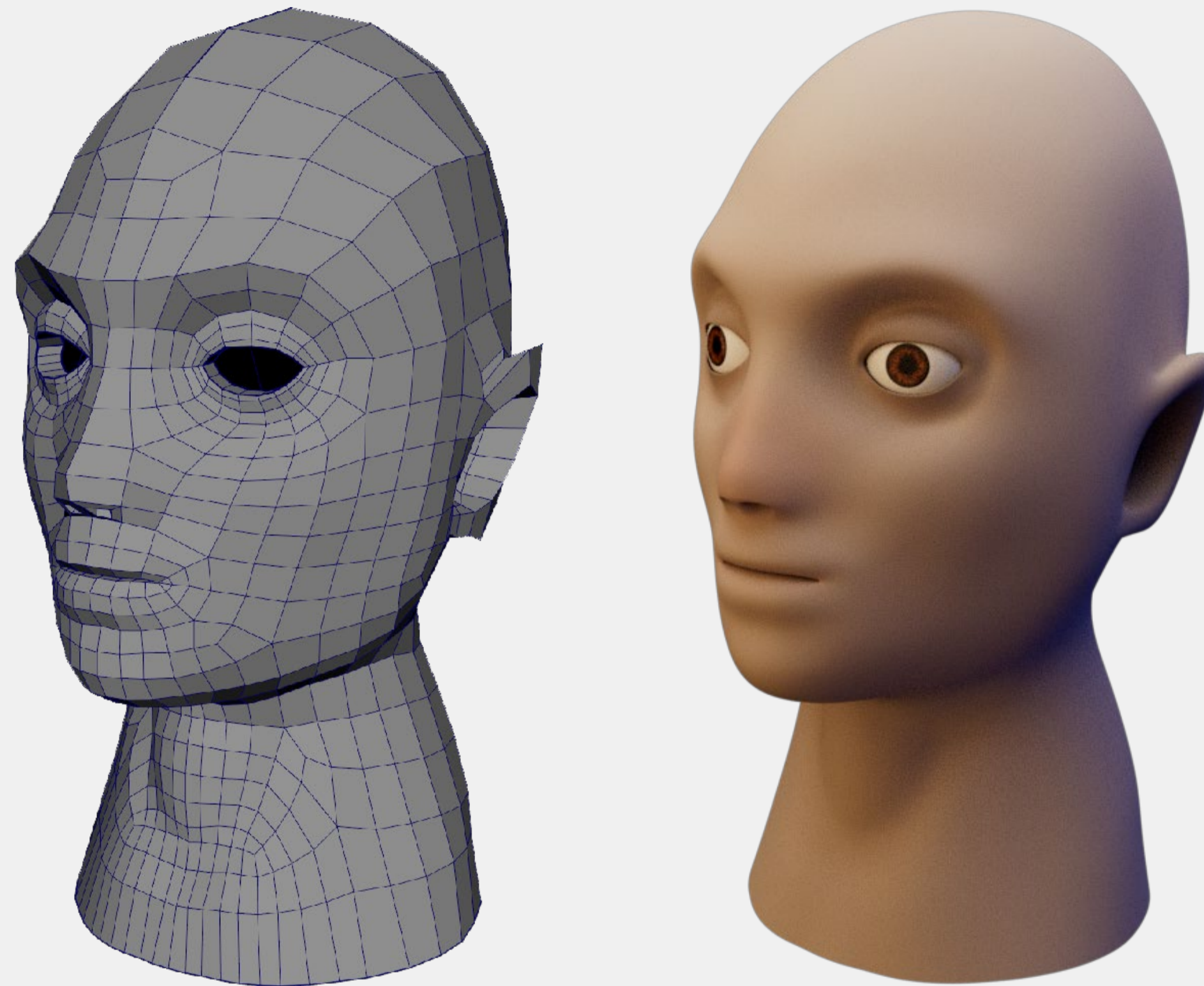
Modelling

The process started off much the same as before, setting up image planes and sculpting a simple sphere to match them, before going over it with the Quad Draw tool.

I'd say my topology skills were better this time, which I assume would make deformation/animation easier later on. Several areas were also improved, such as the adam's apple and nose.

Some other differences were the addition of ears, nostrils and eyelids. The absence of the latter in the first model gave the character a creepy stare, and it would've been impossible to create realistic facial expressions.
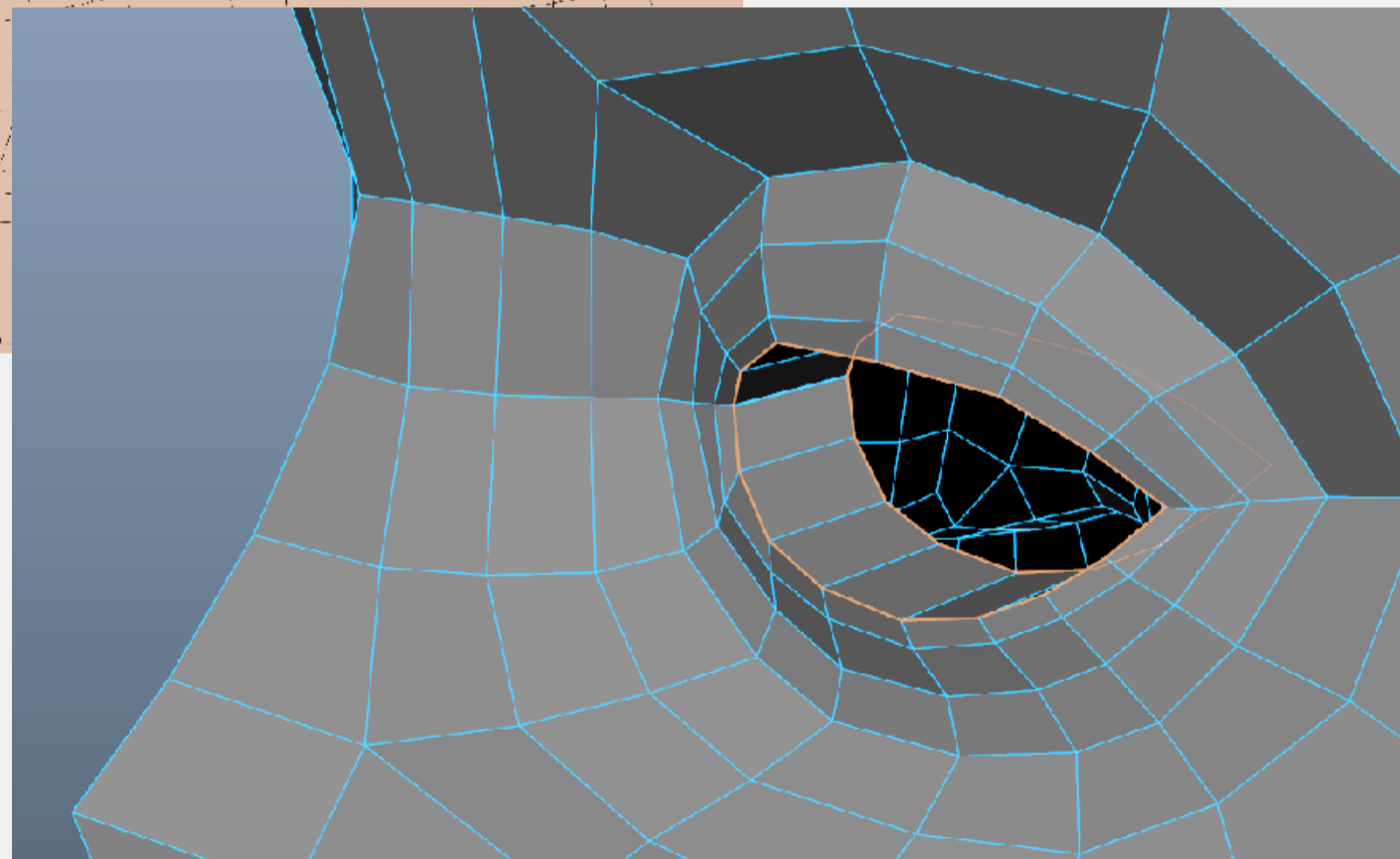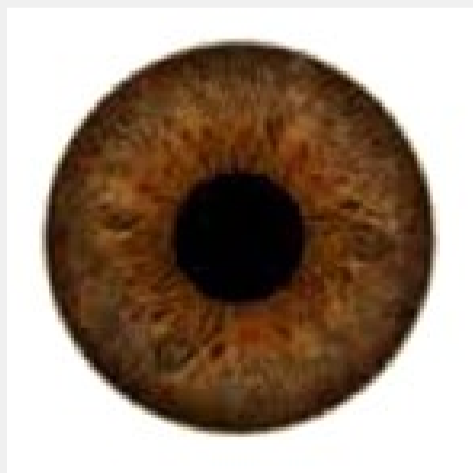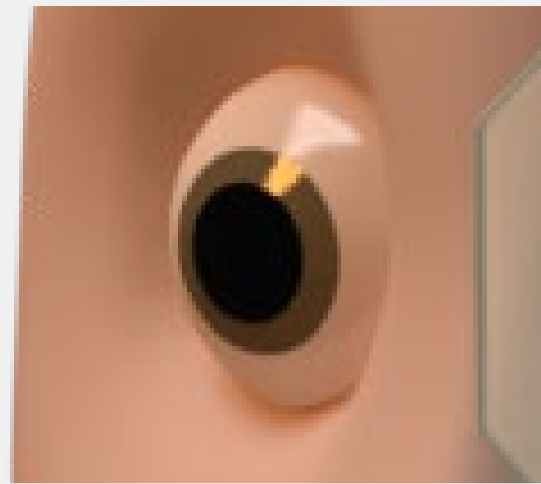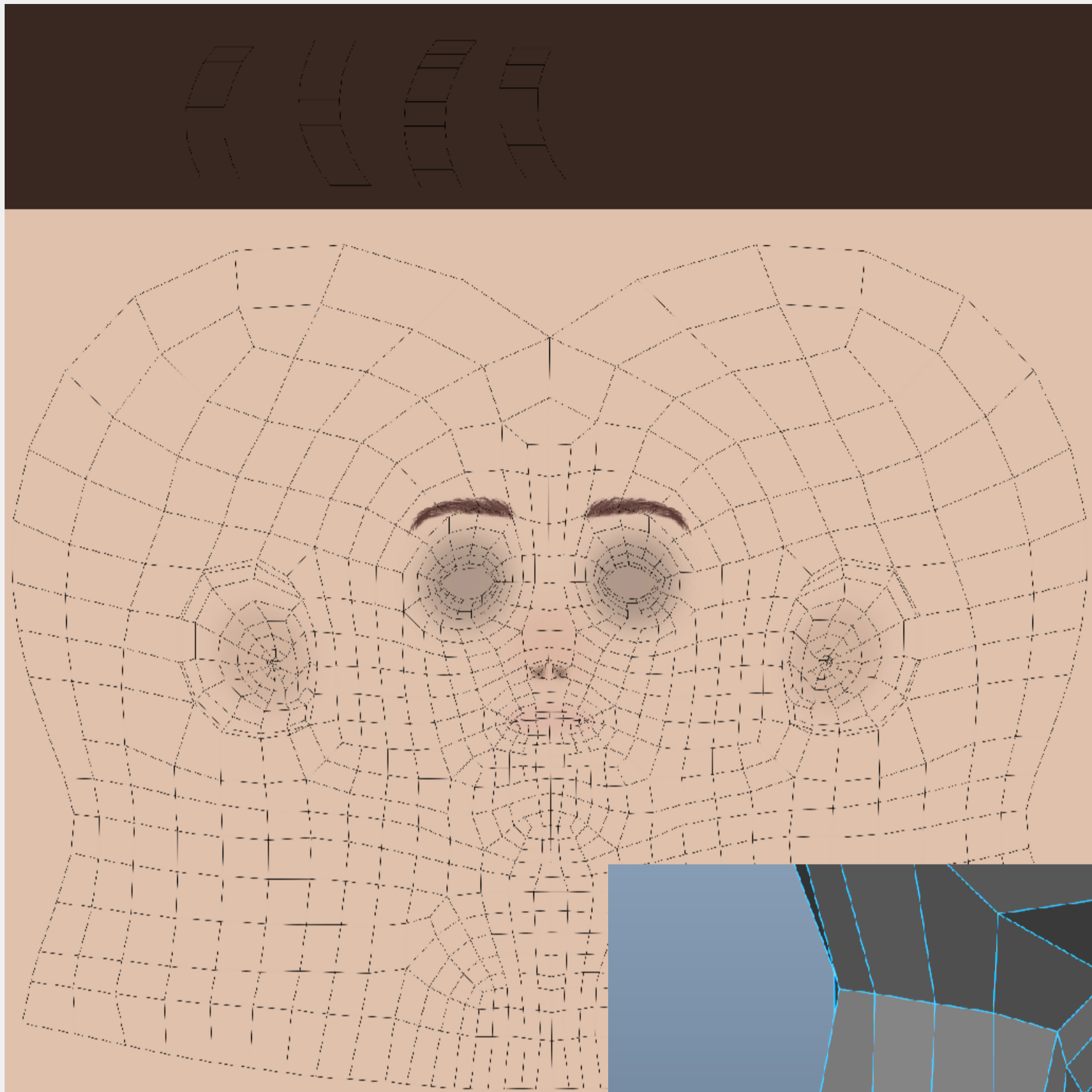
Proper Texturing

This time around, I thought it would be better to use proper textures rather than separate faces with solid colours (notice the eyes in the first model).

I made part of the eye area darker, because for whatever reason, Disney and Pixar seem to have done the same for most of their characters since the early 2010s. My best guess is this "eyeliner effect" creates more contrast with the sclera, which draws the viewer's attention to the character's eyes.

Other coloured areas were the eyes, ears, nose, nostrils and lips.

One challenge I faced when trying to implement this is that having a sudden change between the skin colour and eyeliner resulted in that area appearing pixelated in the renders. To rectify this, I added extra seams, separating the dark areas into their own UV shells, which can be seen at the top.
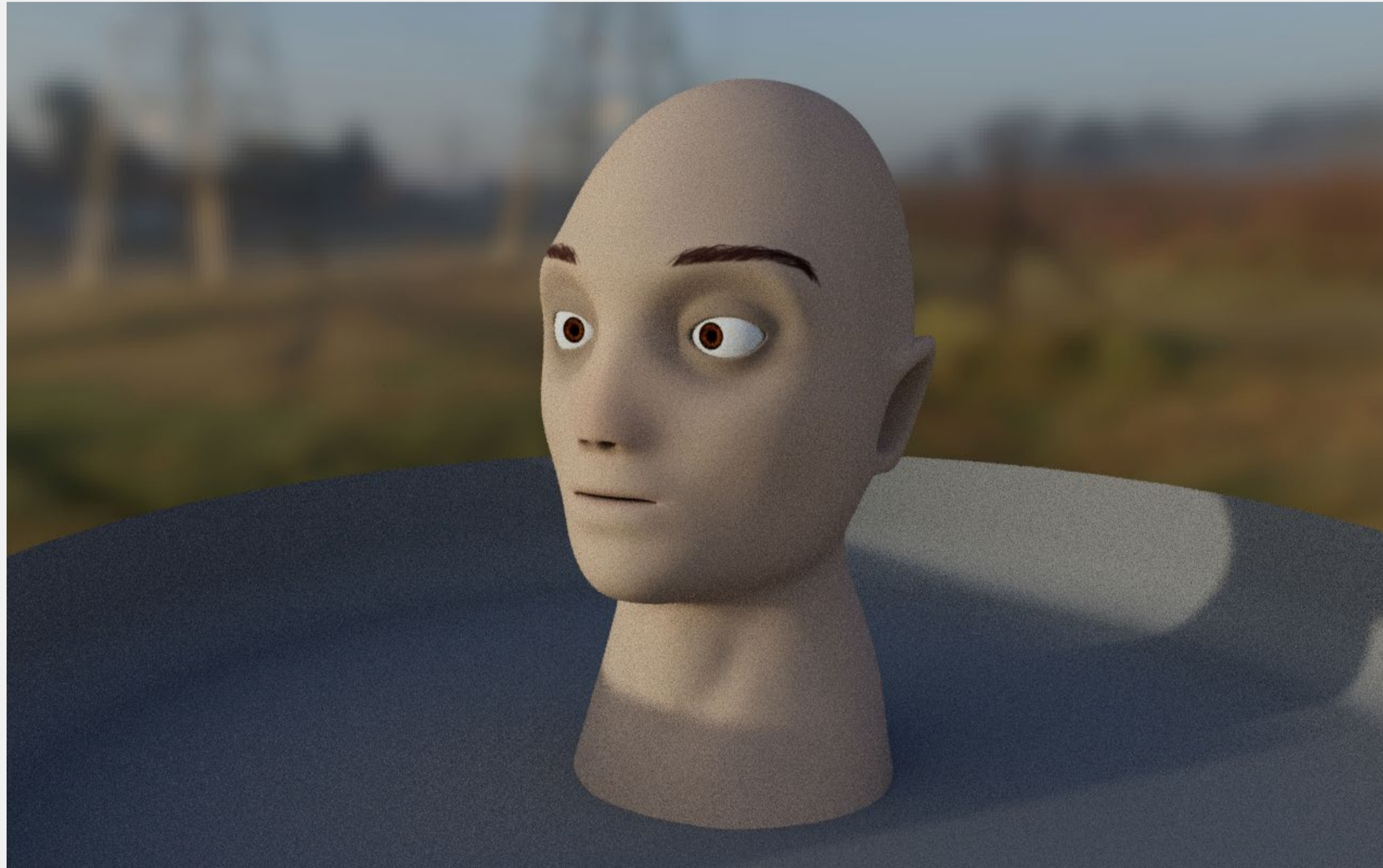
XGen

I had heard about XGen being used for creating realistic hair that could be affected by wind and gravity and stuff, so I thought I would give it a try.

The Cyberthug's hair is fairly short, and seems to be held in place with gel. Compared to long hair, this would make physics a lot easier.

To the bottom-right is a simple render showing off hair clumping.
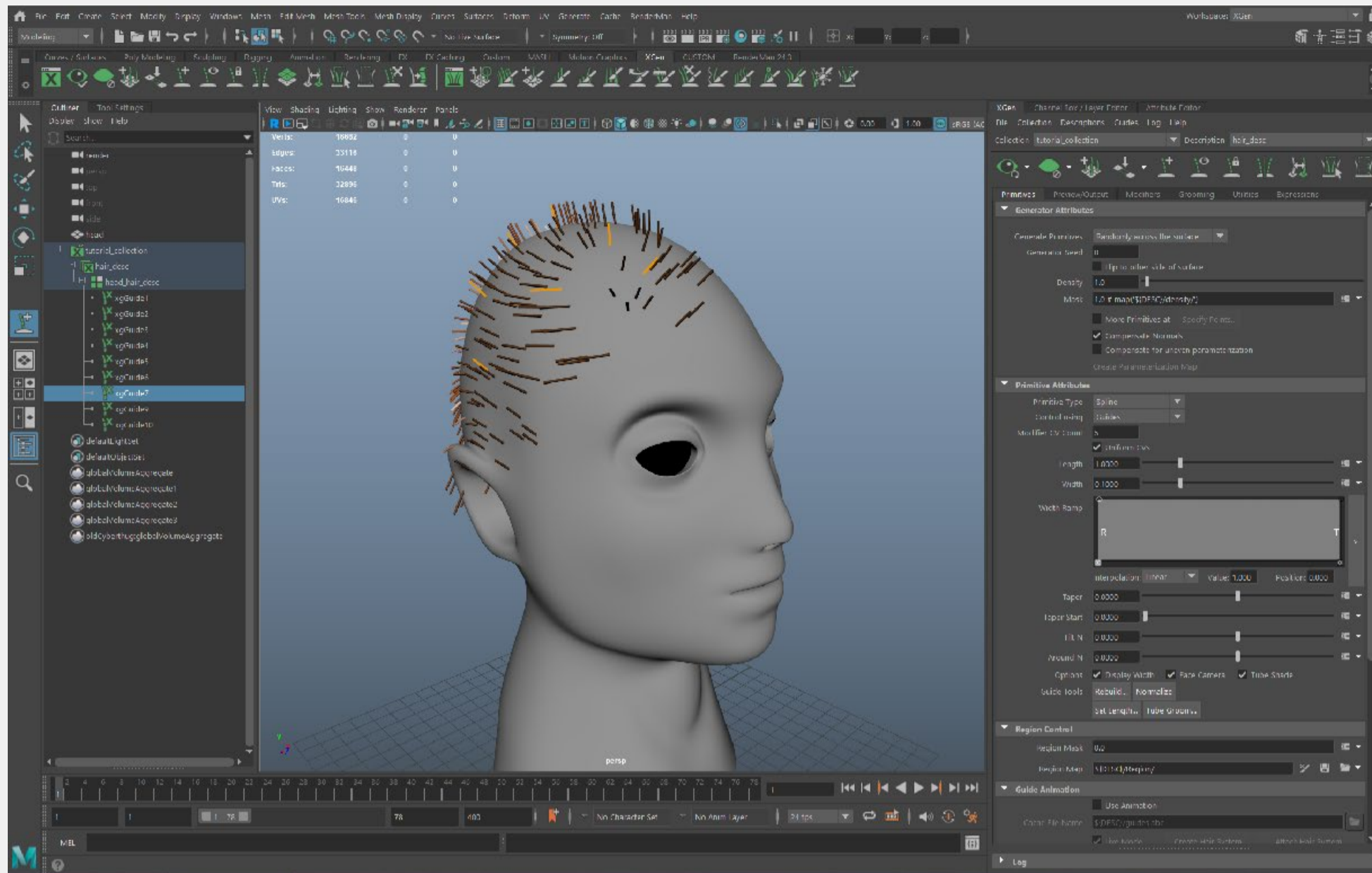
Evaluation

After creating a simple base and skybox to make the renders more interesting, I decided I wasn't satisfied with the head topology. The nose was lacking the side creases that make it stand out, and the eye sockets looked a bit off.

This is what I was worried about earlier. The model matched the physical one, but maybe a bit too well. Some artistic licenses would be needed.

This is where I decided to leave the character, as I would be working on a different one for semester 1 2022.