E1.txt

E1

FMP.txt

FMP

>>> Final Major Project

blog

Jumpscare.jpg

20/11/2025

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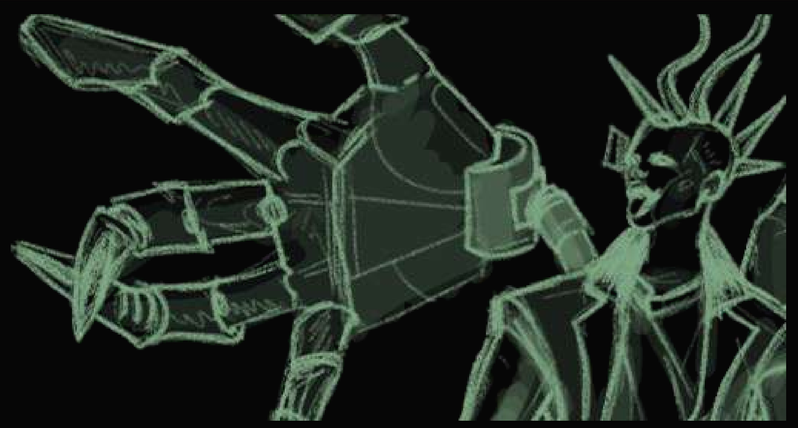
Contents



Summer Work

3d Website using 3JS

During the summer, I set myself the project of creating a website to house my portfolio and CV, using my most recent finished project, The Monster. This entailed creating a corridor, and animating the monster to walk through it <read more on the blog>, and using ThreeJS (JavaScript) to code the whole scene together. As such it can be loaded into the browser natively. The monster is currently able to walk through half the corridor before I ran out of time

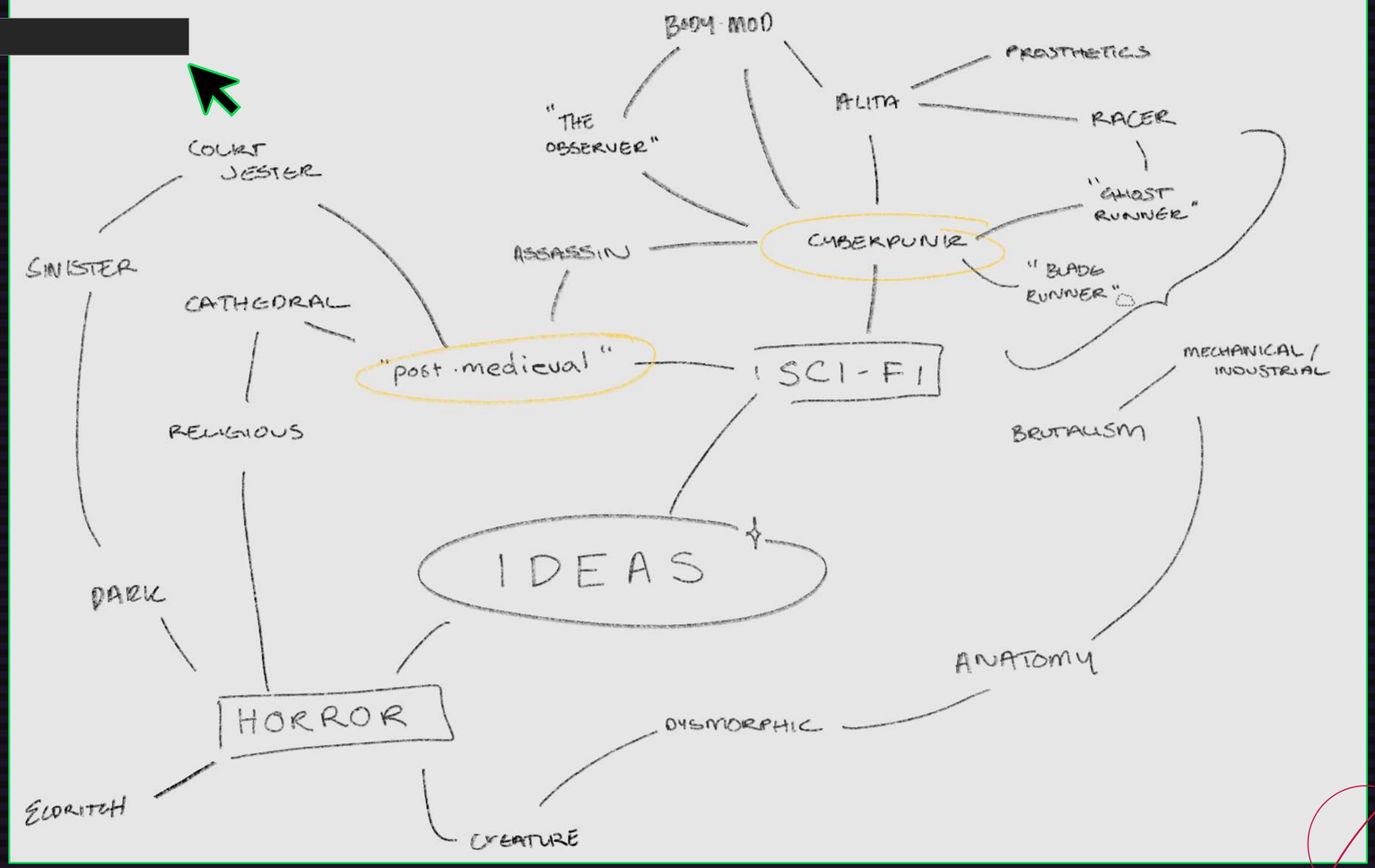
<-- read more

three.js

-- LINK TO BLOG

//Context: Preliminary ideas

Initial Brainstorm



To investigate the kind of ideas I had, I created a mind map. Here I started out with base genres, 'sci-fi' and 'horror'. From there I investigated what motifs made up those genres, as well as any pre-existing IP that exist, such as 'Blade Runner' and 'The Observer'.

Within this exploration, I landed upon three different ideas that I wanted to explore. These were: "cyberpunk" - Exploring sci-fi elements in a classically dystopian futuristic society, looking at prosthetics and mechanical enhancements. "post-medieval" - A sub-motif of sci-fi, looking at religious influences on sci-fi and exploring how that would look in that society, with a sinister and cultish addition to it. Finally, "horror" - body horror especially, looking at distorting the figure and proportion of a character to create something unsettling and scary.

In the end, I decided to go down a mix of these routes, especially combining horror and sci-fi for a 'cyber-horror' aesthetic; using that motif of distortion from both genres to create something both unsettling and unusual within a futuristic context - this I feel being something I have not yet explored.

Research:

World (environment)

"Upgrades, people. Upgrades"

- A highlight on the competitive and striving spirit to make oneself better.

The motto of the project

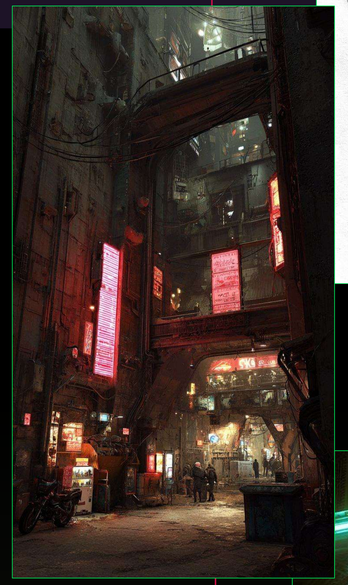
While this creates great opportunity for medical advancement and the opportunity to push past human biology, it also means that people become unique in ways both good and bad. The bad take the opportunity to be bad, and the good grasp for happiness in a fragile world. Swap and change and become anything from an angel to a demon, a god to an ant.

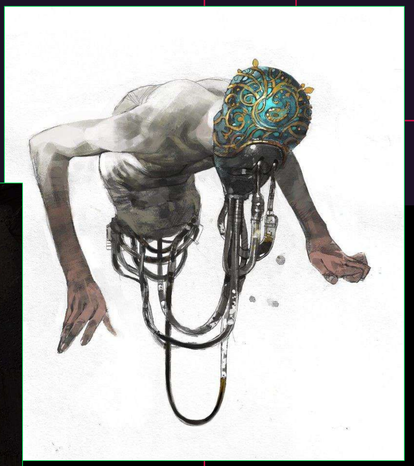
World Context

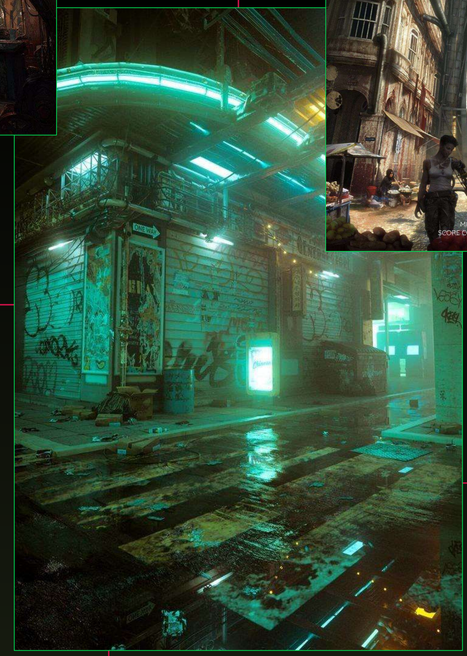
// Thinking about the world that the character will inhabit is very important to me as it weighs heavily on the design of the character.

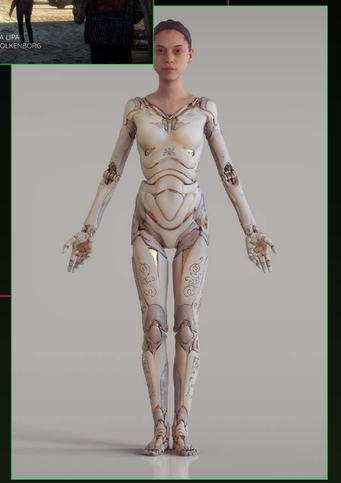
@-- "Who are they in the world, what is their purpose, their aims?"

// Thinking about a cyber-horror aesthetic, I started thinking about dystopias, and the pain of constantly trying to make yourself better. For instance, the kind of character who would do their own enhancements at their own risk, or someone who had gotten them against their will. These kinds of stories told the tale of a competitive underworlds, and a dog-eat-dog rhetoric. Hence, I investigated the world of Alita: Battle Angel (2019), which is close to my own ideas - I, however, want to go slightly darker with it, highlighting more of the pain of it.



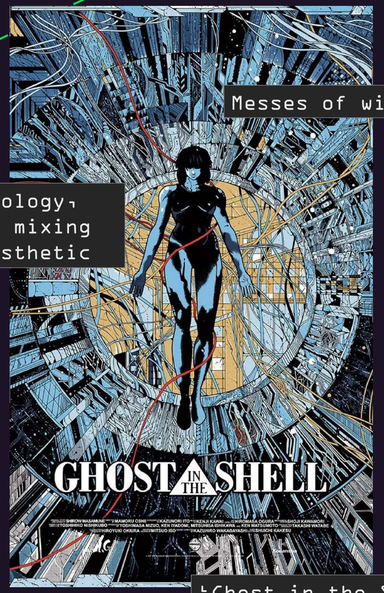




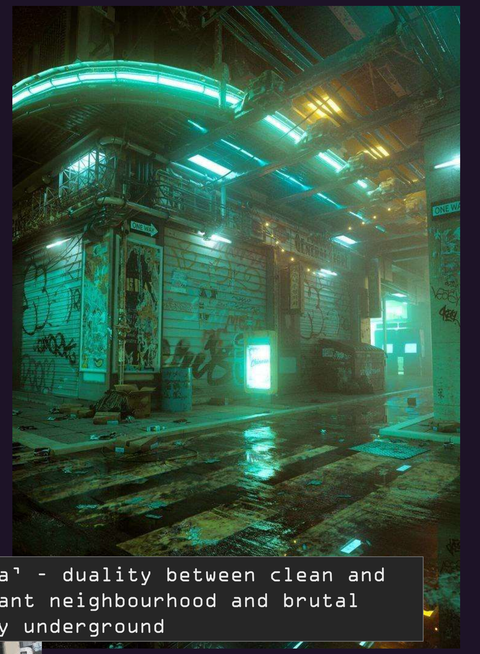


Research:

World (environment)

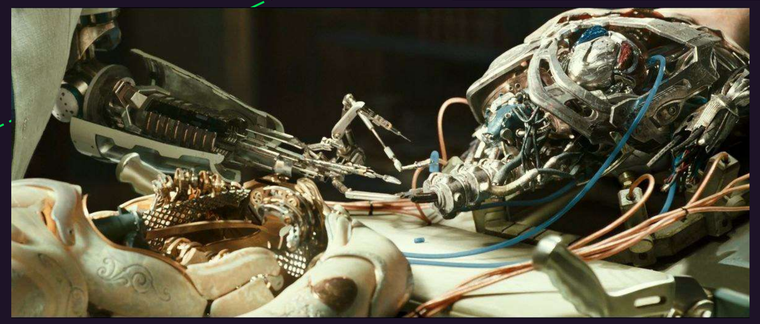


Messes of wires



'Alita' - duality between clean and pleasant neighbourhood and brutal gritty underground

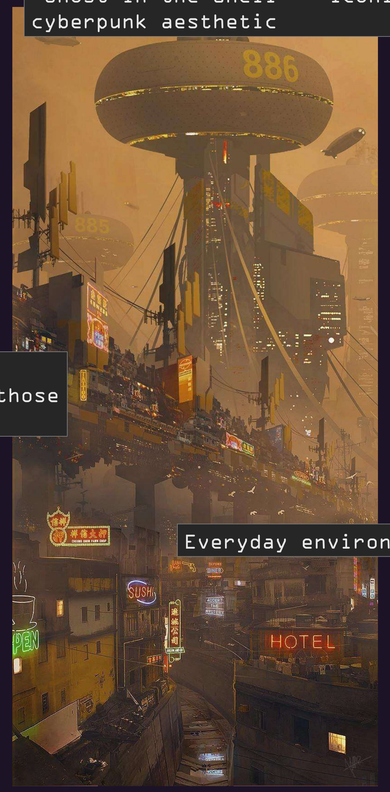
'Alita' - refined technology, beautiful and polished, mixing with the typical DIY aesthetic



'Ghost in the Shell' - iconic cyberpunk aesthetic

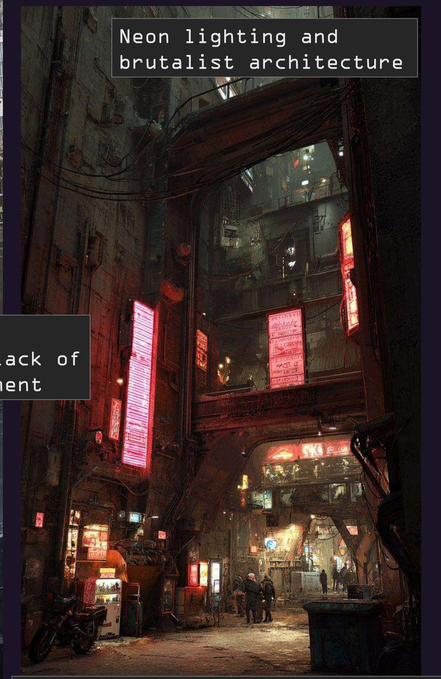
'Doctor Who' - normalised enhancements - like an opening in the brain for direct download. Fit for purpose and professional

'Alita' - mix of those with seamless enhancements, and those with unpolished, bulky ones

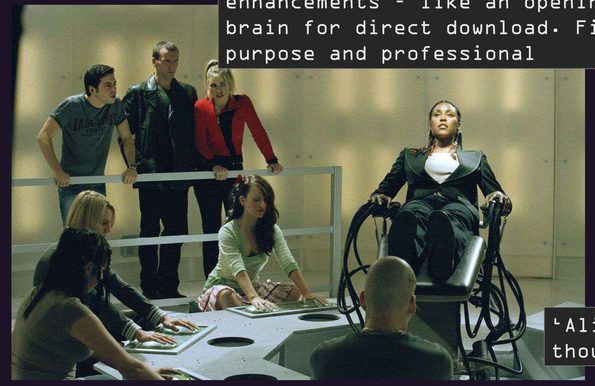


Everyday environment

Cluttered visuals, overbuilt cities - lack of instutional improvement

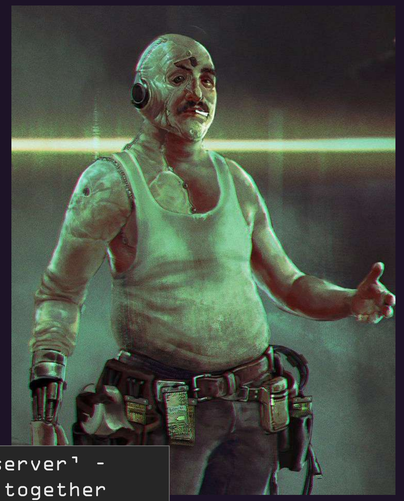


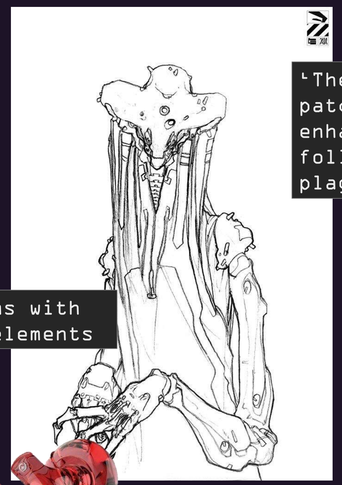
Neon lighting and brutalist architecture



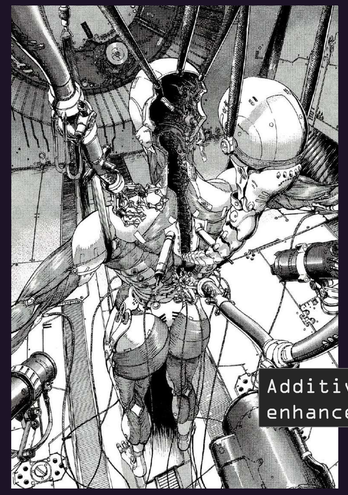
'Alita' - environment feels coherent even though quite patched together

Elegant forms with cybernetic elements



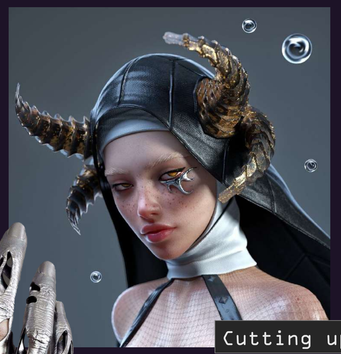


'The Observer' - patched together enhancements following a cyper-plague

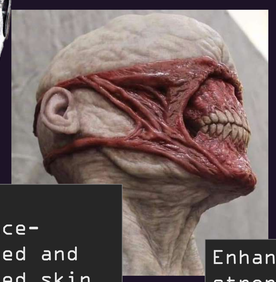


Additive enhancements

Metalic elements

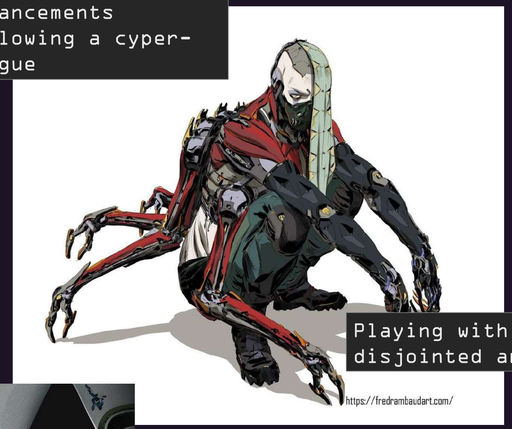


Cutting up the form

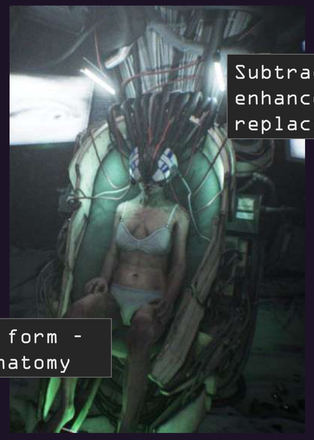


Horror influence- stretched and mutilated skin and tissue

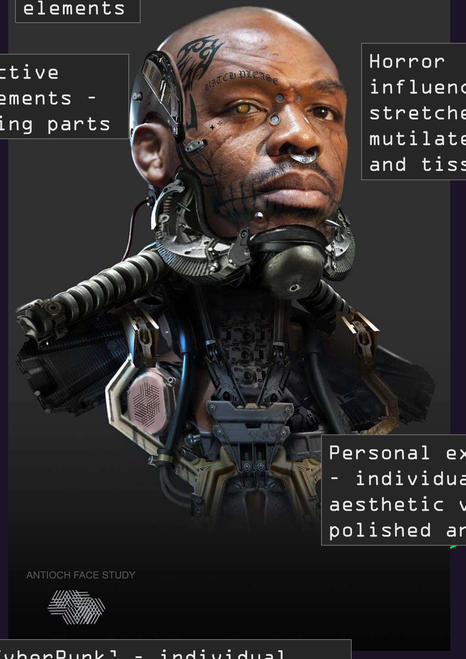
Enhancements for a purpose - strength, agility, etc



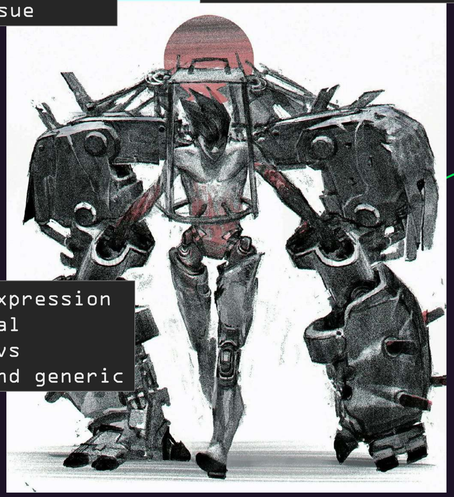
Playing with form - disjointed anatomy



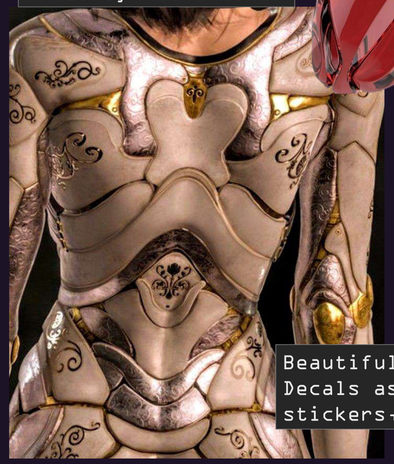
Subtractive enhancements - replacing parts

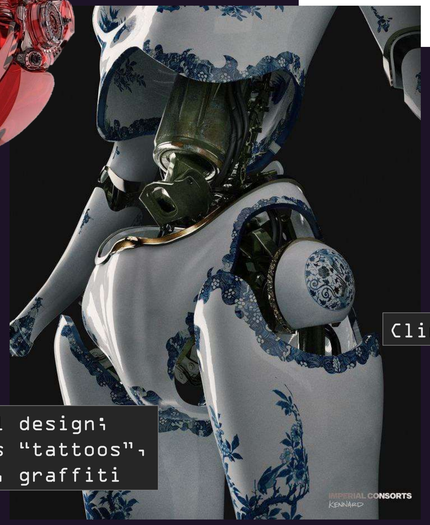


Personal expression - individual aesthetic vs polished and generic



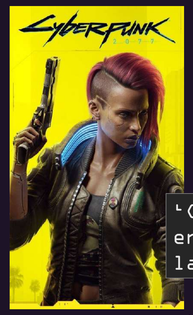
Considered corporeal architecture, anatomiy mechanisms





Beautiful design; Decals as "tattoos", stickers, graffiti

Clinical aesthetic



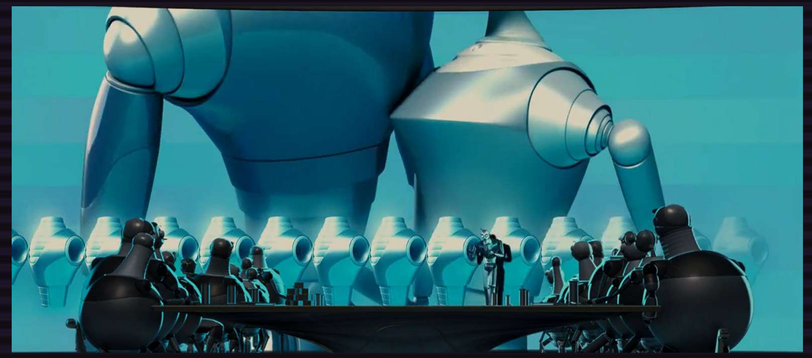
'CyberPunk' - individual enhancements, influence from lawless city

Research:

Art Style & Characters

Research: Films

Robots (2005) & Alita: Battle Angel (2019)



As they said in film, “Upgrades, people. Upgrades” This film is a light-hearted family animation. I took a lot of inspiration from it, namely from its mechanics.

Robots (2005)

An underlying mechanic of the film is the ability for characters to switch out their own parts. In one scene, Fender loses his legs and finds another set to put on. He does this easily and the parts fit universally in the same socket. Being a film from long ago, this idea has settled itself in my mind, with the idea of switching out parts easily and ‘upgrading’ yourself becoming an integral idea for this project.

Alita: Battle Angel (2019)

Alita: Battle Angel is a Sci-Fi film which uses heavy CGI to bring its world and characters to life. The main basis of its world is the characters being able to become what they wish, often having mechanical parts and ‘upgrades’.

<<<<<<<<<<

We see this in action mainly with those characters who operate in the underworld of the city, assassins, bounty hunters etc. They utilise the opportunity to switch out their parts to become stronger. We see this especially in Alita switching her body from the fragile looking china-inspired to the berserker body, indicating her ‘upgrading’ herself for the better.

This idea of being able to make yourself stronger and in a better image of yourself has stuck with me for this project.

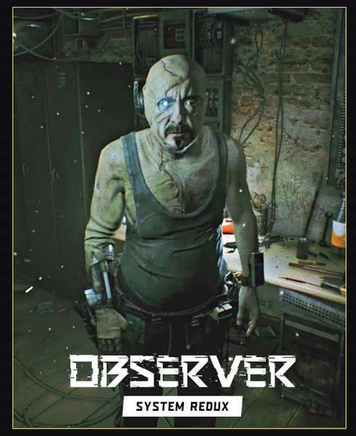
Research: Games

The Observer (2017) & Cyberpunk 2077 (2020)

The Observer (2017)

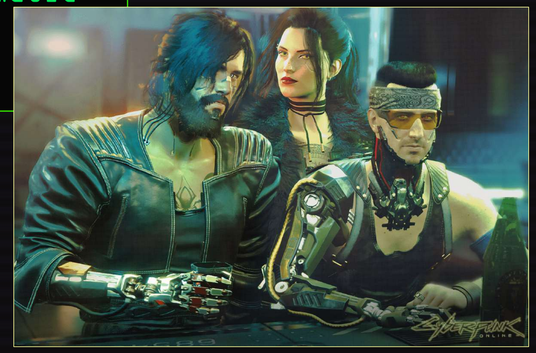
Observer is a psychological horror game following a detective tracking down a mystery surrounding his estranged son. The main gameplay elements involve hacking into people's brains for information and using augmentations to scan for clues. These augmentations allow for him to the job of investigator and forensics, showing the good that such modifications can provide. However, there is the sinister element also present in a digital plague which manifests itself in those with augmentations and addictions to them.

This game is along the lines of what I want to achieve as it shows both the advantage and disadvantage of such technology as well as how people are going about acquiring it. For instance, the character on the right is noticeably cobble together with various adaptations stapled and attached to his body. I really like this kind of detailing as it tells the narrative of the lower classes fighting to be better, as well as being very visually interesting.



Cyberpunk 2077 (2020)

Cyberpunk tells the tale of Night City, free from Government and Legislation. The city has developed into heavy usage of machinery and robotics to go about it's daily function. Subsequently, the populace tend to be of lower classes, with cybernetic modifications and cosmetic addictions.



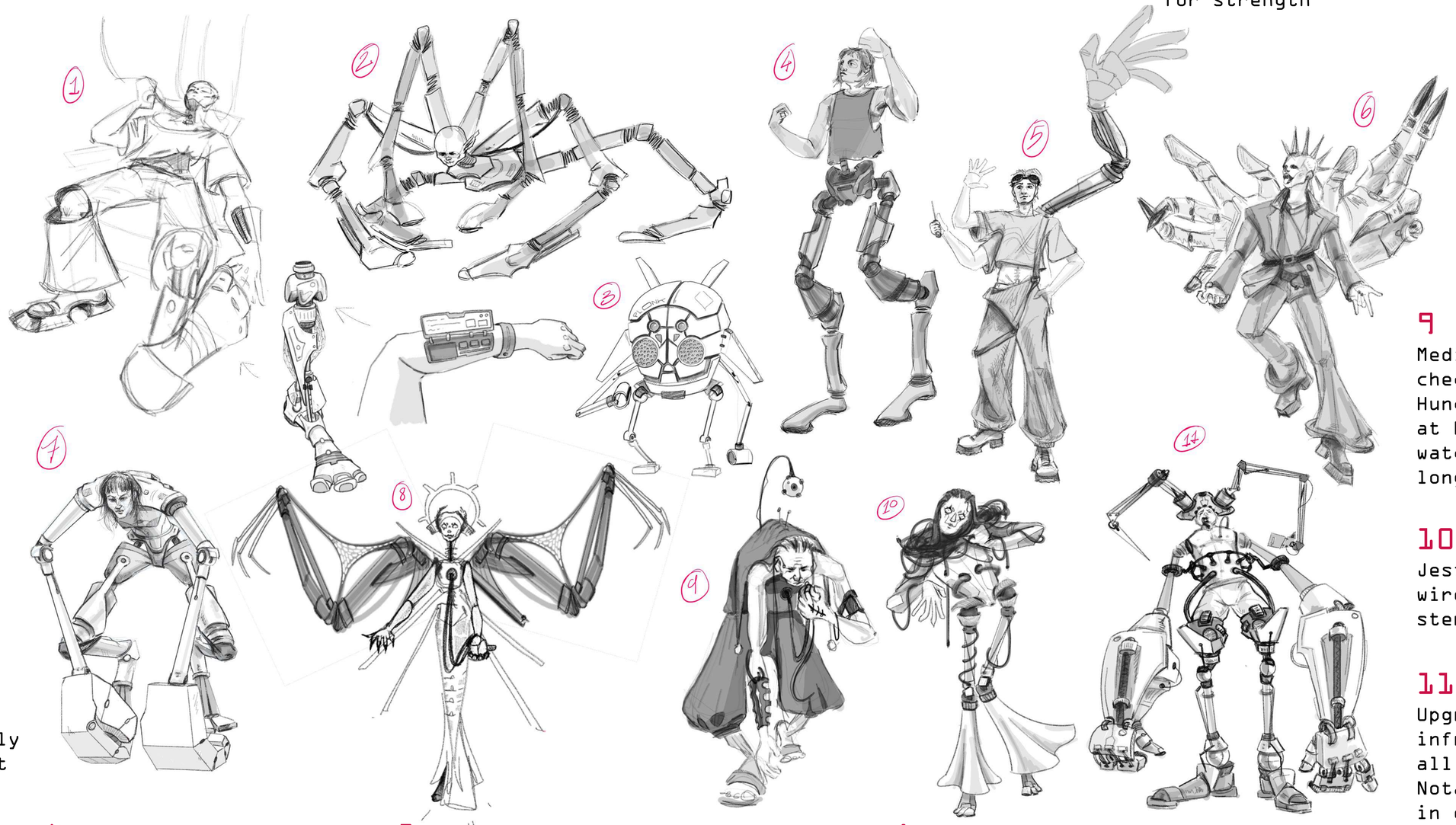
Like Observer, Cyberpunk deals with a post-noir narrative, using investigation and mystery to tell its story.
I love this style of game for dealing with the issues of 'its time' as well as the brutal reality of playing god with the human body. I want to embody this energy in my own work, showing narrative through its design to create something thoughtful and expressive.

Concept

1 - Wired In. Ports are a feature of the body, and the user can upload and inject at will. Parts of the body are upgraded and mechanic

2 - A completely different body, with only the head left attached. I wanted to think about how bodily functions would operate. So, they have a torso area and drawers which can process waste and blood

3 - Completely abstracted from a human body. Friendly mecha. Can be giant or small, hero or sidekick. I personally don't find it strong enough to be a hero



4 - Fighter type. Mechanised legs to improve agility and power. Still notably human, indicating at character morality

5 - A Mechanic. Has 4 arm attachments that can be switched out depending on need. Showcasing a giant hand attachment that useful for lifting cars or servicing mechs.

6 - Punk Angel. Upgrading purely for looks rather than improving his body. Attaches to the punk mentality well, being his wings seem scrappy rather than polished.

7 - Fighter type but fully mechanised. Joints are articulated the only human feature remaining is the head. Upgrading for strength

8 - Angel Fish. Fully articulated wings using stretchy rubberised webbing. Cult figure of worship. Wears "heart on their sleeve"

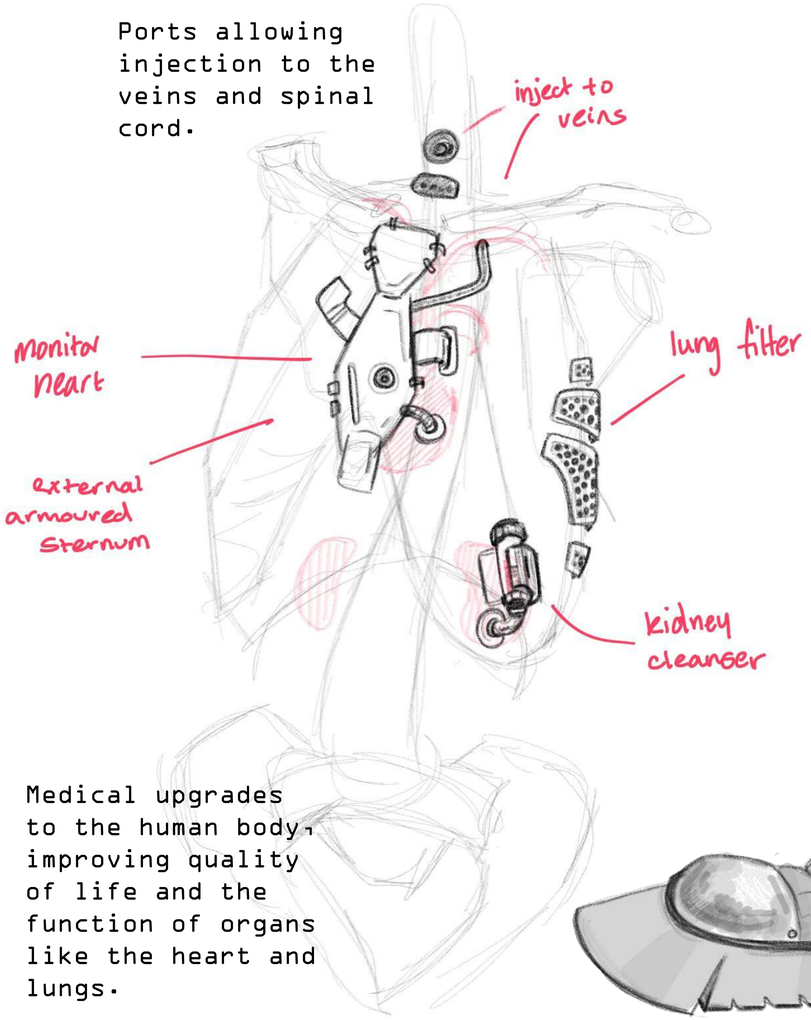
9 - Old man walking. Medical upgrades for checking health. Hunched back. Looking at heart like a pocket watch "how much longer?".

10 - Mechanical Jester. Wrapped in wires like a ruff, stemming from hair.

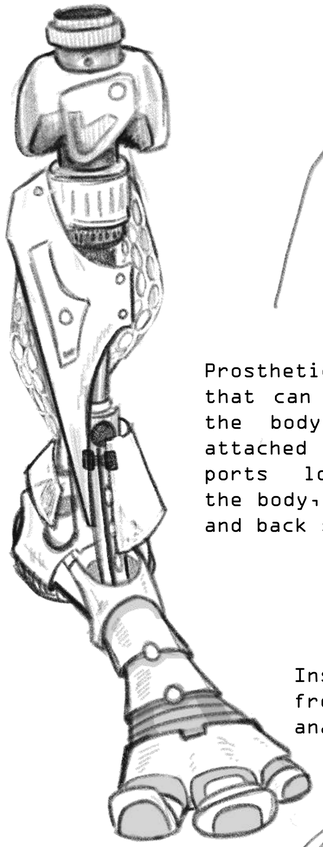
11 - Painful Mecha Upgrade. Mechanical infrastructure located all around the body. Notably has no limbs, in exchange for mechanical ones attached to ports at the limb sockets.

Concept
Extended Ideas

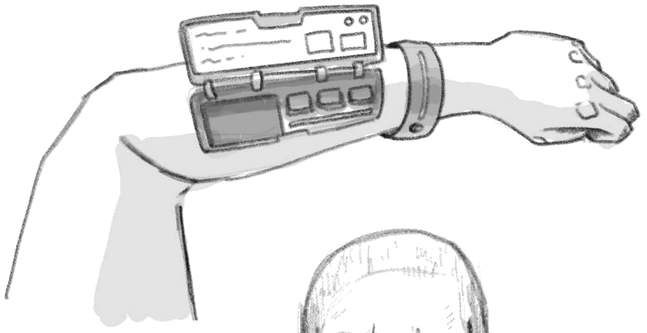
Ports allowing injection to the veins and spinal cord.

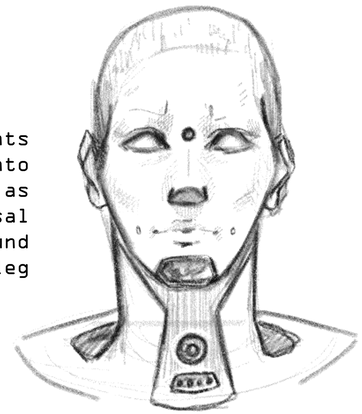


Medical upgrades to the human body, improving quality of life and the function of organs like the heart and lungs.

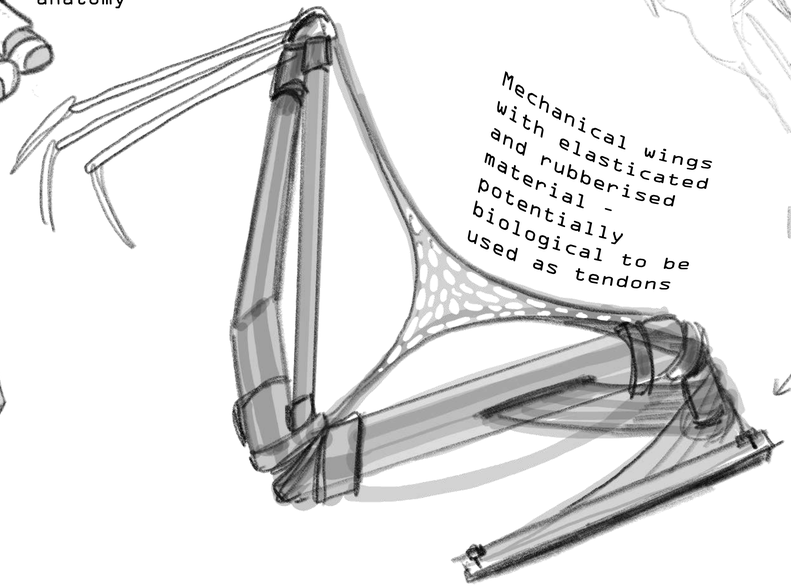


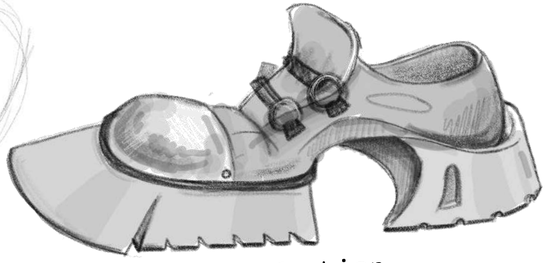
Prosthetic attachments that can be embed into the body as well as attached to universal ports located around the body, like arm, leg and back sockets



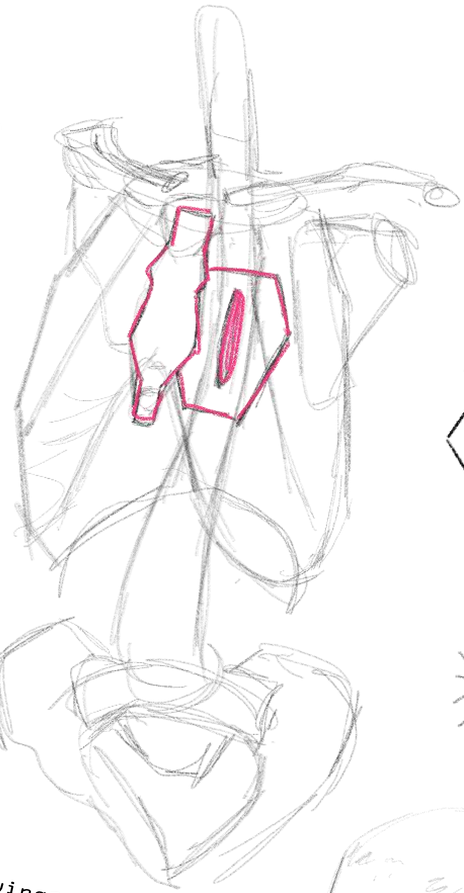


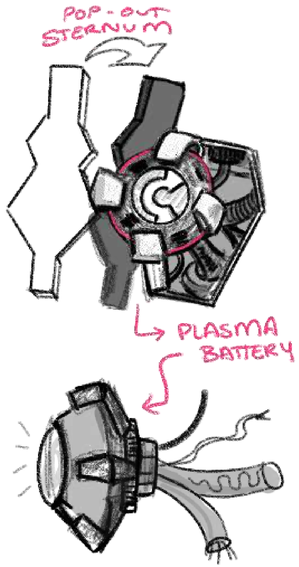
Inspiration from animal anatomy



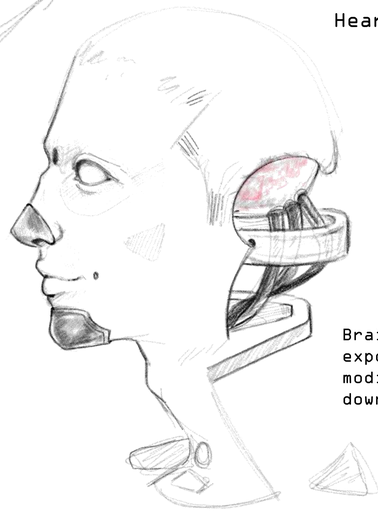


Extreme fashion





Heart upgrade



Brain upgrade - exposed modification and download/upload

Concept

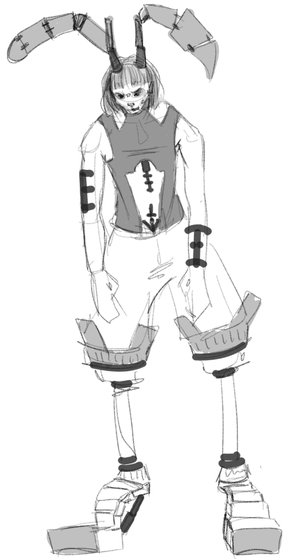
Iterations on Concepts

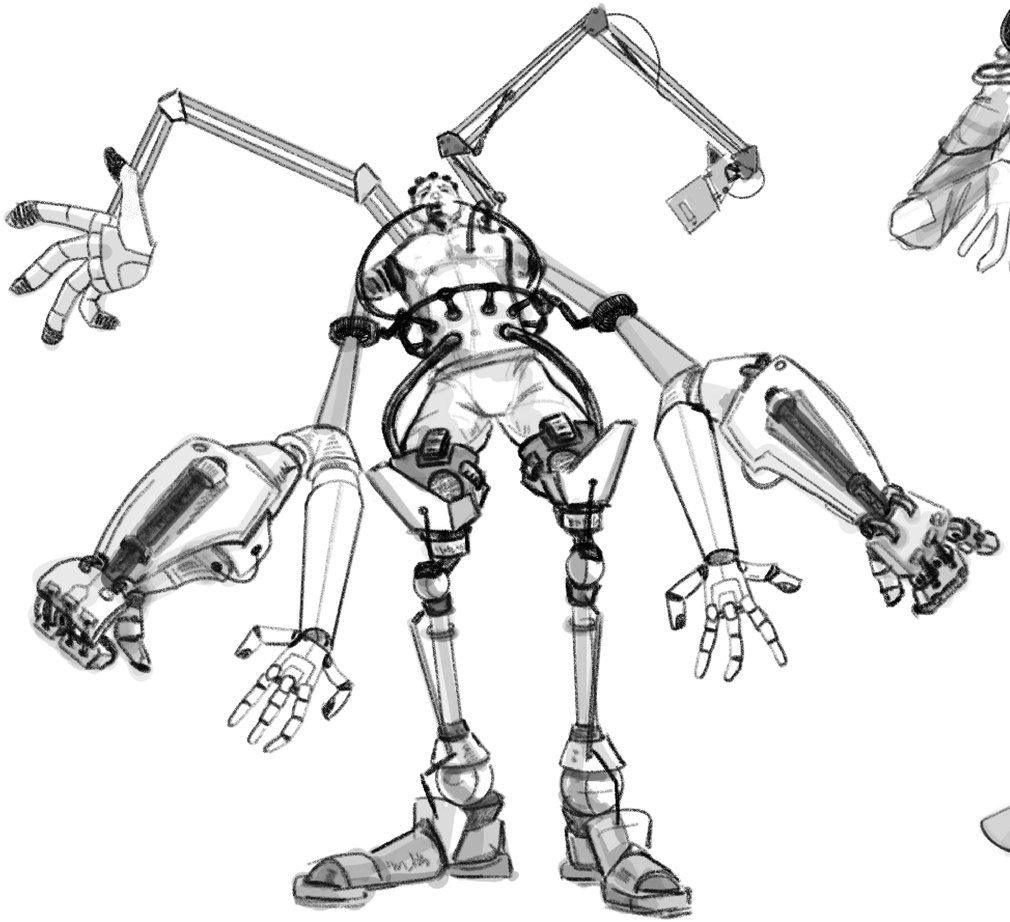
Votes from peers:

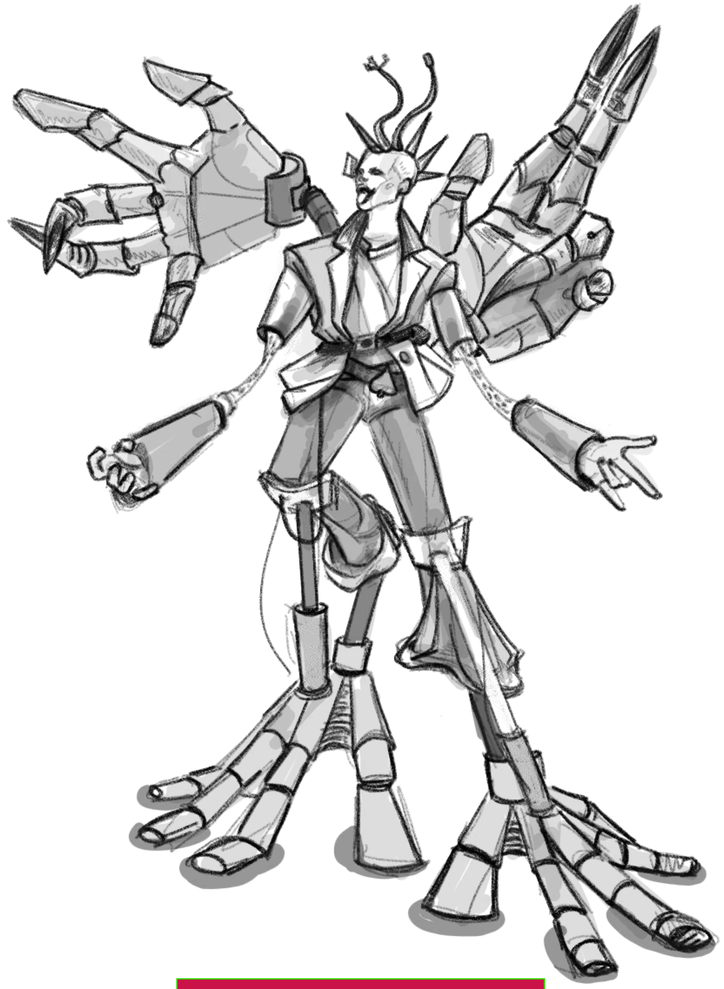
Putting my thumbnails to the votes of my peers, collectively they received the following:

#2 - 2	#8 - 6
#4 - 1	#9 - 2
#5 - 1	#10 - 3
#6 - 6	#11 - 5

>> Find out more in the blog







For my final concepting stage, I decided to do iterations upon my existing thumbnails, mixing in elements from other designs or otherwise improving them. I also had a discussion with the lecturers, all of whom agreed to a mix-and-match of the most popular designs

During class, I displayed a print-out of my thumbnails to the class to vote on, as well as an online version on discord. This I used as a gauge of my most popular designs. I was pleasantly surprised with how #6 performed as I thought it was a design without much purpose. However, as I love it too, I decided to iterate it in such a way to give it some more purpose and intrigue.

Votes on iterations:

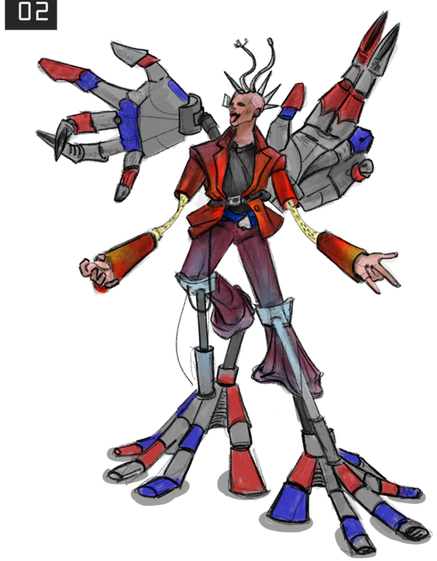
I put my iterations to an Instagram vote which revealed the following:

#1 - 5
#2 - 4
#3 - 7

Concept>Colour Iterations

01

02



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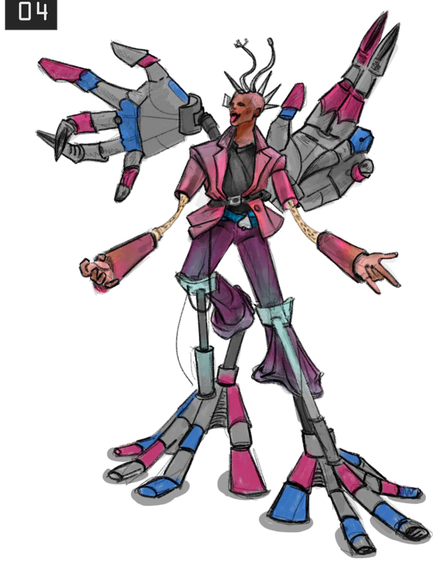
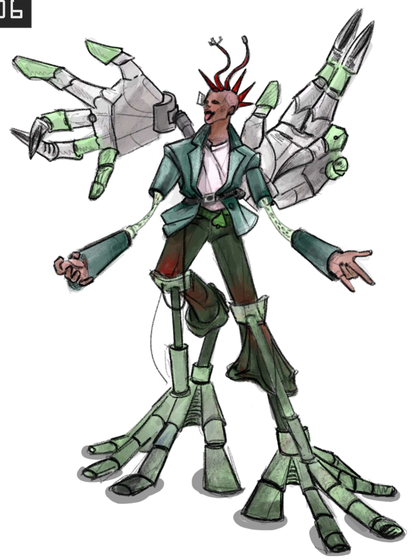
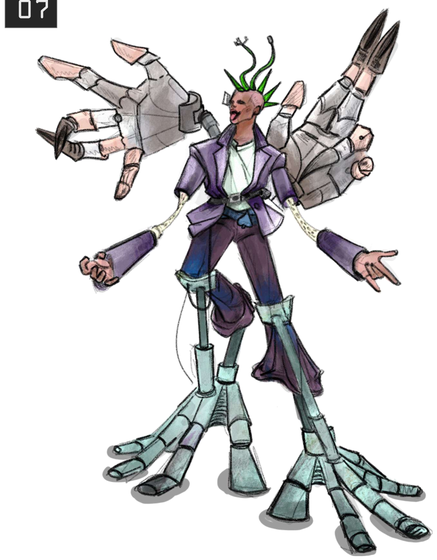


05

06

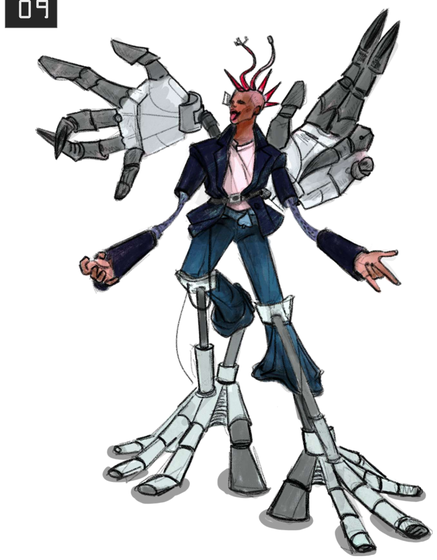


07

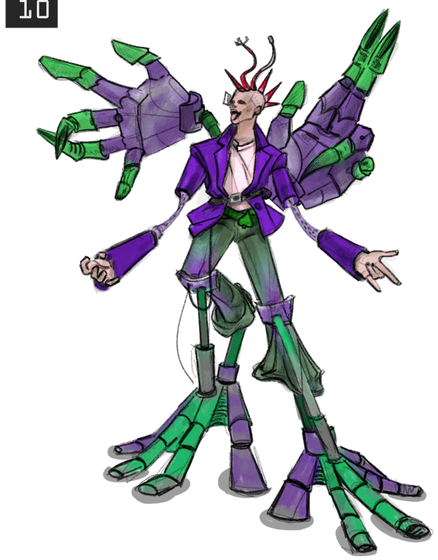


08

09



10



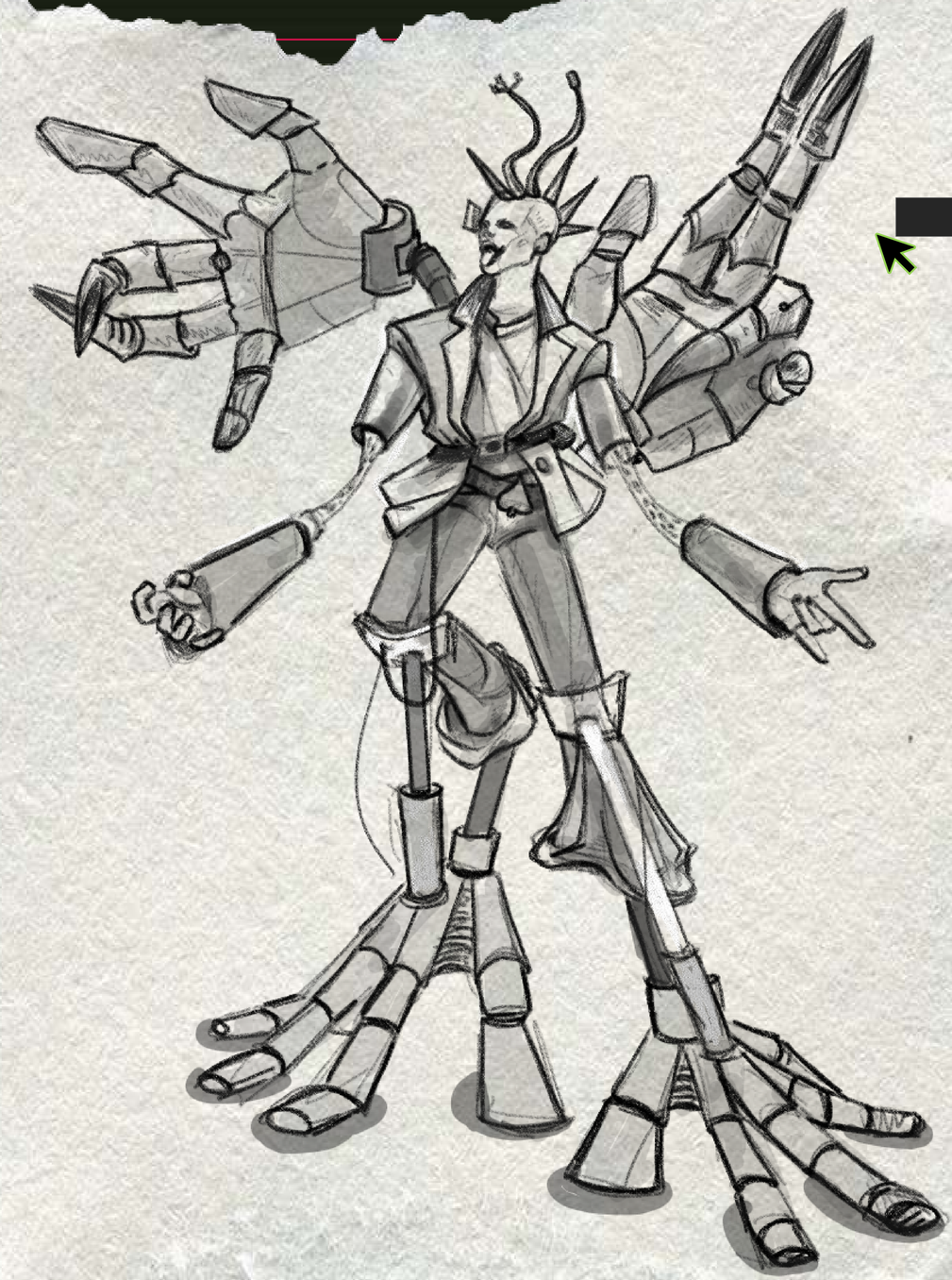
#10 is currently the most popular, but I like #8 the best; it has my favourite colour combination and goes for what I feel is that grungy aesthetic that works well for this character. I like the darkness, but I think incorporating some more character accents like other iterations might make it look less flat.

Final Concept

This design was an ode to the punk aesthetic, which I felt apt given the self-improving and aesthetic drive behind cyber-punk. Each attachment is unpolished and far from sleek; as with the punk aesthetic, the DIY attitude is notable, even to the spiked mohawk

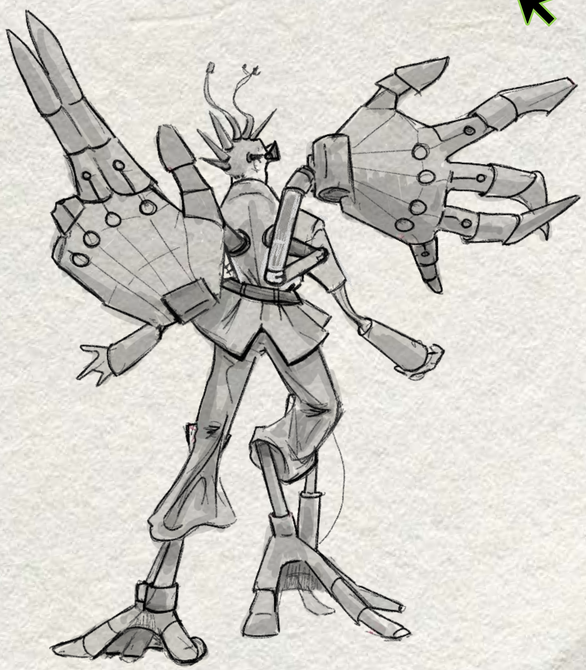
The overall design speaks to form over function, which I believe to be the driving force behind the character's intentions. He has various attachments and enhancements to change his silhouette and make him appear bigger and angel-like - a nod to his seemingly profound ego.

The design lends it self to the saying, "beauty is pain" where here, even if the modifications were painful, anything must be done to look cool.

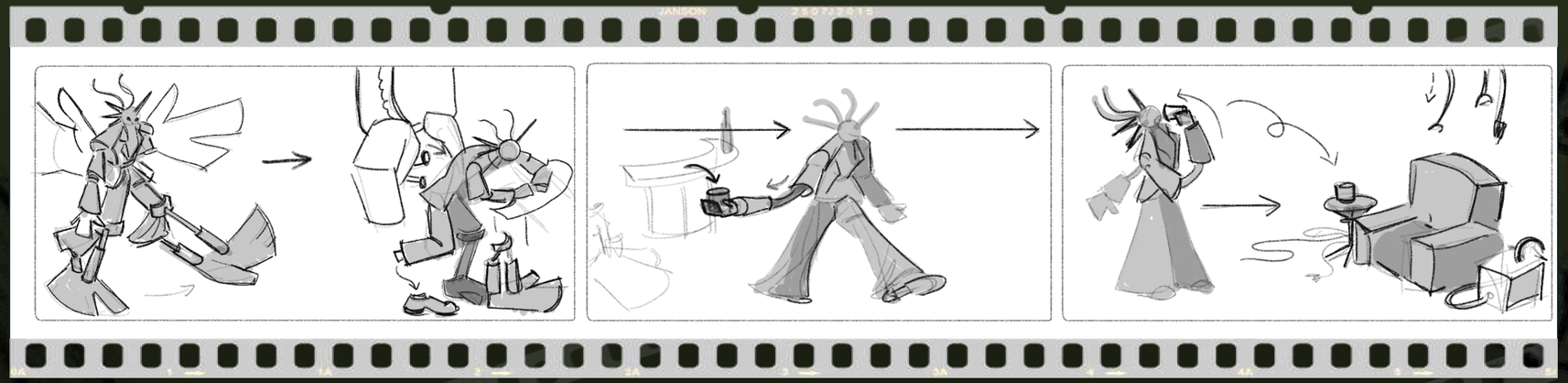


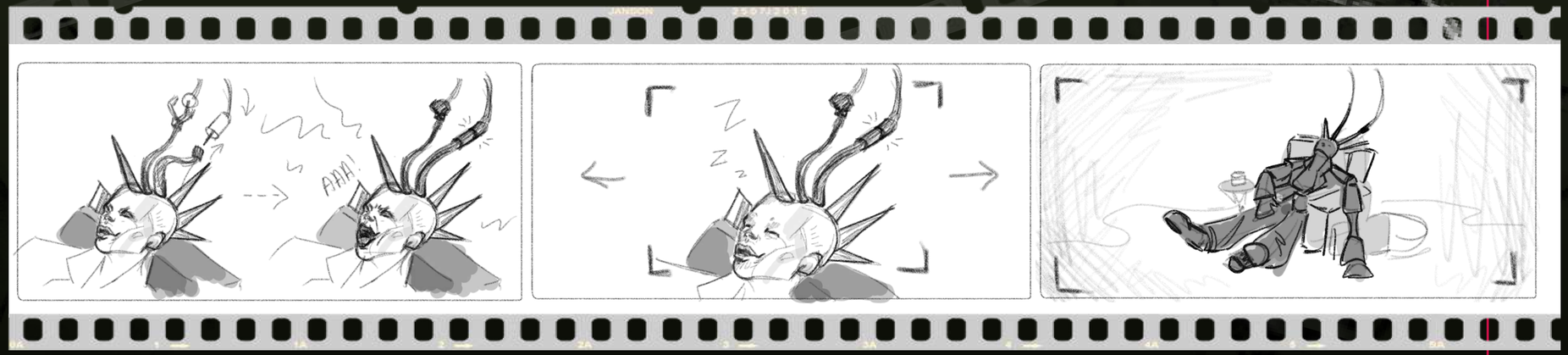
Cyber-Punk

Back



Concept - Story Board





With this storyboard, I want to show a cinematic animation of the character arriving home; taking off the prosthetics, he sits in the armchair. The goal of this cinematic is to show off the technology around the character and how normalised it is, like a man coming from work, taking his shoes of and sitting in front of the TV.

This animation will also show off the character himself, focussing on the most important features.

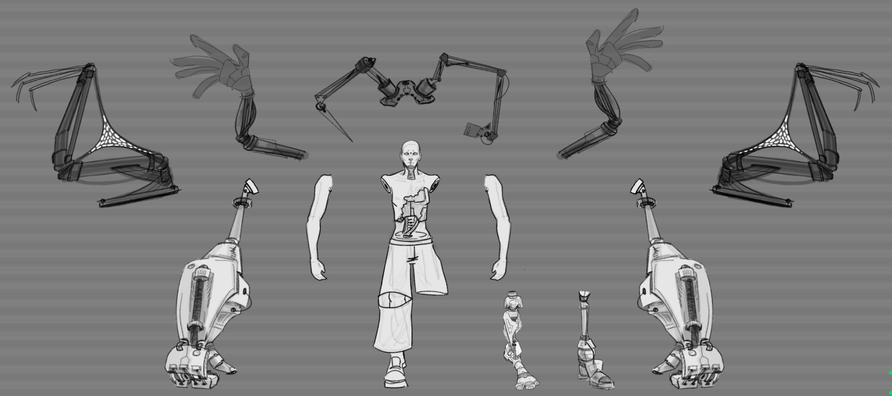
It starts with the character walking in with full enhancements. He then leans over the bar table, with wires taking off his 'wings' and him changing out his feet. The camera then changes, and he walks by the bar table and picks up a whisky glass using his stretchy arms. Before sitting, he drains it, places it on the table, and sits down. As he's sitting, cables that are hanging from the ceiling reach down and attach to his spikes. The camera switches to a closeup - he yells at the contact. Once fully in, he calms down like he's sleeping, with the camera slowly pulling away to the quite empty room.

This is a proof of concept

Human Left Arm
Human Right Arm
Big Arm Left
Big Arm Right
Leg 1
Leg 2

Head Antennae
Back Arm Left
Back Arm Right
Wing Left
Wing Right

Blank, as it loads in



Each item is its own separate layer

This is a proof of concept

Human Left Arm
Human Right Arm
Big Arm Left
Big Arm Right
Leg 1
Leg 2

Head Antennae
Back Arm Left
Back Arm Right
Wing Left
Wing Right

LINK TO PAGE

342 lines of code!!

Head Antennae
Back Arm Left
Back Arm Right
Wing Left
Wing Right

Hover effects!

LINK TO BLOG

This is a small html file proof concept, coded to show the possibility of an interactable demo within a browser. While this is 2D, and majority coded in HTML and CSS, the final product will be coded largely in JavaScript using 3JS.

As this is a very large undertaking, I will be prioritising the cinematic components first and then coming to this as it will need a lot of time to code and animate.

Customisable Character Creator

Press the buttons to toggle the various items on and off

>>> Development

E1 - Spreadsheet

Week 1	FMP: Character	23/04	N	Assignment	161 days
	Element 1: R+D Portfolio, Pitch Proposal	20/11	N		7 days
	Single PDF		E		
	--> Summer Reseach Highlights		S		
	--> Concept Research and Development (early sketches, designs, blockouts)				
	--> Critical Appraisal w/ "Next Steps"				
	Thumbnails (10-12)		C		
	Iteration of design (+value)		S	Thurs-Fri	
	Context, develop world building		C	Fri	
	Moodboards (world/genre and art style and examples)		C		
	Storyboard		S	Thurs	
	Asset List		C	Tues-weds	
	gantt chart :(		N	Tues-weds	
	research games and artists		S	Fri-Tues	
	PDF		S	(Thurs) Fri Tues Weds	
	Proof of concept - 2d site		C		
	finish animation for 3d site		X		
	Blog		S	Thurs-Tues	

I plan to use various methods of organisation to keep myself on track. For the last 5 years, I've been using a spreadsheet to keep track of my projects, using decomposition to break the projects into smaller pieces.

This has proven very useful, especially last year, and I intend to keep using it to keep track on what I need to do.

Asset List

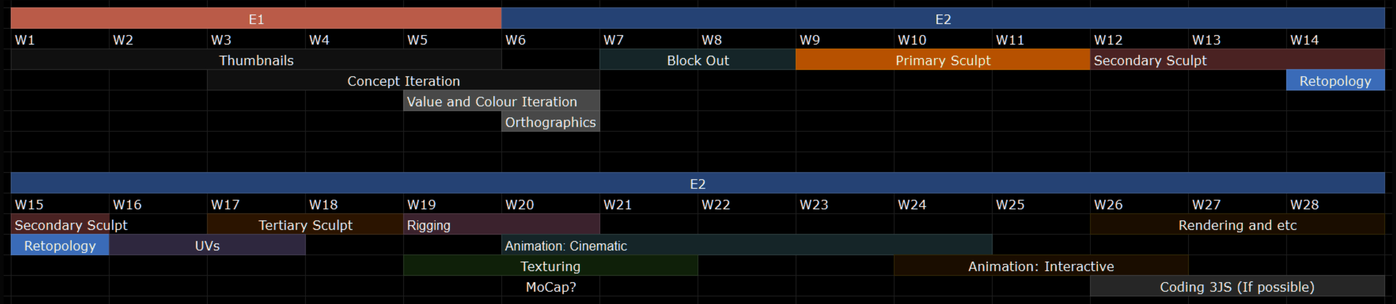
- 3D Character
  - Body
  - Items/Enhancements
    - Limbs
    - Attachments
  - Animation
    - Cinematic
    - Interactive
- Environment
    - Buildings
    - Technology (various, TVs etc)
    - Wires
  - Cinematic usage
  - Simple for interactive (reusable elements)
  - Find what I can from libraries
- Interactive ThreeJS 'Character Creator'

E2 - Spreadsheet

	Element 2: Final Outcome		N	
1	Production Plan		N	
	--> Elevator Pitch - one sentence encapsulation			
	--> Synopsis (100 word sugg. limit)			
	--> Final Research and design			
	--> Proof of concept, block outs etc			
	--> Plan for pipeline and workflows			
	--> Schedule for production			
	--> Statement of intent, relating to personal role (~ 500 words)			
2	Final Finished Outcome		N	
	--> Rendered and Presented			appropriate industry format, titles, credits, and ual branding
	--> Supporting production materials journal			evidence of personal role and teamwork
	--> Critical Appraisal (800 words MAX)			

	DEVELOPMENT	Stage	Status
	Mood board for initial ideas		C
	Thumbnails x12		C
	Iteration: Colour and value		S
	Orthographics		C
	Pose variation		N
	Block out		
	Secondary Sculpt		
	Retopology		
	UVs		
	Detail Sculpt		
	Rig		
	Texture		
	Animation		
	Cinematic		
	Interactive		

Gannt Chart



// Final Outcomes

>>> In order of priority: (Next Steps)

1.png

1 Cinematic Animation

Next Steps:
- Sculpt Character
- Sculpt prosthetic props
- Retopology
- Rigging
- Animation (mocap?)
- Simple environment

2.png

2 3D Renders with Environment

Next Steps:
- Bring Character and rig into Unreal Engine
- Pose
- Use Quixel assets or model something quick
- Render a series of images

3.png

3 3D Character Creator Website

Next Steps:
- Model separate prosthetic props that can swap out
- Motion capture animation?
- Animate motions of character taking on/off item
- Load into 3JS scene
- Load animations into scene
- Use HTML and JavaScript to code button selectors
- Use simple environment or find something.

// Critical Appraisal

Crit_Appr.Txt . Notepad

So far with the Final Major Project (FMP), I think I could have done a better job at time management and organisation. I spent quite a bit of time on the concept, wondering what I should do, before eventually moving on to the thumbnails. OF course, in hindsight it would be easy to say I could have done this a lot quicker, but I think if I'd have managed my process to a point where I could ideate at the same time as finally fixing my concept, I'd have a lot more work. Towards the final week, I used the spreadsheet to split my available days into tasks, which helped me visual my workload.

Originally, I wanted to do something very horror inspired, but I think working with hard surface modelling and more complicated forms might enhance my portfolio more, hence why I'm going down the "cyber-horror" route.

I do like the character, and I think it'll be different to what I've done previous, whilst still in keeping with my aesthetic - that being horror leaning models with disproportionate anatomy.

In terms of my priorities, I'm going to spend the majority of my time sculpting and modelling the assets as quickly as I can to be able to construct the cinematic animation. This I want to do because I think it'll be the best thing to bring the character to life and really show off the character model and its interaction with the prosthetics. Then, once that has been completed, I can spend more time on the next two 'steps'. The website coming last as that can be completed outside the project with no detriment to the other outcomes

Spreadsheet_LastWeek. Excel

	A	B	C	D	E
1	Thumbnails (10-12)		C		
2	Iteration of design (+value)		C	Thurs-Fri	
3	Context, develop world building		C	Fri	
4	Moodboards (world/genre and art style and examples)		C		
5	Storyboard		C	Thurs	
6	Asset List		C	Tues-weds	
7	gantt chart :(		C	Tues-weds	
8	research games and artists		C	Fri-Tues	
9	PDF		S	(Thurs) Fri Tues Weds	
10	Proof of concept - 2d site		C		
11	finish animation for 3d site		X		
12	Blog		S	Thurs-Tues	

Sheet1 / Sheet2 / Sheet3

Edit NUM

Crit_Appr.Txt(1) . Notepad

I think that rigging will be my biggest challenge. To have models interact and move with each other is something I've not yet attempted, and considering my dislike of rigging, will not make it any more appealing.

I will try to use AdvancedSkeleton to help with rigging in this project, as I previously used HumanIK, which on a monster, made it a little difficult. Hopefully, with all my previous experience, I'll be able to rig more efficiently.

I would also like to try motion capture to make to animation process easier. If I could get simple animations of the human character reaching over to take off something, I think it could help to streamline the process.

My next biggest challenge would be actually coding the interactive website that I want. Theoretically, it shouldn't be too difficult as long as I have the assets and animations. However, I think a lot of the work will be spent tweaking the final outcome, rather than building it. Having built a 3D website before, I'm very comfortable in doing so - partly why I set myself the challenge. I think it will also be an excellent demonstration of my animations and assets in a close-up viewport. My issue however is time, and if it is possible within the timeframe that I have for the project.

// Feedback

Feedback.Txt · Notepad

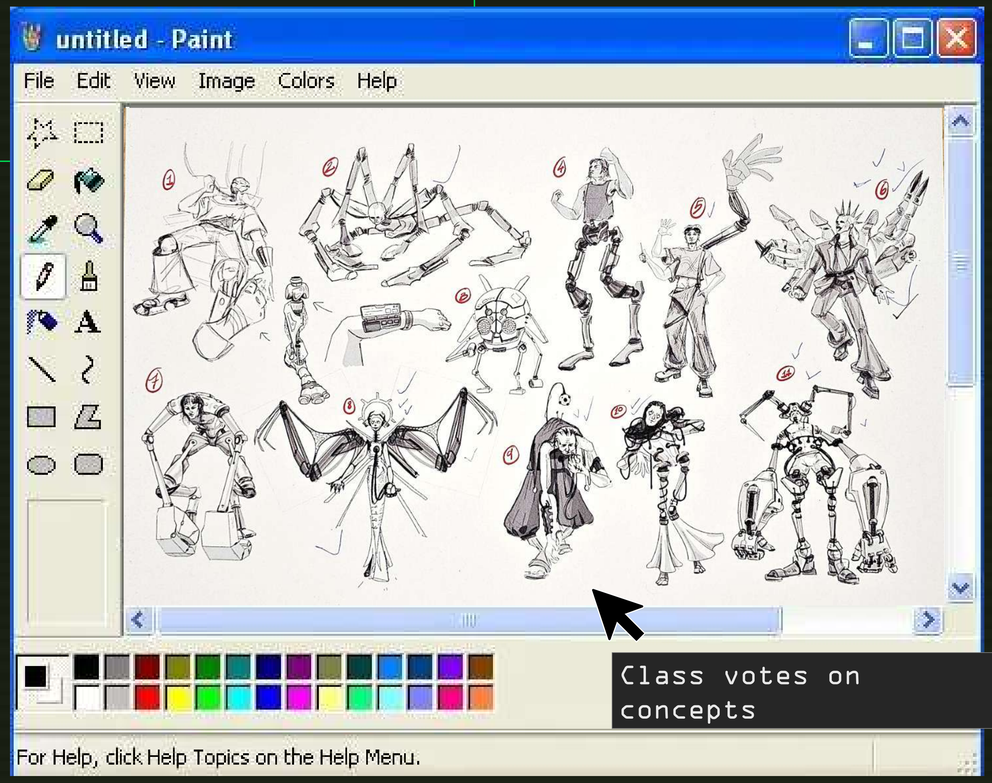
Feedback has come from a lot of sources. Explicitly, I received feedback from my peers in the form of voting on their favourite of my designs. This was valuable to me in terms of shaping my next steps with iterating upon those ideas. The votes actually surprised me, as I thought it'd be the last one to get the most, but it ended up that #6 received the most. I think that this is because he ended up having the most personality. This motivated me to creating a mix of #6 and #11 to create the final outcome

Less obviously, I had quite a bit of feedback from Mike and Shihong, giving their opinions on my designs. I found this useful as through these conversations I'd be able to develop different ideas or ways of thinking about things. For instance, during a conversation with Mike, we were discussing my summer project - using ThreeJS to code a 3D portfolio website. It was from this conversation that Mike introduced the idea of a website that you can use to interact with the model. This idea bloomed into the final idea I have now; I can create a space that loads directly into the browser in which you can instruct the character to take on/off a different form.

To enable this, I had to get NodeJS and Three installed to one of the computers; in discussion with the technician, she exclaimed "Why?!", so safe to say that I am being ambitious enough.

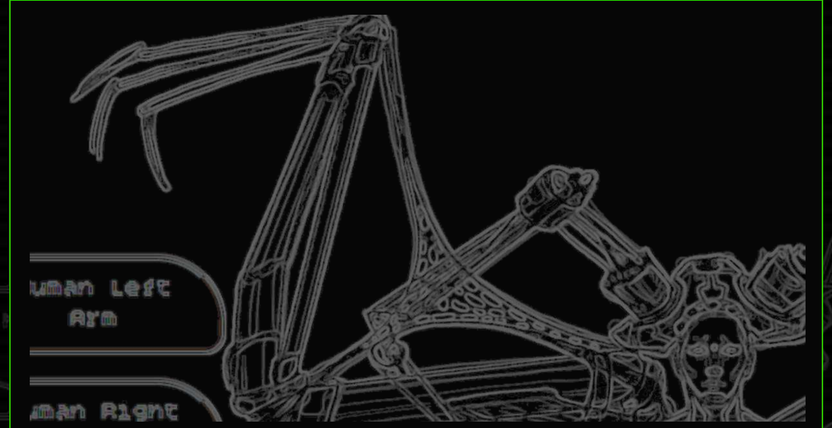
I also talked to a lecturer in Games Design, with Mike, who, when presented with the idea of collaborating with one of his students, explained that there wouldn't be enough to create a game from.

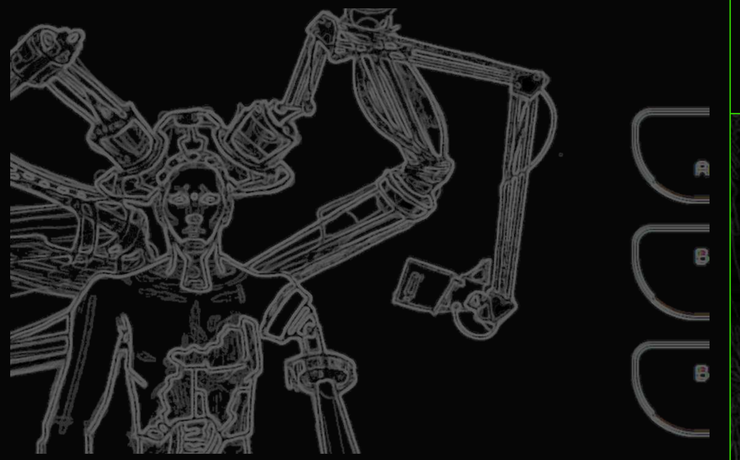
Overall, feedback has been integral to creating these concepts and refining my idea, and I will continue to reach out for feedback during the project.



Class votes on concepts

View further commentary on feedback





Bibliography

threejs.org. (n.d.). three.js docs. [online] Available at: https://threejs.org/docs/. (Accessed: August 2025)

Robots (2005) Directed by Wedge, C. and Saldanha, C. [Film] 20th Century Fox

Alita: Battle Angel. (2019) Directed by Rodriguez, R. [Film] 20th Century Fox

One More Level, Slipgate Ironworks (2020) Ghost Runner [Video game]. 505 Games, All in! Games

Shirow, M. (2023) The ghost in the Shell: Fully compiled. [Book] Random House Inc.

Ghost in the Shell (2017). Directed by Rupert Sanders [Film] Dreamworks.

Bloober Team (2017) The Observer [Video game]. Aspyr

W3schools.com (n.d.) W3Schools Online Web Tutorials. [online] Available at: https://www.w3schools.com/ (Accessed: November 2025)