

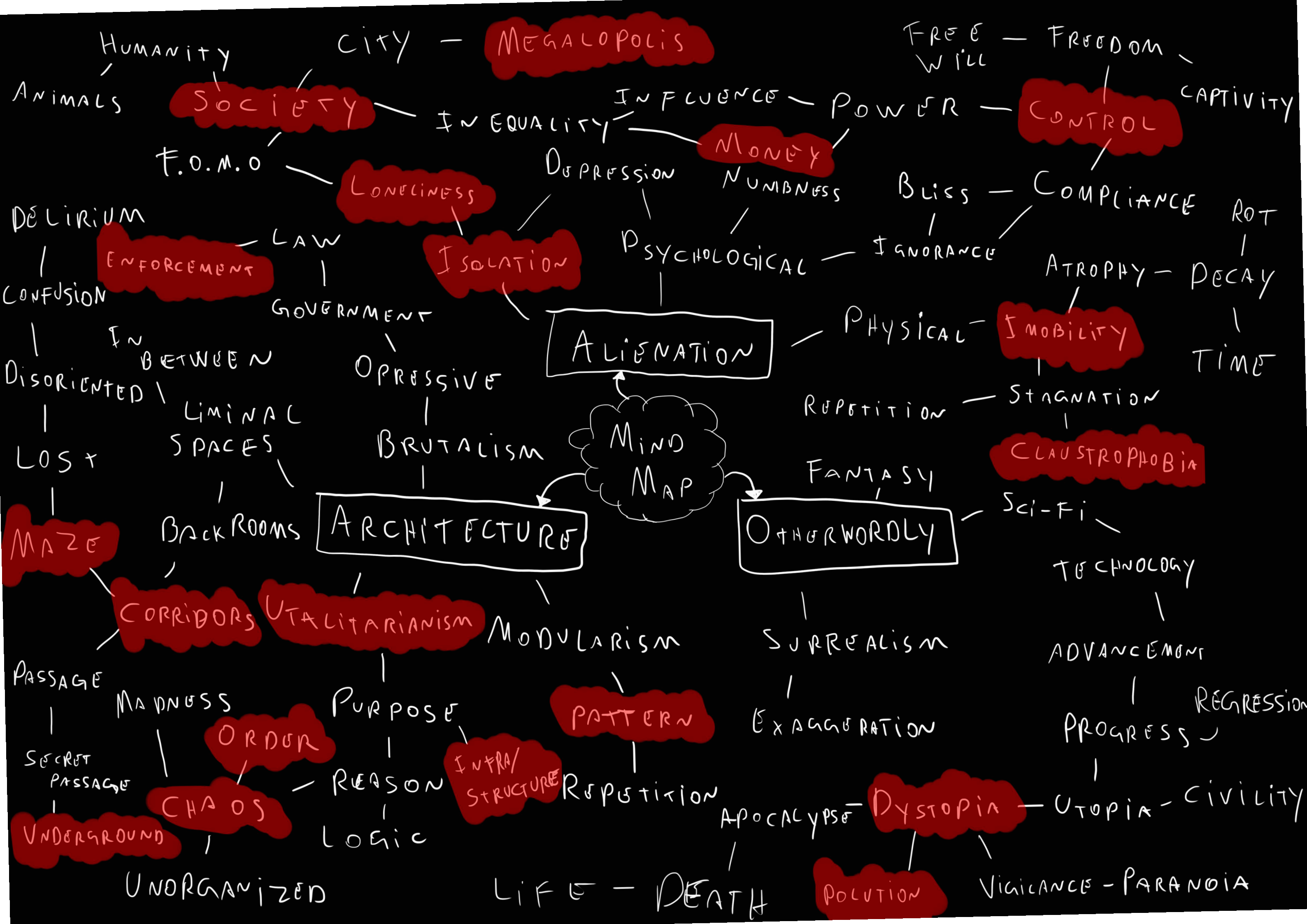


# ART AFTER VIDEOGAMES

## ENVIRONMENT DESIGN

Ionatán Biniamin Maghidman - 13845901







# STORY OUTLINE

*In response to the 2 themes, “Alienation” and “Urban Chaos”, suggested on the brief, I have developed the following narrative:*

*The setting is Earth, in a far-away future, where the issues with overpopulation have grown to dystopian proportions.*

*The planet’s population per square kilometer has become so unbearably high, people become physically unable to commute. There is literally no space without either another human or a household for a human.*

*Hence, automated deliveries through highly pressurized air pumped vents deliver anything from food, medication, online shopping directly into an individual’s cubicle, rendering going outside redundant. Those, alongside classic infrastructural structures such as sewage, gas pipes and electric cables, are often clearly exposed on what little can be seen from windows facing the outside, not to mention all the scaffolding of unfinished buildings, which need to be continually built to accommodate the exponential growth of the population.*

*The only available existing, and very prevalent physical art form is graffiti, which is prevalent across all structures, indoors as outdoors.*

*Jobs and education are delivered exclusively remotely. People socialize only with those directly around them, if at all. Some do so exclusively online, with people they never meet. Who would’ve thought that the deepest solitude one could ever experience was found in the utmost personal degree of company.*

*In a civilization that has mostly verticalized, since it is the most efficient way to accommodate more people with the least amount of space, space has become the “neo-money”. The concept of a "house" is abolished, monetary discussions are measured in meters. You are worth the amount of space you own.*

*The rich used this opportunity to segregate the world in a physical socio-economic staircase; rich on top, poor on bottom. As humans carved deeper into the Earth's surface, a portion of the demographic was literally buried underground. The closer to the top, the more space an individual inhabits, whereas the lower, the less space per person.*

*People aren't even able to see the sky... because there isn't one anymore. It has been covered up completely by stacks and stacks of seemingly never-ending human enclosures.*

*As opposed to the rich, who live lives that mostly resemble what we are accustomed to in the 21st century, the poor have to adapt to the crippling absence of space.*

*Some areas have elevators that connect the underworld to the overworld, and rarely, when someone from bellow gets lucky enough to get a job on the surface, they access such long elevators that take them up.*

*To accommodate such high demand for living spaces as well as the lifestyle of permanent sedentarism, the world has become not simply one large megalopolis, it has amalgamated into a single, planetary scale chain of compacted apartments, so consumed by its brutal utilitarianism, that it barely suits humans anymore.*

*In fact, “streets” have also been abolished as a concept altogether as well, since supposedly, the big apartment complex which the Earth has become seemingly has no bottom either. Some say that the planet's core has been completely hollowed out, and if you try reaching the bottom, you would simply loop around Earth’s gravity center, and end up on the other side of the world. The only thing that mildly resembles the purpose of streets are the confusing, oppressively narrow, never-ending corridors that intertwine all the cubicle apartments, which further discourages anyone from ever daring to leave.*

**People are complacent hostages to the space they inhabit.**

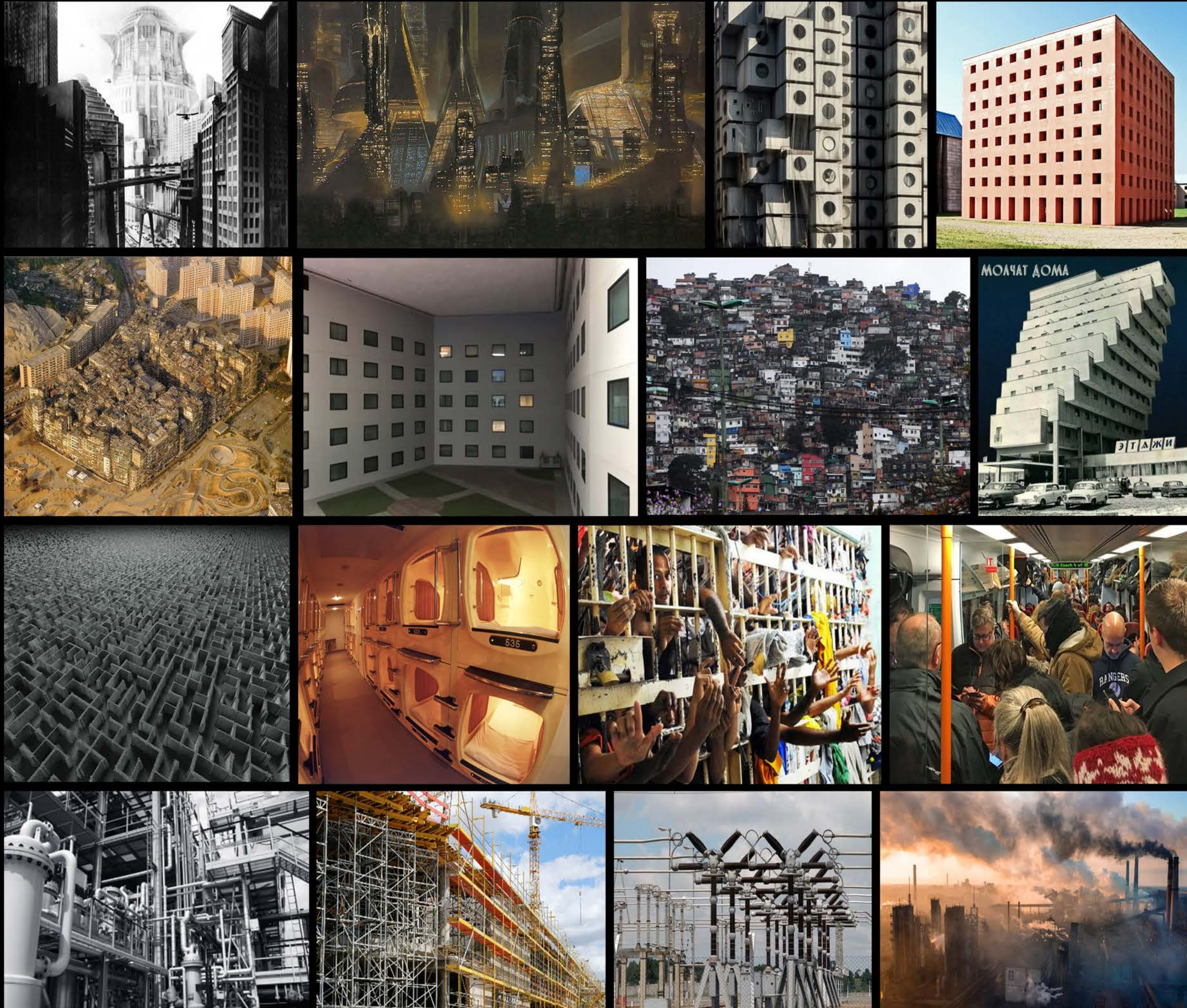
*Needless to say, such a densely metropolitan world generates such an obscene amount of pollution that vegetation has become scarce and deeply under control of the rich. A constant smog blurs the vision of anyone who peeks out of their window. Speaking of which, windows are a rare occurrence in any home. Not exactly because it is some form of luxury, it's simply because windows tend not to lead anywhere, only more walls of other neighboring apartments.*

*Within the context of a videogame, the experience would center around the life of a regular “no one”. The point of the experience would be less about who this person is and why we should care about them, and more about the world they inhabit. Basically, they are simply a narrative vehicle to explore a complex world and its structure. Things to do in the game would follow simple tasks, such as shopping for groceries and medication, go to work on the overworld, overhearing conversations of people who live right next to you, etc.*

*My piece will attempt to encapsulate what this world roughly looks like from the point of view within one of those long elevator shafts that connect the top and bottom of the world, since there wouldn’t be really anywhere else with space which I could depict in a large scale.*



# MOODBOARD

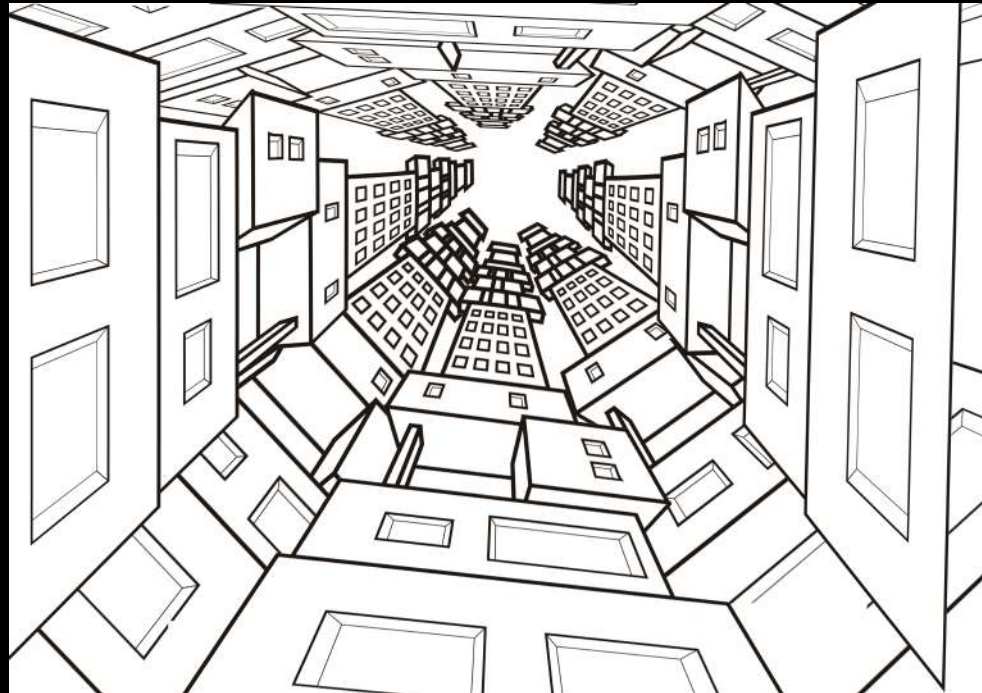


IN ORDER TO REPRESENT THIS DYSTOPIAN VERSION OF EARTH IN THE FUTURE, WHICH IS ESSENTIALLY ARCHITECTURAL HORROR, I HAVE FIRSTLY RESEARCHED EXAMPLES OF ARCHITECTURAL MOVEMENTS, REAL AND FICTICIOUS CONSTRUCTIONS THAT TEND TO BE ASSOCIATED WITH OPRESSION OR CLAUSTROPHOBIA, SUCH AS BRUTALISM, AS WELL AS UTILITARIANISM, WHICH SEEM SO CONCERNED WITH PURPOSE, THEY ALMOST LOSE TRACK OF THE FACT THEY WERE BUILD TO ACCOMODATE PEOPLE. THESE ARE FURTHER ENHANCED BY EXPOSED INFRASTRUCTRE (PIPES AND WIRES), WHICH ALONGSIDE SCAFFOLDING, INDICATE HOW EVERYTHING IS BUILT IN A CONSTANT RUSH TO ACCOMODATE MORE AND MORE INDIVIDUALS. THIS OF COURSE, IS COMPLEMENTED BY THE IMAGGERY I GATHERED OF OVERCROWDING, WHICH IS INSPIRATION FOR OVERPOPULATION. I HOPE THAT ALL THESE FACTORS, MIXED WITH THE CLASSIC FEATURES OF A GOOD DYSTOPIA, SUCH AS POLLUTION, WILL COME TOGETHER TO COMMUNICATE A SENSATION OF DREAD WHEN VIEWING MY PIECE, ONE OF CLAUSTROPHOBIA.

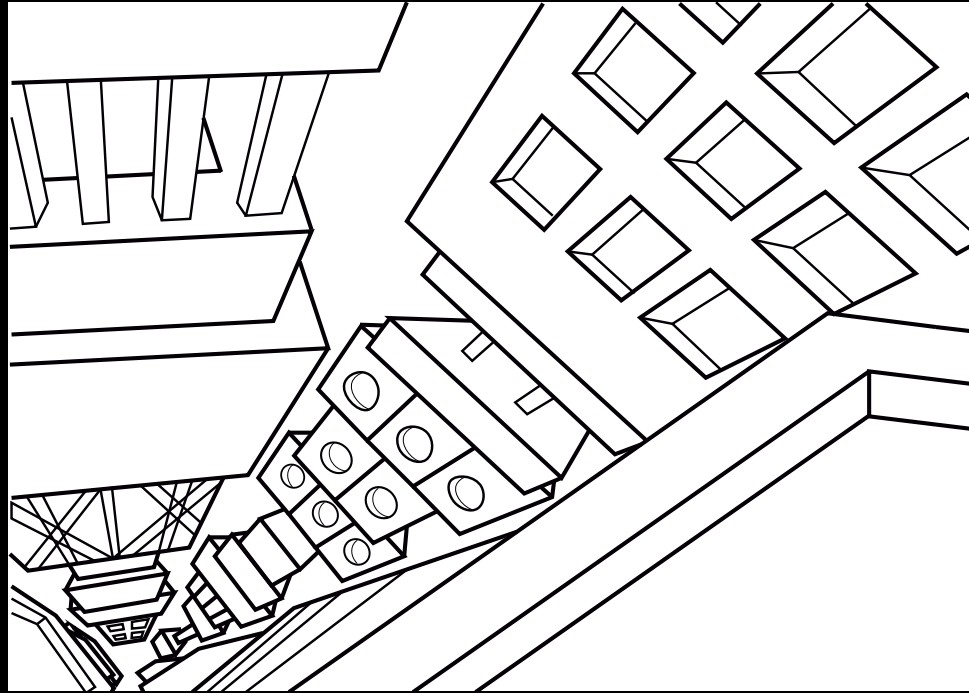


# INITIAL SKETCHES

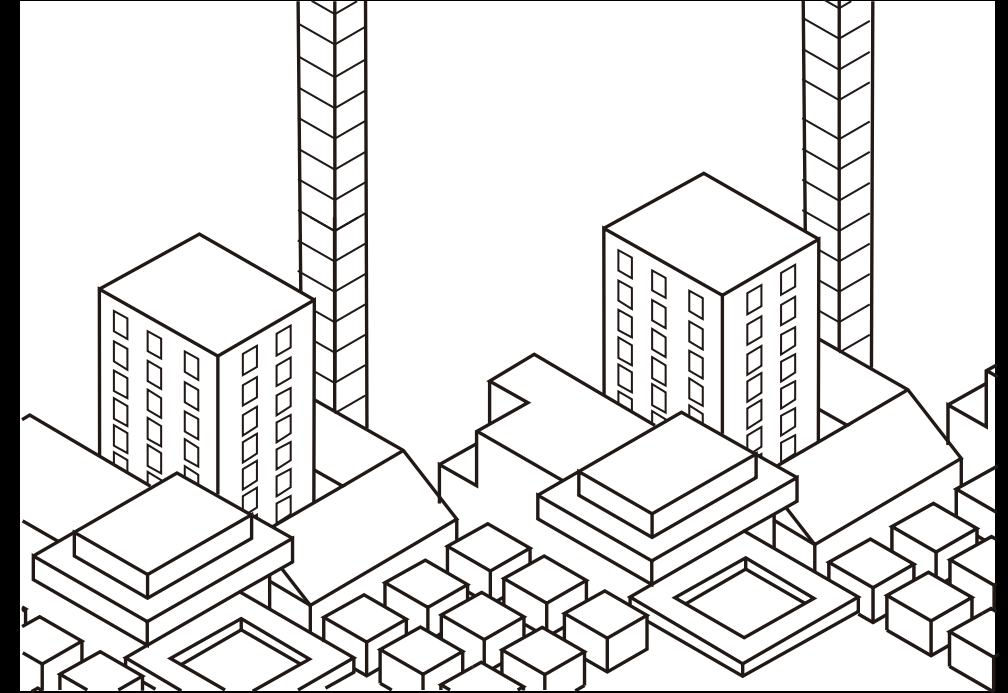
Before actually creating the space in a 3D software, I thought it'd be best to develop a series of sketches in Illustrator utilizing a range of perspective based techniques, such as Isometric, One and Two point perspective. I chose this way over hand drawings or greyboxing because for me, vectors offer a faster workflow, but especially because the results offer great insight in what your final piece will look like from the camera angle chosen.



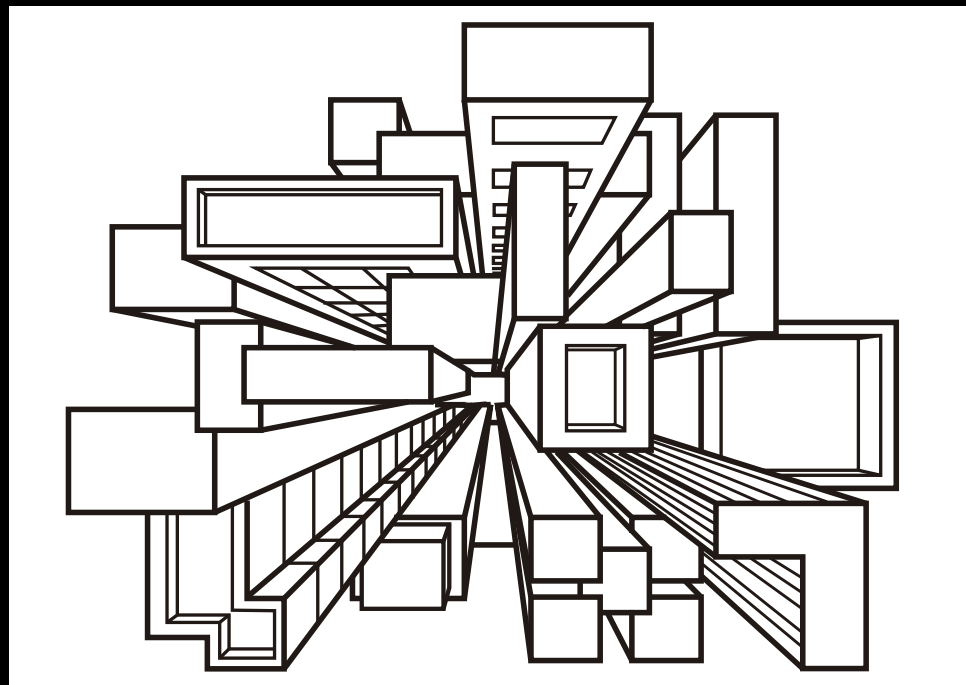
This is a classic "ant's view" shot which I've borrowed from cinema studies, achieved through a one point perspective drawing. It's strong at communicating the scale of the city as well as making the viewer feel dwarfed by their surroundings. It also leaves a lot of room to be modular and "recycle" my own work, because the further away, the more forgiving repetition becomes. In addition, being enclosed by walls on every side really delivers the claustrophobia.



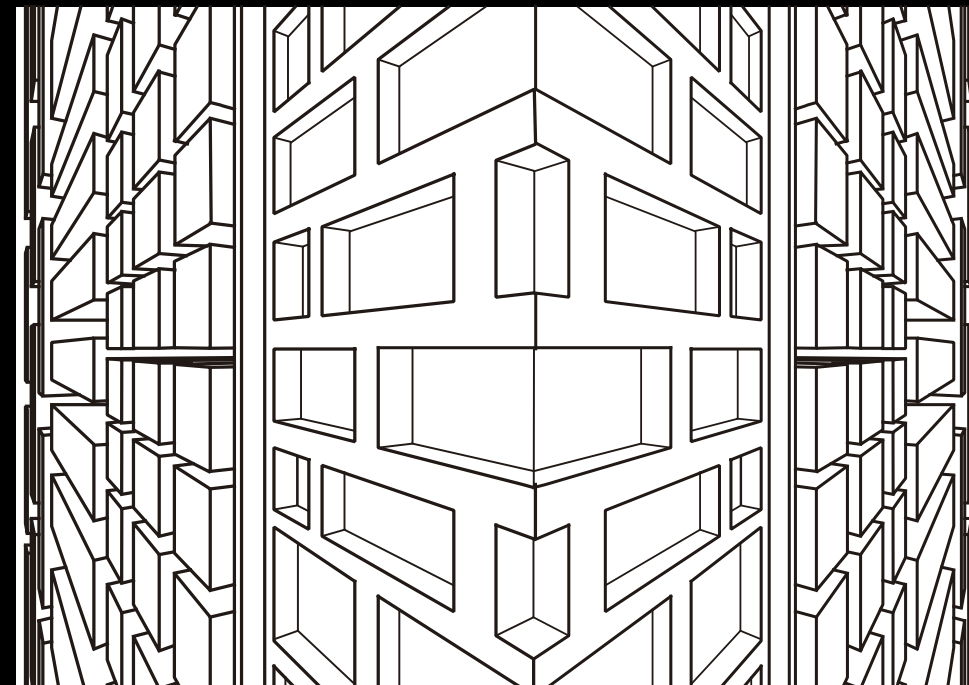
Pretty much the antithesis of the previous piece, this "high angle shot", again borrowed from cinema, again done in one point perspective. It communicates a similar feeling of scale of a massive environment. The difference is that looking down to an endless void may evoke a sense of dread more than claustrophobia. I'd say the environment feels less intimidating, but the sense of doom of looking down and seeing no floor is also a strong suit for my piece.



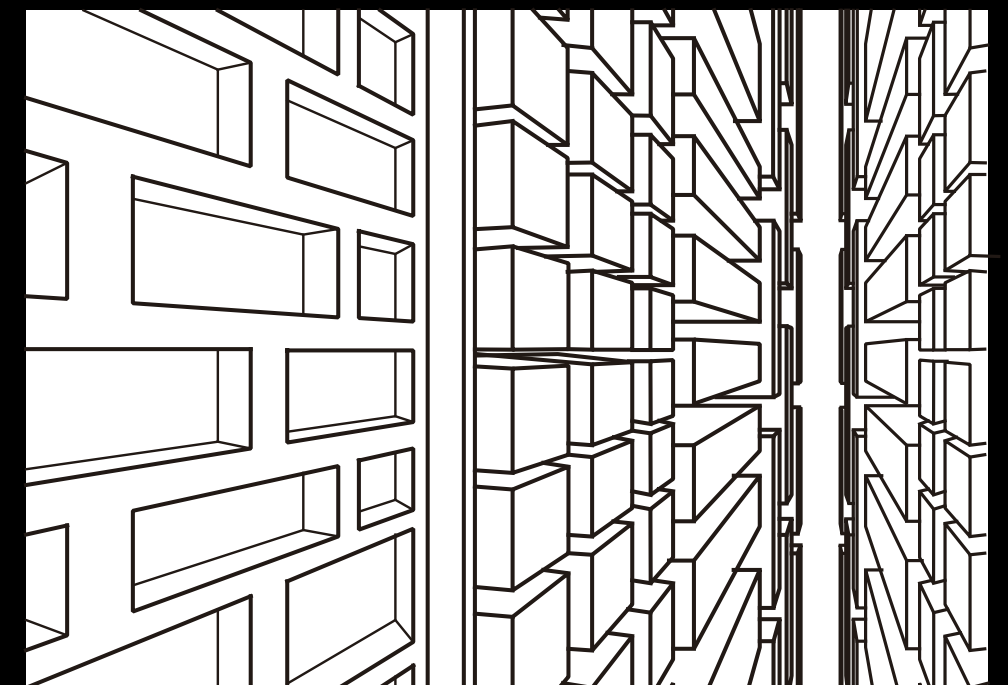
This isometric drawing communicates quite a separate message from the others. It is strongest at communicating modularity and pattern. The city feels like a city more than any other shot. The issue with it however is that, due mostly to being so far above it, the sensation of claustrophobia and an oppressive space don't come across as strongly. It feels less personal, which can come to good effect on a very large scale, which would also make it open to modularity.



Based on the cinematic "overhead shot", again done through one point perspective. This one is pretty much as impersonal as it gets, since it's right atop the city, very difficult to capture the granular details. But, strong at creating a sense of an endless expanse of buildings. It's also phenomenal at communicating depth. Still, I believe that it's difficult to justify this one, since it bets its entire quality on the macro and none on the micro. Hence, I feel like it might not create an adequate sense of entrapment.



The only two point perspective drawing I made. Its strong suit is the ability to communicate both the micro and macro details, since the center is quite close to the camera, whereas the closer to the sides the further. One issue that might occur however is that due to how two point perspective tends to distort images, it could be difficult to grasp the whole picture as a mega city. I also really enjoy the composition proposed by how close the center feels to the screen. It's quite confronting.

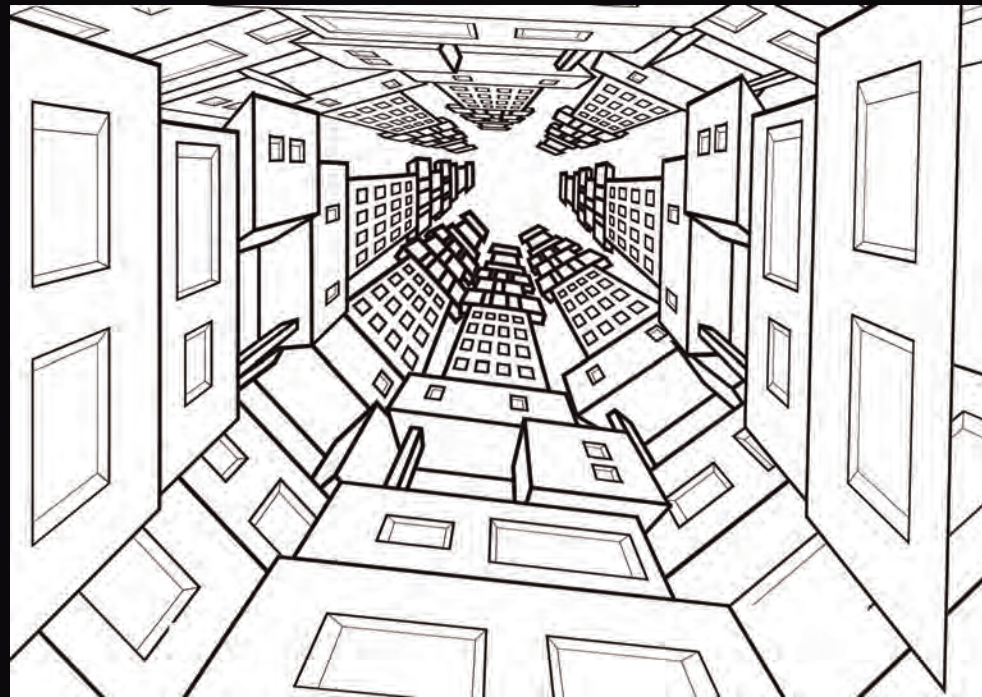


The similarity to the previous image is no coincidence. Both of them are the same, however, this one is one point perspective, which makes them very different. To me, what distinguishes this one is the fact that it feels like an endless corridor. The presence of the opposing wall really nails the sensation of claustrophobia. The narrow gap between each wall screams oppression. This drawing also experiments multiple architectural styles, which might not even be necessary for the final. Making it all look the "same" could be beneficial.

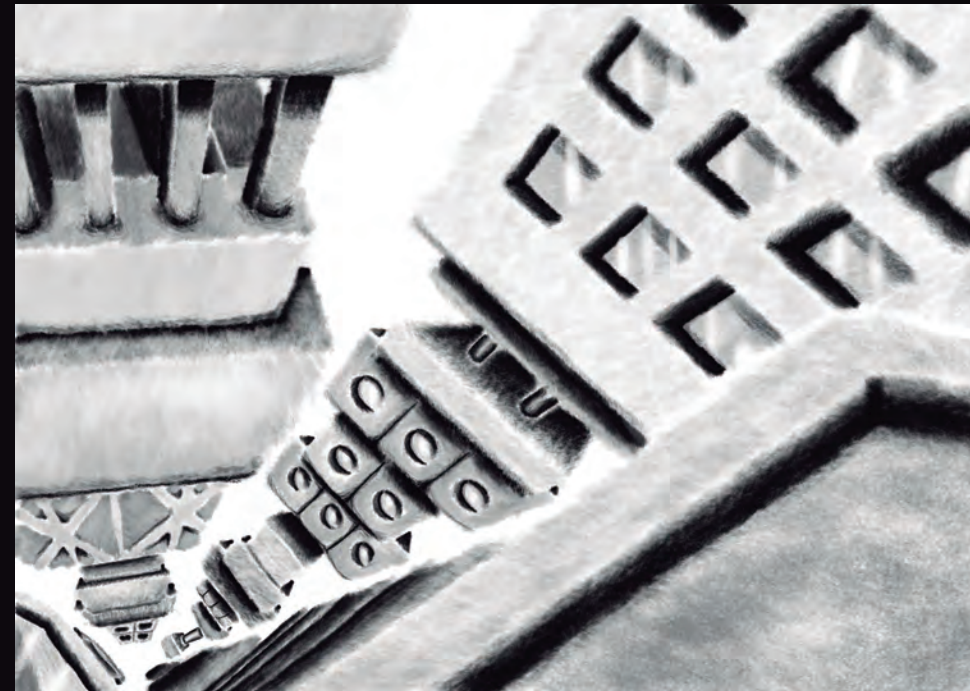
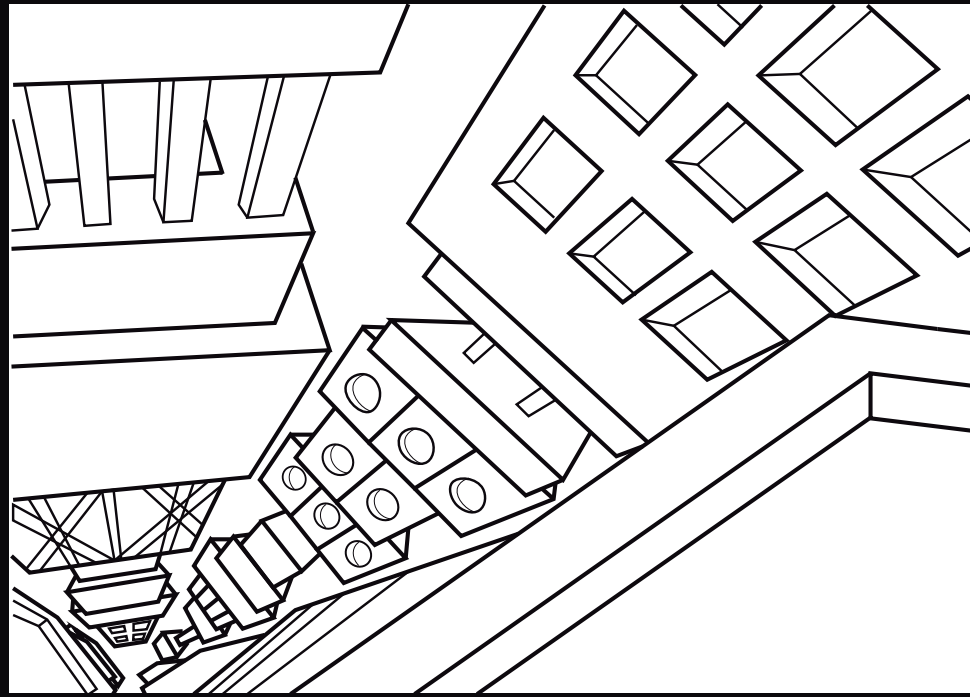


# DEVELOPMENT

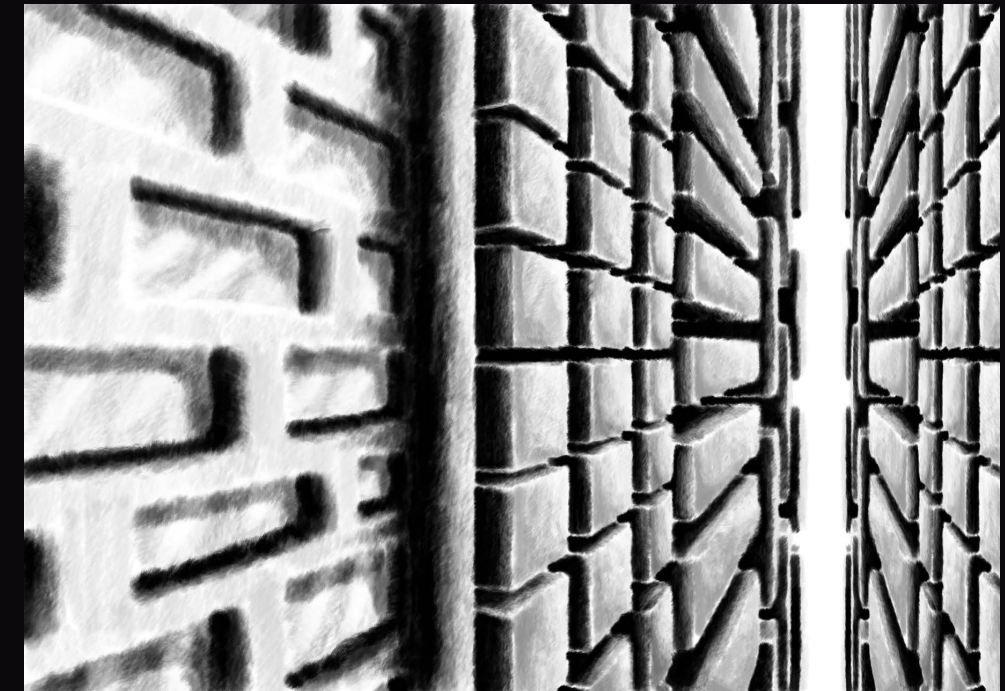
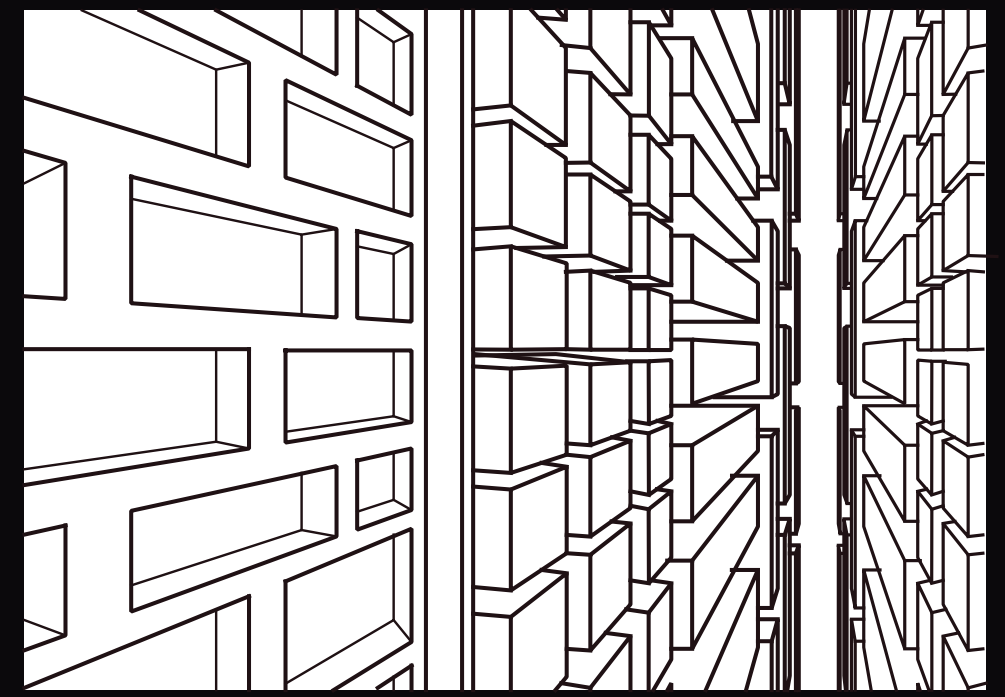
Out of my initial sketches, I have picked 3 that to me hold most appeal, mostly because they all transmit intense claustrophobia. The space really oppresses the viewer and makes them aware of how these habitations feel inhuman. Hence, I must now narrow it down to only one concept. Therefore, I will develop all of them by adding basic shading. This should then aid me in definitively choosing one for final refinement.



Definitely delivers the sensation of claustrophobia, with how all surrounding directions are blocked. Unreachable heights feel very oppressive, almost like the buildings were looking down on the viewer. The clear light source from above is a good indicative of direction. The composition however is a little cliché. The centerpiece of the artwork is pretty much the centre.



I'm not sure this environment makes you feel trapped as much as it evokes dread. An endless abyss is interesting, but not quite claustrophobic. Still, it does communicate scale through depth. I also enjoy the light hint of a high-ground from the right side having the top of a roof, as if the viewer was on top of the world they see. Also, this enables me the rare opportunity to show evidence of light coming from behind the viewer.

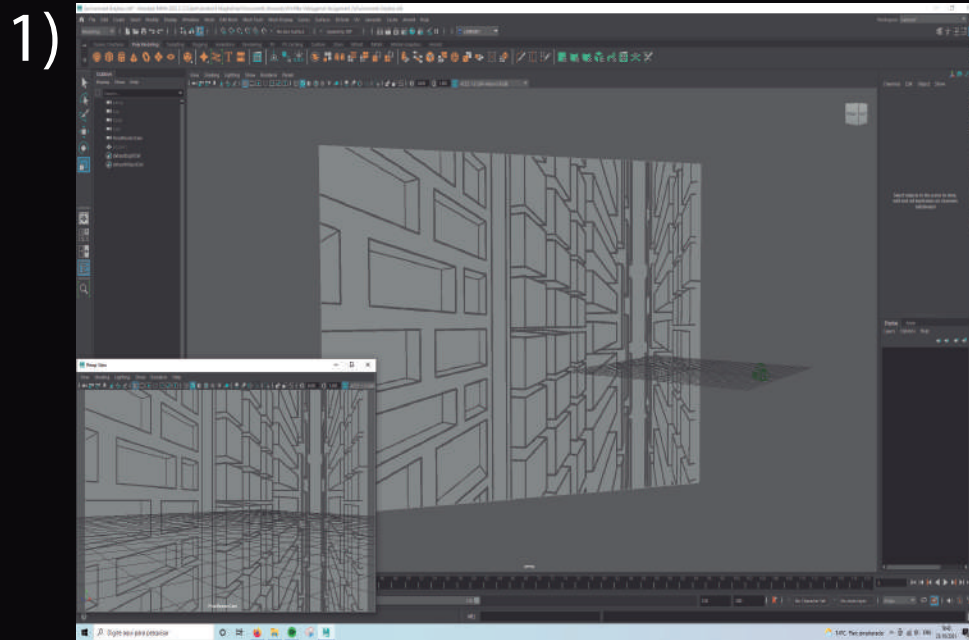


I find the composition of this one interesting in how it abides by the rule of thirds, by deliberately placing the focus off center. It is also great at communicating scale on both the vertical and horizontal, covering the screen top to bottom, side to side. But the main aspect that makes it stand out is how it is very difficult, even with shading, to determine if we are looking up, down or to the sides. This disorientation really accentuates the claustrophobia.

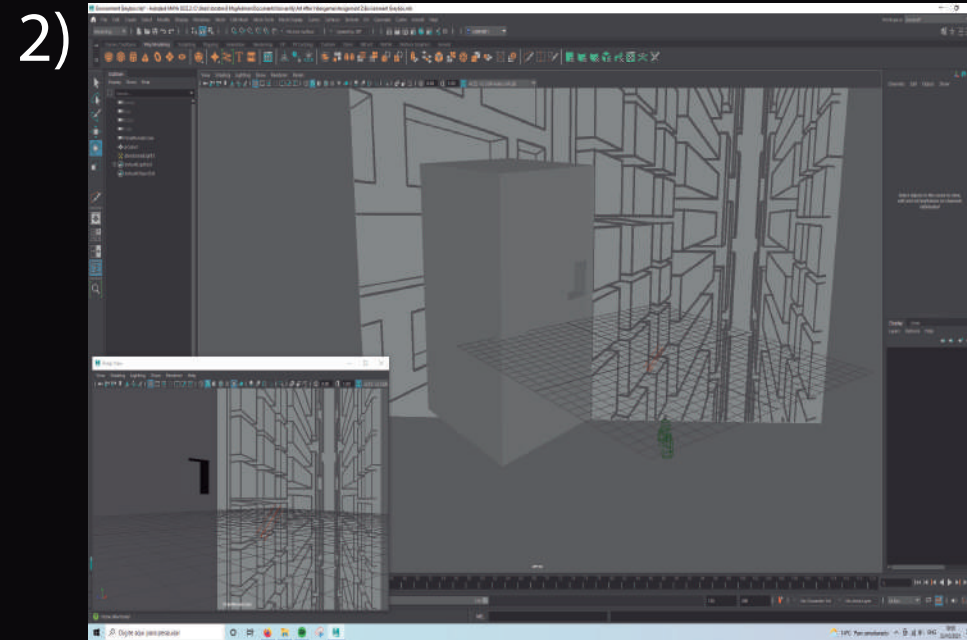


# REFINEMENT - 3D GREYBOX

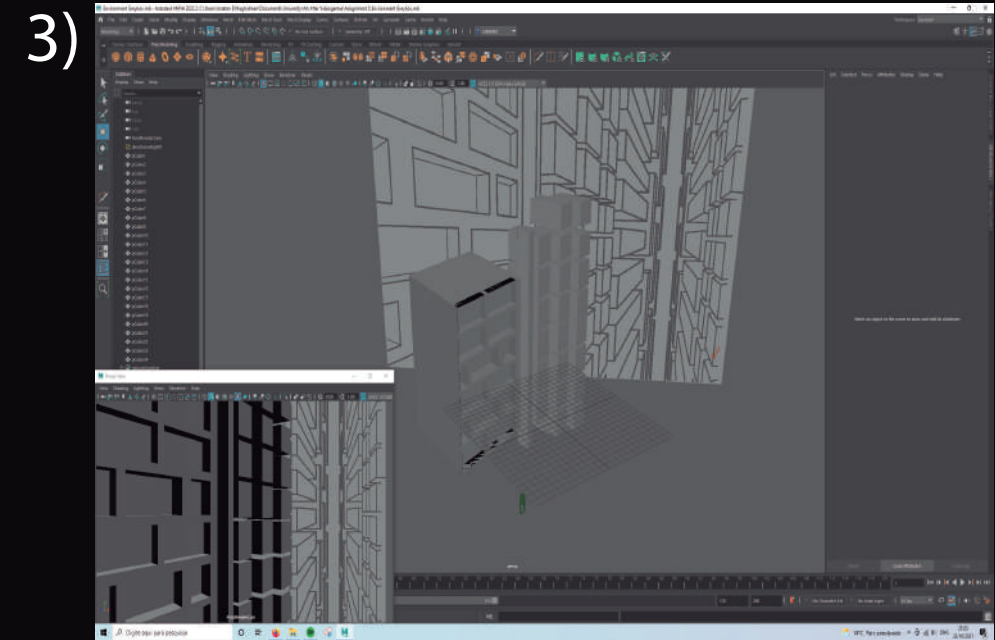
I have settled for the third concept because I feel as though it has the most unique composition arrangement, while also keeping the oppressive, claustrophobic mood. It also enables me to both focus on micro and macro details, as there are portions real close to the camera, and other real far. Hence, in order to refine it, I will first roughly block the greybox version of the scene in Maya, using mostly primitives.



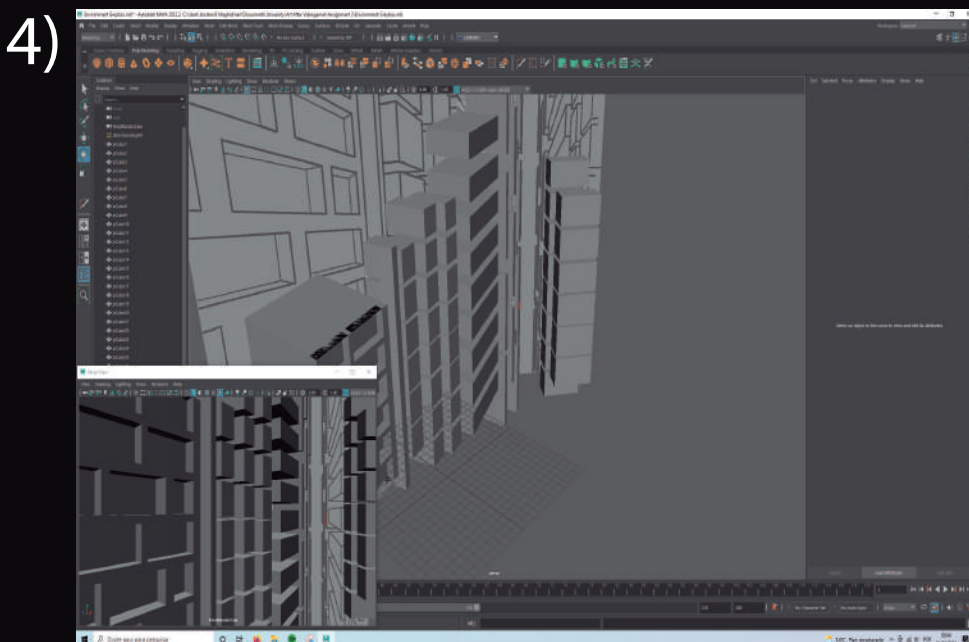
For starters, I simply imported the picture I made in Illustrator into a static camera in Maya (bottom left), while I block it all out on the rest of the screen with the perspective camera. This way I can see the final perspective and work simultaneously.



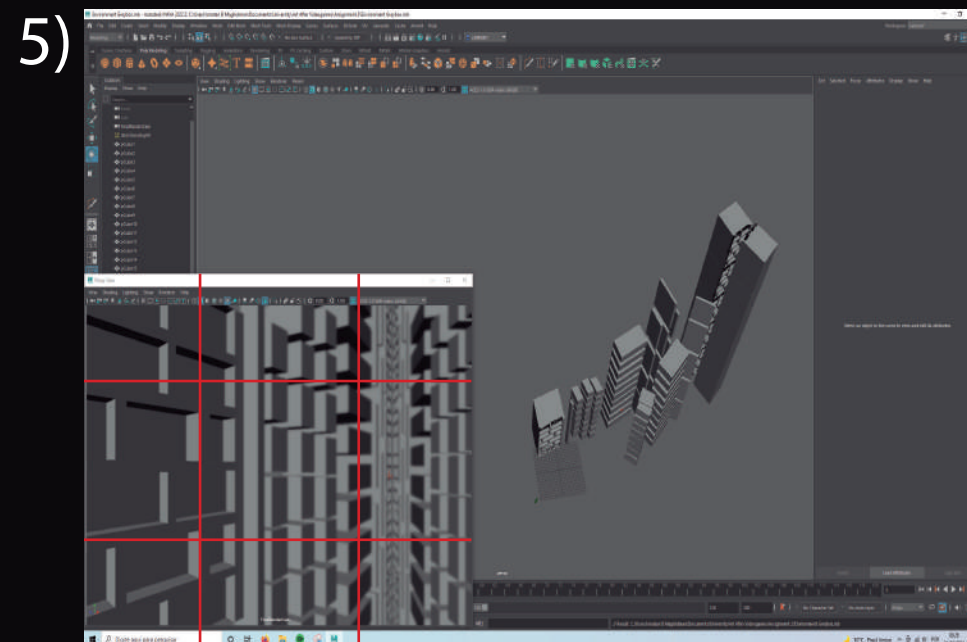
With positions set, I started blocking each part of the environment up with basic primitives. I quickly noticed that it was difficult to perceive details on the final render cam, so I added a temporary light source to roughly distinguish light/dark surfaces.



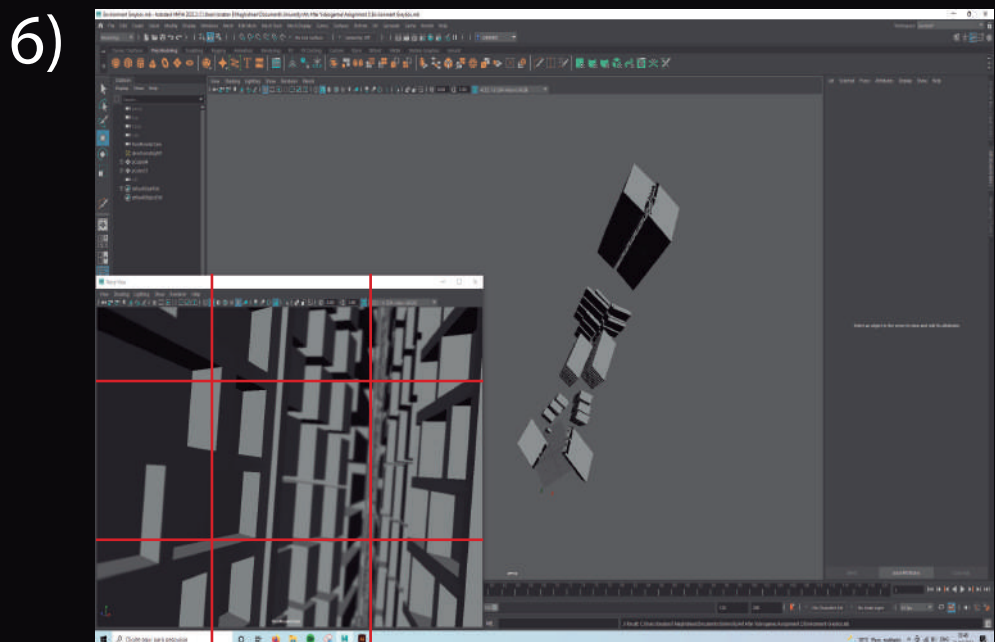
Although I am aware I will be very modular and repetitive in my final piece, for now I am still trying out multiple apartment designs for the sake of having an idea of which one looks most appealing when repeated in pattern.



As soon as I started blocking the opposite side of the buildings, I noticed the light turned the walls on the right side completely dark. I then adjusted the light to come from the back to the front.



When I finished blocking everything and added a bit of depth of field to the camera to check how it all looked, I noticed how the piece feels at the moment not claustrophobic enough. Hence, I decided to adapt the original sketch a bit, to deliberately fit the rule of three better.

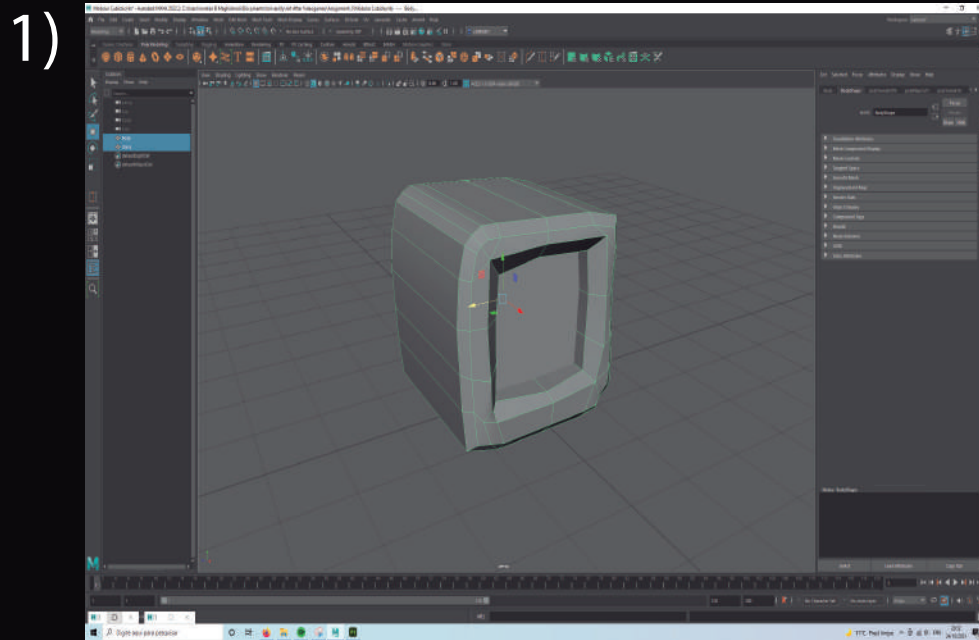


I tightened the gap between the buildings to create an effect, NOW it inspires entrapment. I also added a slight curvature inwards to the left as the buildings advance, to further disorientate viewers, causing a vertigo sensation. The final touch is that I rotated the camera a bit to give it a cinematic dutch angle.

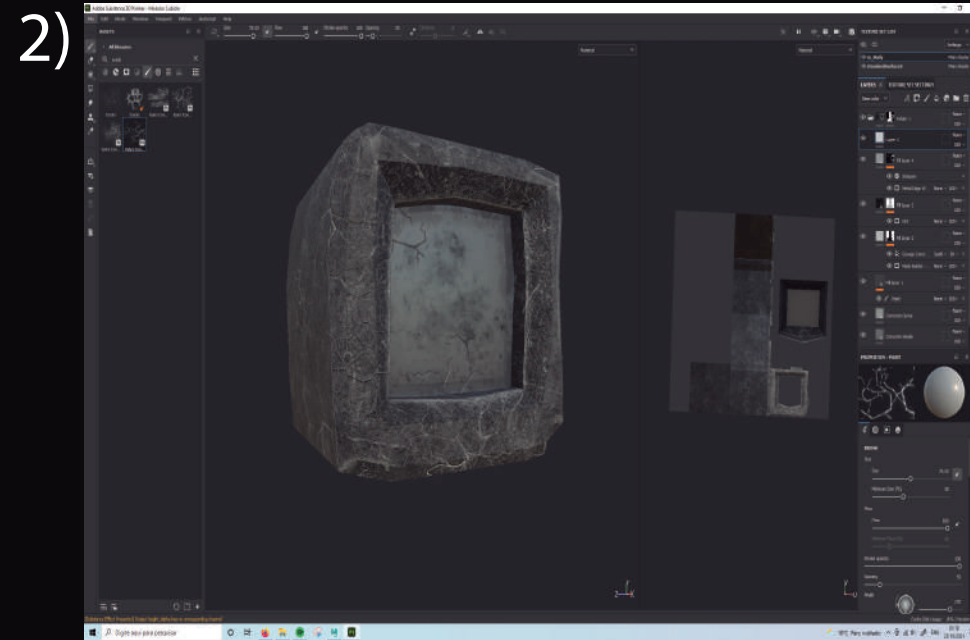


# REFINEMENT - MODULAR ASSETS

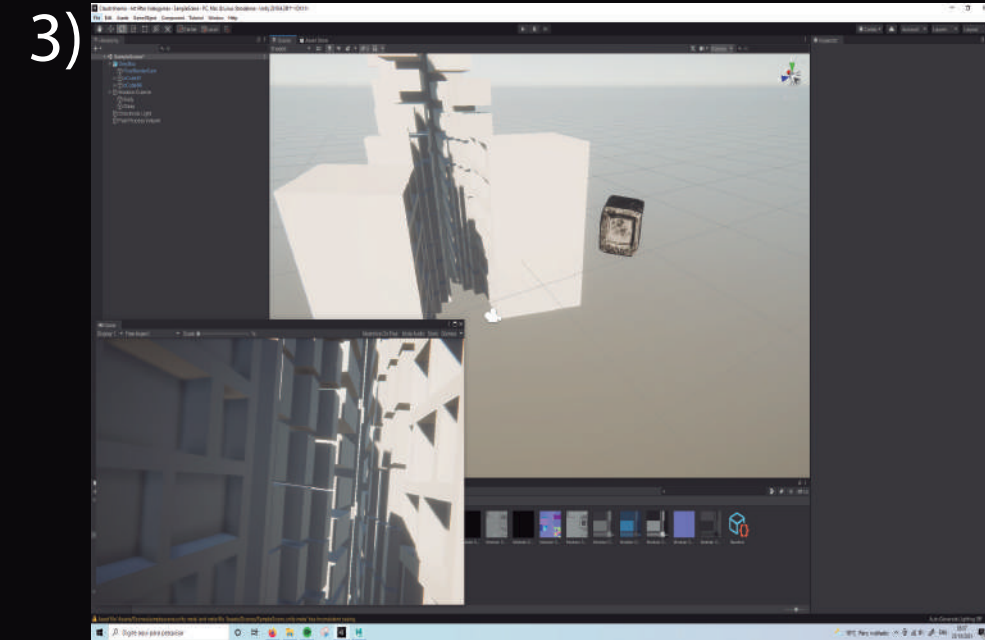
Now that the blocking is settled, I'll substitute the primitive shapes for refined assets. As previously stated in my intention, the goal is to make the environment feel inhuman. By making everything homogeneous through repetition, I can achieve this sensation of brutalist utilitarian architecture. Therefore, I will model and texture a single cubicle asset, which can easily be duplicated and slightly modified, then replace all of the primitives I currently have on scene. Then, to breath life into such repetitive pattern, I will also include other minor modular assets commonly found in urban areas.



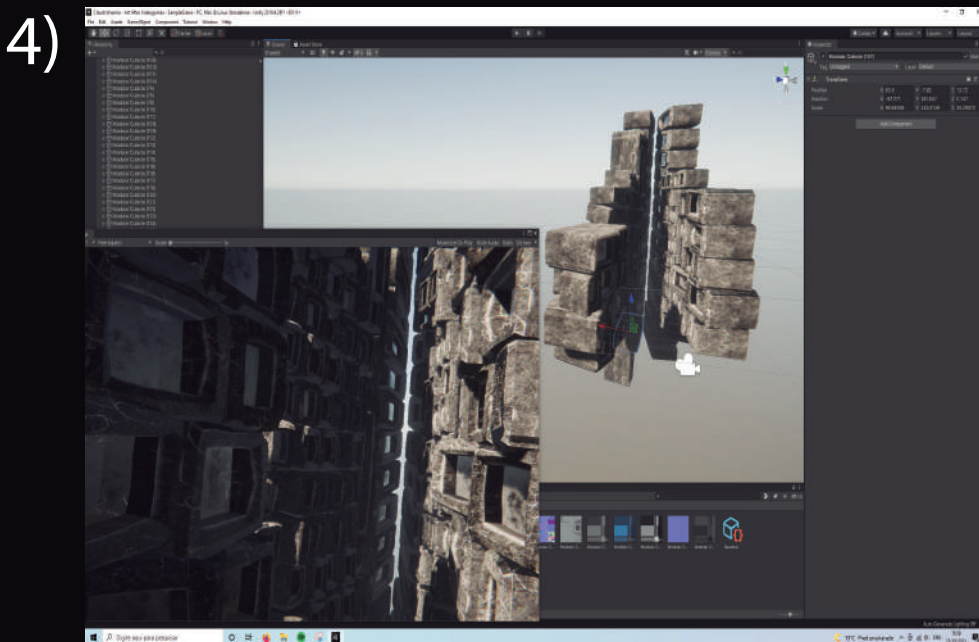
On a separate maya project, I created a hollow cube with clear signs of erosion, filled with a simple window of glass. Because the asset will be repeated, it doesn't even need to be very high poly or detailed. I then UV unwrapped it for export.



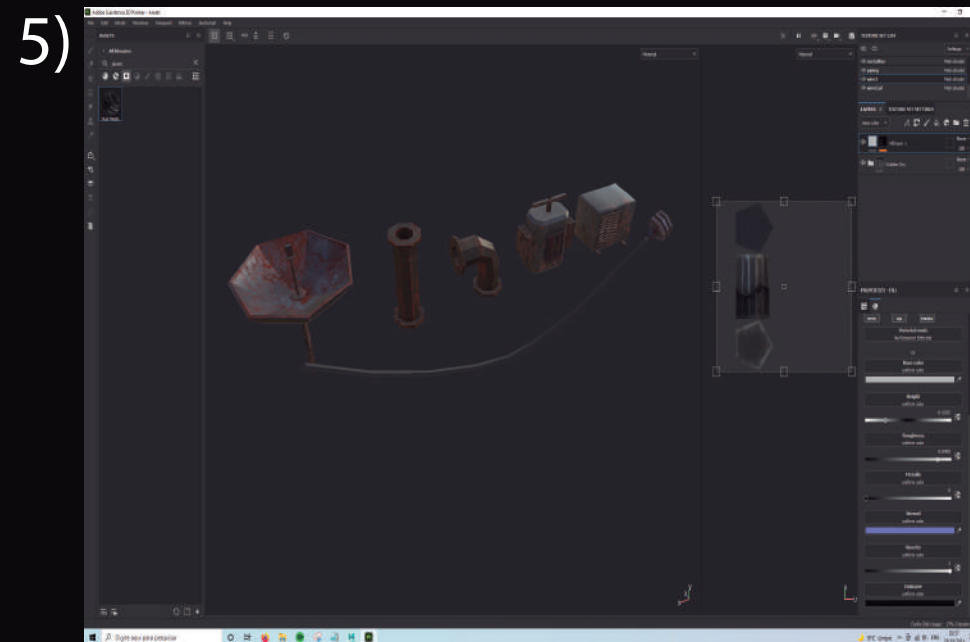
I imported that file into substance painter, where I gave the cubicle a cement material, and the window a glass material. Both have clear signs of poor maintenance and arson, so that it transpires the sensation of a grey, dystopian city.



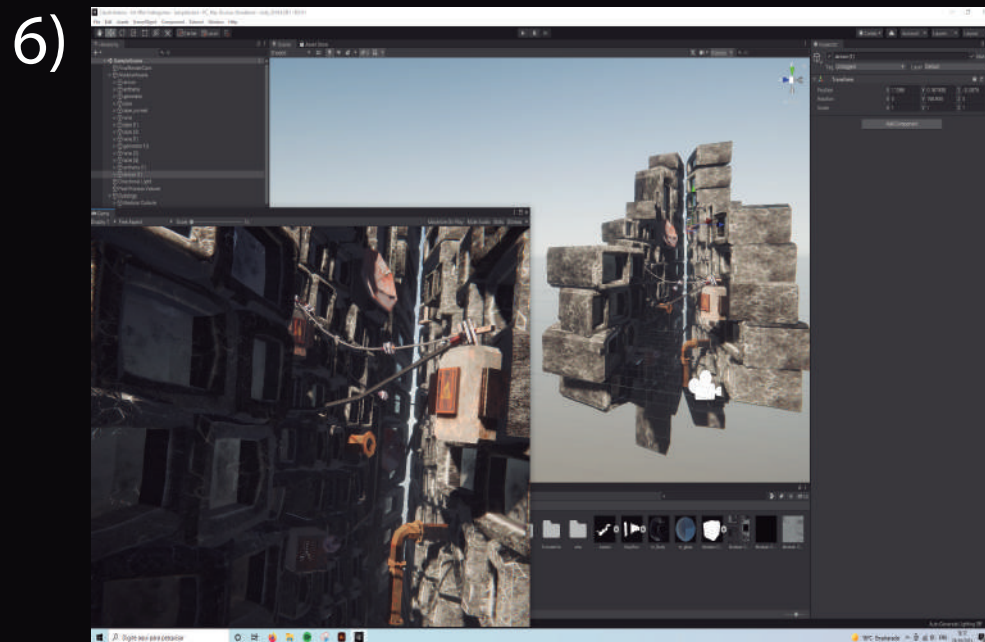
I exported the greybox meshes and camera from maya as one big fbx and imported it into unity. I did the same with the modular cubicle asset, exporting the meshes from maya and the textures from substance painter, then importing it all into unity.



I then started substituting each portion of the greybox for multiple copies of the cubicle, each with their own minor changes in either rotation, position or scale. Once the entire greybox was replaced, I deleted it all.



The repeated assets made the inhumanity of the scene clear, but perhaps too much. It was missing the human presence. Hence, I created new modular assets commonly present in urban areas in maya, textured them in substance.

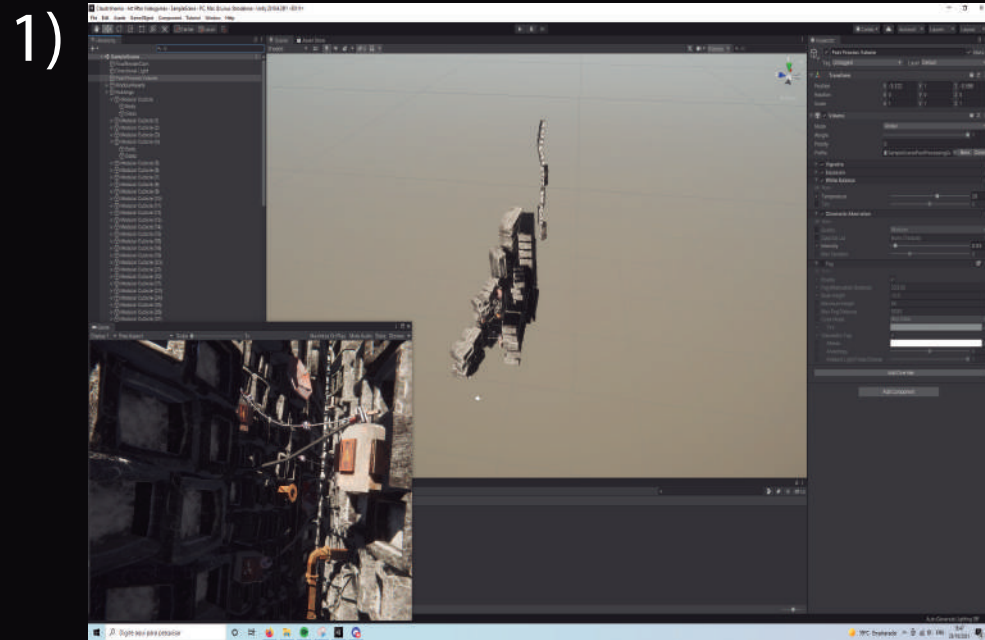


Once I imported them all into unity, using the exact same trick of changing the transforms of the objects, I made several copies of each modular asset and populated the scene with them. Now, all textures and meshes are adequately placed in the scene.

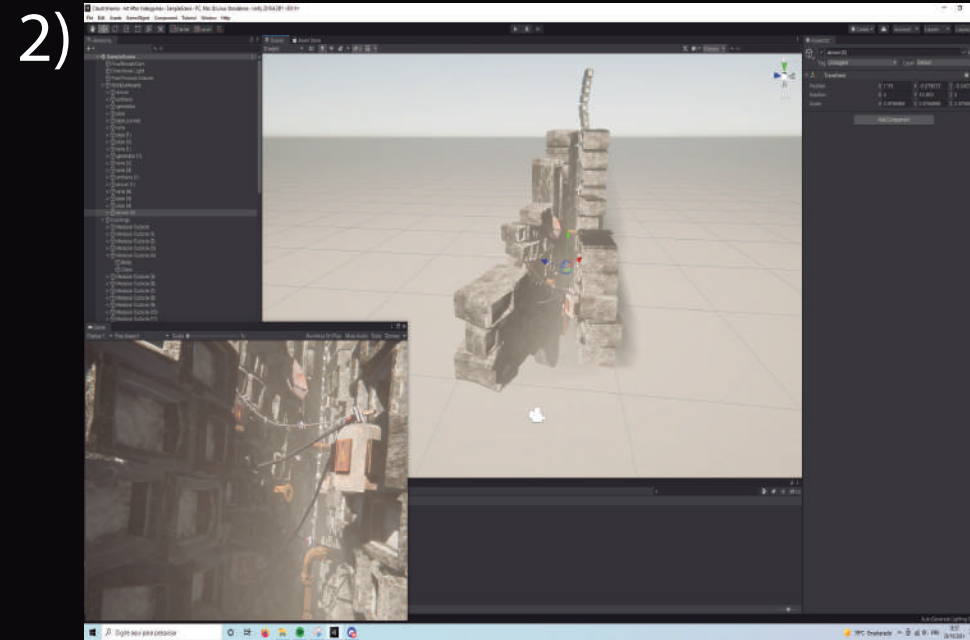


# REFINEMENT - POST PROCESS

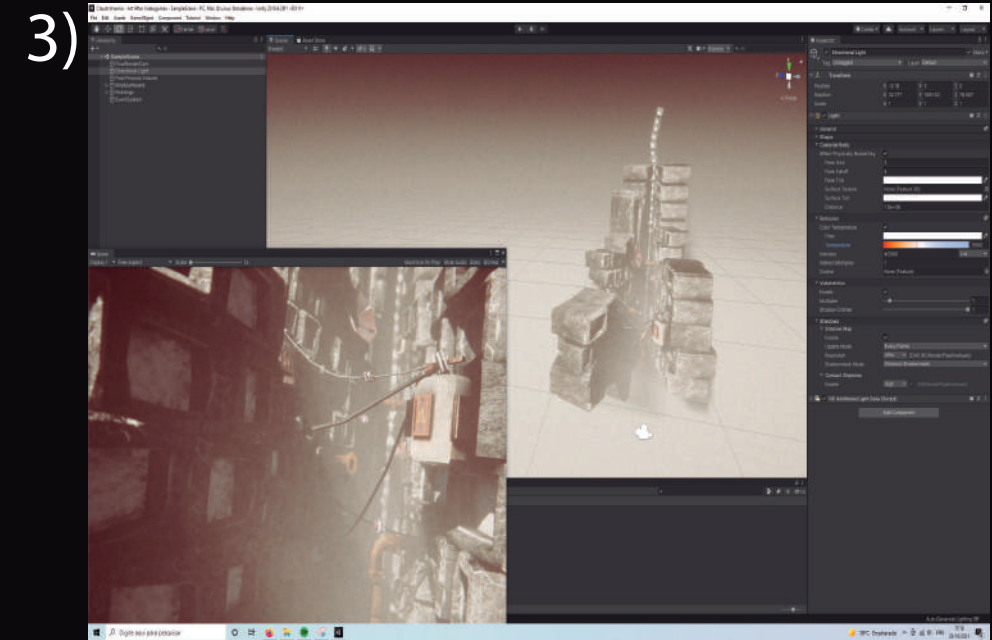
The final touch before calling the piece final is adding post process. Unity has many inbuilt settings for it, which I shall use in the HDRP pipeline to make the light really eye catching and the shadows very well defined. The goal for my final is to accentuate the already established geometry, but I want to ensure that the greyness and homogeneity of the space comes across. For this, I will design a setting on an uncomfortably hot day.



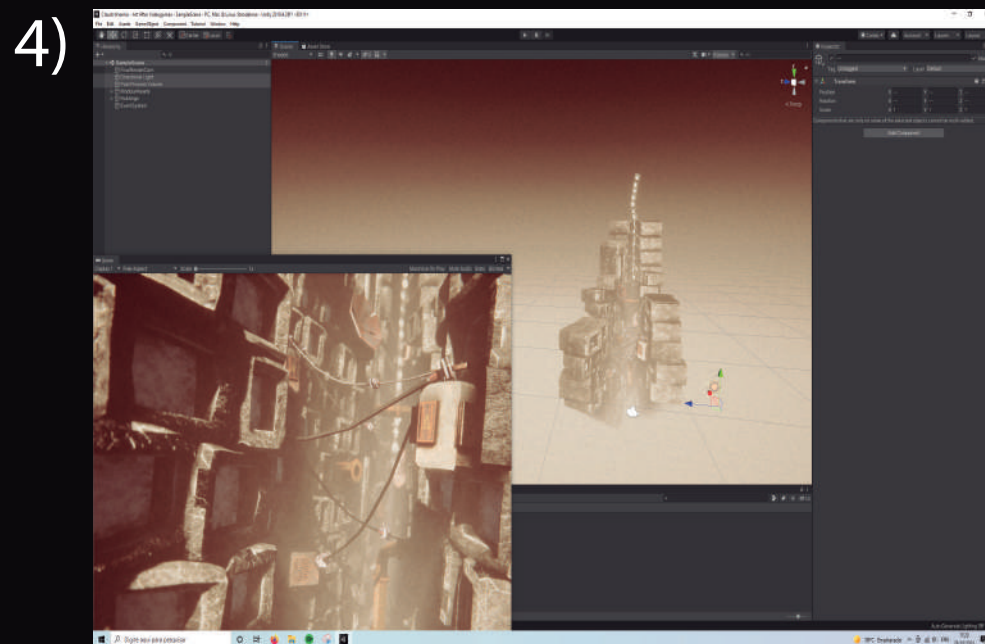
Prior to starting the post process, I fixed the emptiness seen on the space between buildings towards the end of the piece by adding more cubicles in a distance, because the light disturbed the grey overtones.



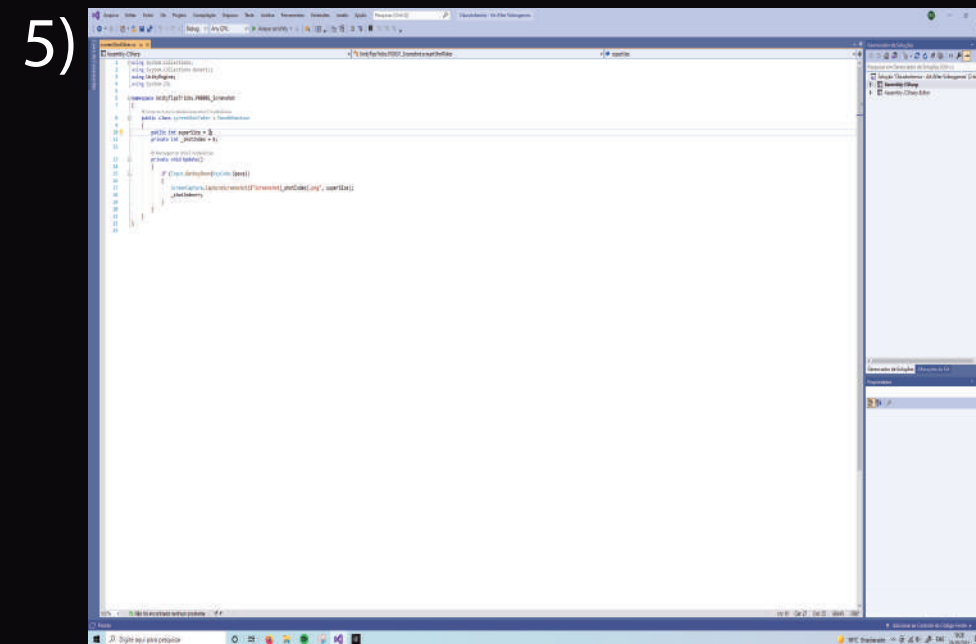
I started it all by adding in fog, which interacts great with the volumetric lights. It really makes the setting grey as I want it, making it look really polluted.



I colour corrected the frame to seem more red and orange, so that the greys still came along while also communicating the warmth of the day. I also added a depth of field so that the background is slightly blurred.



Seeing how the new post processing made the scene darker, I needed to rearrange the light's angle, as certain key areas of visibility weren't being seen clearly.



Finally, in order to take a photo in full resolution, I wrote a simple code in unity that takes a screenshot based on the window's size, as opposed to just taking a regular screen print because it would lose a lot of quality.



# FINAL RENDER

Already I can say I feel successful! The claustrophobia comes along clearly, the warmth of the day feels unbearable, and the environment feels inhuman, while also clearly being inhabited. It ticks all the boxes I had set out. Now, all that's left is to make two more variations of the same in different colour.





# CALLOUT SHEET

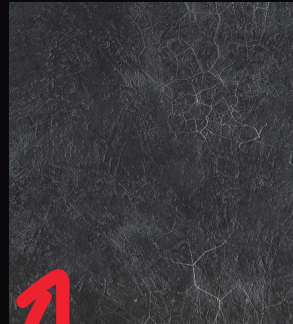
View of the city-scape from above. Architecturally, even the "streets" are modular, in a labyrinthic, repeatitive pattern.



Each one of those city blocks looks something like this within context.



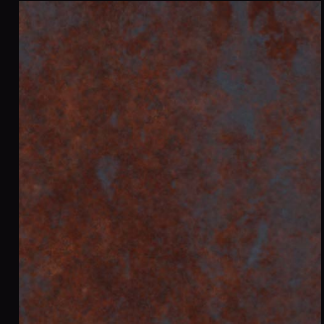
Concrete



Glass



Rusted Metals



Above are all the assets I used for this piece, which have all been duplicated or slightly modified to add variety.



# COLOUR VARIATIONS



## Variation #1: Rainy Day

Achieved by changing the post process colour correction values to accentuate blue tones. The rain was a particle system I made.

## Variation #2: Night Time

Achieved by increasing the exposure to filter the light. For the windows with the lights turned on, I created a cube with an emissive yellow material, coupled with a point light.

