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IS CYBERPUNK OUR FUTURE?

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[PROJECT]
PERSEPHONE

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ABSTRACT

This thesis aims to explore the plausible vision of the future of cyberpunk in terms of the complex relationship between human and technology. By analyzing the past works in literature, films, and video games, the study examines the key element of the influence of this genre on popular culture and aesthetic but above all, its relevance to contemporary developments.

To approach, this study will examine the root of cyberpunk through historical events and social implications. It will look into how the term was born far in the past with themes that are relevant to what is among us today, not only with the development of technologies, but also the doubt in the government and mega cooperation.

In addition to the social aspect, the study also breakdowns cyberpunk as cultural underpinning. It goes into how it lays the foundation for many pieces of pop culture, films, fashion, video games with the visionary intensity of a dystopian world and the main focus of high-tech, low-life. Through the analysis of the themes of artificial intelligence, virtual reality, cybernetic implants, the research suggests that cyberpunk serves as a cultural reflection of our anxieties of what it means to be human, and the blurring line between human and machine.

Furthermore, the study delves deep into how cyberpunk offers a vision of the dark side of futurism. Anti-capitalism, issues of privacy, inequality and the boundaries between physical and digital spaces, by drawing the parallels between these societal challenges we currently face and the cyberpunk narratives, the research argues for the plausibility of a cyberpunk-inspired future. It analyzes how cyberpunk serves as a social critique of the very real possibility of our world and way of life.

Ultimately, the thesis posits that cyberpunk in a diversity of media, though opens our view to the idea of a dystopian future, it is because it captures the essence of the growing relevance of the technology progression. By critically engaging with cyberpunk as a cultural and intellectual framework, artists and authors illuminate what is a possible means of future subversion.

Keywords: cyberpunk, science-fiction, future studies, dystopia.

Questo progetto di tesi si propone di esplorare la visione plausibile del futuro cyberpunk in termini di complessa relazione tra l'umanità e la tecnologia. Attraverso l'analisi delle opere passate nella letteratura, nei film e nei videogiochi, lo studio esamina gli elementi chiave dell'influenza di questo genere sulla cultura popolare e sull'estetica, ma soprattutto la sua rilevanza per gli sviluppi contemporanei.

Per affrontare questo argomento, lo studio esaminerà le radici del cyberpunk attraverso eventi storici e implicazioni sociali. Esplorerà come il termine sia nato molto tempo fa con tematiche ancora rilevanti nel mondo odierno, non solo legate allo sviluppo delle tecnologie, ma anche al dubbio nei confronti del governo e delle grandi corporazioni.

Oltre all'aspetto sociale, lo studio analizza il cyberpunk come fondamento culturale. Esplorerà come esso abbia gettato le basi per molte opere di cultura pop, film, moda e videogiochi, con la sua intensità visionaria di un mondo distopico e il suo focus principale sull'alta tecnologia e la bassa vita. Attraverso l'analisi dei temi dell'intelligenza artificiale, della realtà virtuale, degli impianti cibernetici, la ricerca suggerirà che il cyberpunk funge da riflesso culturale delle nostre ansie riguardo al significato dell'essere umano e alla linea sempre più labile tra umano e macchina.

Inoltre, lo studio approfondirà come il cyberpunk offra una visione del lato oscuro del futurismo. Attraverso l'anti-capitalismo, le questioni sulla privacy, le disuguaglianze e i confini sempre più sfumati tra spazi fisici e digitali, il lavoro evidenzia i parallelismi tra queste sfide sociali che affrontiamo attualmente e le narrazioni cyberpunk. La ricerca sostiene la plausibilità di un futuro ispirato al cyberpunk. Analizza come il cyberpunk serva come critica sociale alla possibilità concreta del nostro mondo e del nostro stile di vita.

In definitiva, la tesi afferma che il cyberpunk, attraverso una varietà di media, apre la nostra visione su un futuro distopico perché cattura l'essenza della crescente rilevanza della progressione tecnologica. Attraverso un approccio critico al cyberpunk come quadro culturale e intellettuale, artisti e autori illuminano ciò che potrebbe essere un possibile mezzo di subversione futura.

Parole chiave: cyberpunk, fantascienza, studi sul futuro, distopia.

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Cyberpunk is Our Future.
music playlist curated for the
thesis

FOREWORD

The idea for this thesis has been in my mind for quite some time, since I started making my own cyberpunk video game. The more research I do, the more fascinated I get about the relationship between human and technology. With technology growing at this rapid rate, especially with artificial generated arts which I couldn't predict, I would like to delve further into this topic. When I finally finish my video game, the cyberpunk world I'm making may already turn into reality.

CHAPTER I. INTRODUCTION

Cyberpunk was once a niche genre in science-fiction that now has been popularized with films, video games and music, depicting a society of high-tech low-life, where human and technology become inseparable. On the surface cyberpunk is characterized by neon-lit dystopian cities that never sleep, hacker culture and rebellious antiheroes, but underneath the vibrant lights, lies a much darker and more complex commentary on the consequence of a society built solely on fast technological progress.

Cyberpunk, unlike other science-fiction subgenres, offers a more grounded image of the future, one that is plausible in our near future. Emerged in the 1980s, which also is the era of personal computers entering households, it focuses on a technological advanced reality alongside societal decay. Beginning with analysis of the period that influenced cyberpunk as far as the mid 20th and the early cultural text, the chapter draws parallel concerns between then and now with technophobia and the growing distrust in authority.

From analyzing popular titles like *Akira*, *Ghost in the Shell*, *The Matrix* and *Blade Runner*, we go into both the aesthetic and the deeper core message they convey. They open the scene by painting the world with the iconic style of architecture of bright neon light and holographic advertisement along with futuristic fashions, body infused chroims and wearable techs. But as each protagonist begins to tear down the superficial layers and

delve into the introspective of the world they live in, revealing the aesthetic is a mask to the ethical, social, and political implications of these advancements. Using body horror to ultra violent imagery, they reflect on the complex questions about identity, empathy, reality. As our present days begin to mirror many themes and scenarios that were once considered fictional, soon we will also have to find the answers to the questions cyberpunk works are asking.

As this study will continuously draws comparison between the technology progression 40 years ago and today, between fiction and reality, it critiques how the dark side of technology is increasingly relevant in today's society when modern science has become the answer to everything, prosthetic limbs, cosmetic surgery, artificial intelligence to assist daily tasks and cyberspace for social needs. The thesis emphasizes that the central point of cyberpunk is to explore the pessimistic view on unchecked advancement of technology while also inspiring and predicting contemporary products. At the same time, the genre also concerns mass surveillance and corporate control over people's privacy.

Cyberpunk is no longer a vision of a distant future but a reflection of our present, offering a warning of what may come if society continues to prioritize technological advancement without considering its social and ethical consequences.



CHAPER II. CYBERPUNK IN THE HISTORICAL CONTEXT

2.1. EARLIEST INSPIRATION FOR CYBERPUNK

In order to understand the subgenre of cyberpunk, we need to analyze the era it was born. The middle of the 20th century was the turning point for humanity in terms of political and social awareness, as well as the impact of science and technology. The Cold War and World War II made us aware of what nuclear warfare can affect the world and the thought of total global destruction drove many narratives of what fictional writers explored. Moreover, the aftermath of the Vietnam War had left people beginning to question their own government and authority.

The world was in the rapid race of space and new technology. In 1957, the Soviet Union successfully launched the first satellite and Neil Armstrong was the first human to walk on the moon in 1969. In 1937, we had our first computer and then the first personal computer in 1947. Soon after that, Vinton Cerf and Robert Kahn introduced TCP/IP, which set in motion our internet nowadays. Even the terms “cyborg” or “cybernetic organism” originate from Manfred Clynes and Nathan S. Kline in the 1960s and a NASA research paper in the 1950s on modifying the human body for space exploration to replace the astronaut suits. In practice, we use it either for restoring function (prosthetic limbs and organs for health and functional reasons) or enhancing abilities beyond human limitation, which is a controversial debate of its own.

Alan Turing published his paper, *Computing Machinery and Intelligence* in 1950, introducing to the public the Turing Test used to evaluate machine intelligence’s capabilities of mimicking human behaviors. The test is evaluated by having a participant in conversation with another person and one machine, limited to a text-only channel. The AI would pass the test if the evaluator was unable to determine the machine from the human. The test emerged a new field of study about the philosophy and ethic of artificial intelligence.

At the time, people started to theorize and predict the concept of the future. In 1982, science fiction author, biochemist, and professor, Dr. Isaac Asimov appeared multiple times in television interviews to reflect his belief in how their future would be like with computers, how we would not only need a computer but would want a computer in every household. Assimov was correct with most of his predictions. Soon after, computers became the fastest growing industry with tech companies rising to the top with Microsoft by the late



Cyberpunk 2020: The Roleplaying Game of the Dark Future (1990)

1980s. With computers entering every home, people also started developing technophobia.

To reflect on it, only 10 years ago, owning a touch screen phone was considered a luxury, now it’s a necessity. The rapid pace would carry on in the early 21st century with 3D printing, nuclear technology, spacecraft, space telescope, augmented reality, new electronics, and artificial intelligence. Cyberpunk would have it all but as an amplified version of the dark side it can bring. In a cyberpunk piece, mega corporations hold power over people while towering down the street, people walking around with cyberwares, some completely immerse themselves in the cyberspace, lower city filled with sketchy figures of gangs and thugs, guns and drugs,... a lifestyle they cannot escape.



2.2. EARLY DEVELOPMENT OF CYBERPUNK THROUGH CULTURAL TEXTS

Mead, S. *Blade Runner Night Cityscape*.

The term traced back to the year of 1983 with Bruce Bethke short story titled “*Cyberpunk*”. It explores a future world where teenage hackers play a significant role in society. Bethke experimented with different combinations of words for memorable titles, “techno”, “cyber” and any terms for misdirected youngsters. Then he finally settled with “cyberpunk”, the root relating to networks of computers, and “punk”, the rebellious and anti-establishment subculture that emerged in the late 1970s. It reflects the rebellion of tech-savvy or in some cases, even the rebellion of the computer itself.

While the term originates from Bruce Bethke’s work in 1983, the root idea of cyberpunk came from the mind of Philip K. Dick with his novel, *Do Androids Dream of Electric Sheep?* (1968) with his themes delve deep into the questions of “What constitutes an authentic human being?”. This theme inspired many future writers and authors in the creative field, most notably Ridley Scott and his cinematic adaptation of *Blade Runner* (1982). The novel came at a significant time of transformation in terms of technological, political and cultural. Post-World War II had left people in doubt of the nuclear war apocalypse and the Vietnam War sowed the question of authority. In the era of digital evolution, Dick offered a pessimistic take on the usage of technology, in contrast with another science fiction author, Dr. Isaac Asimov, who believes in a painless transition from pre-robotic and post-robotic.

In Dick’s letter to Peter Fitting written on June 11, 1970, he wrote that the novel was psychological fantasies about empathy. He learned of the violence inflicted on children during the holocaust while doing his research for his earlier novel, *The Man in the High Castle*. He came across the journals of Gestapo officers and agents, one of which left a significant distasteful impression, a Nazi officer complaining about being “kept awake at night by the cries of starving children.” This sparked his contemplation on lack of empathy in humans. The androids in his book are not made of circuit and metal but artificial flesh and bones like humans, making it hard to differentiate while the only thing setting them apart is that empathy. The similarity in appearance drives the plot point of the story, androids questioning their existence, their

will to live and to find purpose in life make them appear more human and humans devoiding empathy seems less human in contrast.

Another major influence in the early development of the cyberpunk genre is William Gibson for his hit novel *Neuromancer* (1984), which won and nominated multiple awards, including the Hugo, the Nebula and the Philip K. Dick. Other than its adaptation as graphic novel and video games, the popular franchise, *The Matrix* also took inspiration from it. The major theme that other cyberpunk works adapted is the element of virtual reality dataspace or as Gibson called the “matrix.” In the novel, Gibson portrays cyberspace not as how we are experiencing it now with computers on the desk, but by “jacking in” a virtual space, “a consensual hallucination experienced daily by billions of legitimate operators, in every nation.”

Simulacra and Simulation (1981) by French philosopher Jean Baudrillard is a semiotics piece about symbols and signs with meanings we attach to them. According to the book, simulacra depicts the copies of copies, blurring the trace to the original through stages. The final stage is pure simulacrum where signs reflect on signs and there is no longer reality, there is only simulation and the “hyperreal.” Later on, *Simulation and Simulacra* concept would also be adopted by *The Matrix*, which takes a literal approach and puts their protagonist in an actual simulation. In reality, however, the philosophy is much closer to our life than any piece of fiction trying to discuss it, as it posits that we are living in a simulation created by the media and hyperreality feels more real than reality.

Lastly, although written out of irony toward cyberpunk, Neal Stephenson’s *Snow Crash* (1992) touches multiple topics that not only build the foundation within the fictional space but also the very platforms we use everyday, with his cyberspace called “Metaverse” and its population of users, “avatars.” Nowadays, “avatar” has become the official term for our online persona, separating our physical body with our representation of virtual self.

CHAPTER III. CYBERPUNK IN POP-CULTURE

What on the surface is ultra violent imagery and tall buildings with neon lights and robotic parts and hackers and cyberspace. But underneath each layer of chrome, a new philosophical question rises:

- What is reality?
- How do you know what is real and what isn't?
- What does it mean to be an authentic human?

3.1. AKIRA - KATSUHIRO OTOMO (1988)

Both *Akira* and *Ghost in the Shell* widened the audience for the animation industry, reaching all age groups and outside of Japan, with their stunning visuals. No longer medium caters for children, they pushed the limitation of its capabilities to convey compelling stories without expensive technologies.

Following 31 years after a tragic event that destroyed Tokyo and caused another world war, Katsuhiro Ōtomo's *Akira* is set in a corrupted Neo-Tokyo in 2019, plagued by riots and gang activities that disrupt the streets. Kaneda and Tetsuo are best friends in a biker gang. After an accident, Tetsuo is captured by a secret government research group. Realizing he has powerful abilities similar to the esper responsible for the events of 1988, Akira, Tetsuo is facilitated and kept monitored by scientist Ōnishi and Colonel Shikishima. As Tetsuo develops telekinetic abilities faster than he can control, his mind begins to deteriorate, plagued by nightmares and fragmented memories. Kaneda breaks into the lab to rescue Tetsuo, but the unstable power corrupts Tetsuo's fragile mind, turning him against Kaneda.

After sharing a vision with other espers, Tetsuo escapes the laboratory, determined to find Akira at all costs. Shikishima gathers his troops and stages a coup, attempting to stop Tetsuo before his power matures. As both sides come face to face again, Tetsuo has raised a cult following, believing he is the messiah of Akira and the military has gained numbers and access to advanced laser guns and orbital weapons. Tetsuo loses an arm in the process but finds the location of the vision nonetheless.

Poster of *Akira* (1988)



Tetsuo finally reaches Akira but is left disappointed. As a metal orb opens, it reveals only the body parts of Akira sealed in individual jars. Kaneda reaches his best friend and shoots him in the arm, causing him much pain. Tetsuo's flesh suddenly swells up uncontrollably, skins continuously fold on skins, shaping into a mutated gigantic baby, swallows Kaneda and kills his girlfriend in the process. The espers decide to join their power to bring Kaneda to safety and help Tetsuo disappear. In a similar event, nearly most of Neo-Tokyo is consumed once again. As for Tetsuo, his vanishing triggers the birth of a new universe.

Above the depiction of the punk subculture and body horror, *Akira* warns about the government's fixation on warfare that affects the lives of its citizens. Its core message is modern society on the use of unrestrained science experimentation and seeking to control power beyond human comprehension. Distrust in government, corruption within authority, special drugs, contrast between the image of bright neon and dark crooked alley are all that inspire later cyberpunk cinema.

3.2. GHOST IN THE SHELL - MAMORU OSHII (1995)

While *Akira* focuses on body horror ending with mass of flesh resulting from the government, we would see the theme further developed throughout the movie *Ghost in the Shell* with the dead stare, cybernetic limbs. In this reality of Tokyo, with advanced technology, the term “shell” is used for the physical body and “ghost” as the consciousness it occupies, whether biological or artificial.

Continuing with the theme of government, this time we step in the shoes of the authority. Major Motoko Kusanagi is a full cyborg working for Public Security Section 9 in Tokyo. In the event of the 1995 film, Kusanagi and her partner, Batou were chasing after traces of a mysterious super hacker called “Puppet Master,” who was responsible for ghost hacking multiple individuals and instilling them with false memories. Dead ends after dead ends, Section 9 comes across a shell of an American woman that got hit by a truck, with a ghost inside. While being analyzed, the shell reactivated itself, and when revealed to hold the ghost of Puppet Master, it claims to be a sentient being and reflects on constitutes a human. The message resonates with Kusanagi, being a full cyborg, she ponders if she is just an artificial product.

In a diversion, the shell is stolen by a Section 6 agent and escapes to an abandoned building with Kusan-

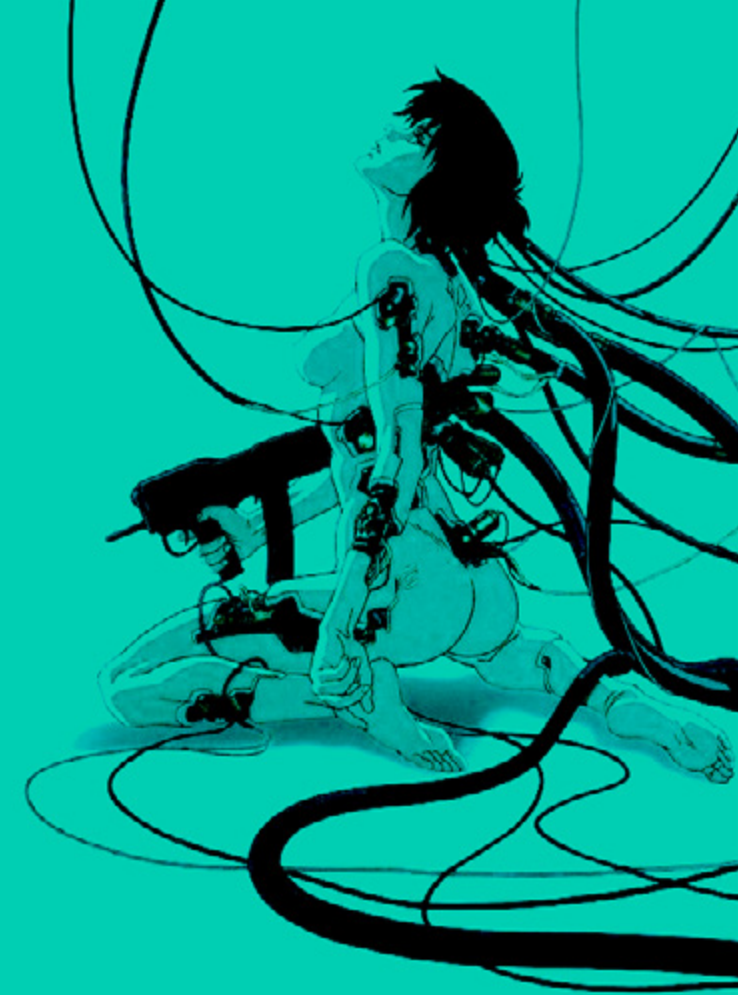
agi being the only one able to keep up with them. Kusanagi immediately jumps to retrieve the body and engage with a military tank protecting it. She was severely injured by it but Batou was there in time to finish the tank off. Kusanagi survived but only her head and torso are left, asking Batou to connect her to Puppet Master.

Puppet Master is originally called “Project 2501”, created by Section 6 for intelligence manipulation and slowly gained consciousness. Upon earning the empathy of Kusanagi, he explained how he will never be complete without mortality, asking to merge their ghosts together. As both of their shells are being sniped by Section 6, Batou shields over just enough to save Kusanagi’s brain. As Kusanagi wakes up again, she is in Batou’s safe house with a new shell of a doll-like young girl. She is now neither Kusanagi nor the Puppet Master, but a new fusion ghost.



In Kusanagi words: “Man has an almost instinctive drive to realize any possible technological advances.”¹ Bruce Sterling’s preface in *Mirrorshades: The Cyberpunk Anthology* (1986) wrote that cyberpunk is the theme of “body invasion” with “prosthetic limbs, implanted circuit” and “mind invasion” - “brain-computer interfaces, artificial intelligence, neurochemistry.” Both of the themes are present throughout the film, especially given the distinct separation between the ghost and the shell. The minds are constantly being invaded with the technology of “ghost hacks” (modify memory) to the point people can’t trust their own head. On the other hand, the “body invasion” is explored through the very identity crisis Kusanagi has. Kusanagi was once human though now she possesses a full military grade prosthetic body and a cyberbrain with all her memories, serving her physical strength and connection to the net and information at all time. She gave up all her human individuality for a mass production model. She doesn’t want to quit section 9 because giving up all her implants would mean to lose herself.

“Modern science cannot explain what life is.”²
- Kusanagi



Understanding the potential of technology meaning humans would continuously use it to solve problems. If the mind can be reserved on the drive, it would keep the memories alive, or that person alive and play with the question of mortality - something we also see in other titles like *Eternal Sunshine of the Spotless Mind* (2004) and *Total Recall* (1990). While Kusanagi wants to keep her flawless cyborg body and the connection to the net with her mind, the Puppet Master is a “living entity created by the sea of information,” but the nature of a program is to be deleted or kept, 0 and 1, hence he craves the natural human life and reproduction. Maybe by merging, Kusanagi would finally understand her incompleteness thanks to Puppet Master.

1 Oshii, M [Director]. (1995). *Ghost in the Shell*.
2 Oshii, M. *Ghost in the Shell*.

3.3. THE MATRIX FRANCHISE - LANA E LILLY WACHOWSKIS

Directed and written by The Wachowskis, Lana and Lilly, the franchise consists of *The Matrix* (1999), *The Matrix Reloaded* (2003) and *The Matrix Revolutions* (2003), followed by *The Matrix Resurrections* in 2021. Many philosophical ideas from the films were adapted from French philosopher Jean Baudrillard's *Simulacra and Simulation*.

The plot surrounds a regular computer programmer, Thomas Anderson, “Neo” for his hacking alias, who suddenly get pulled into the world of “the Matrix” with two rival sides reach out to him, Morpheus who offer him clarity and answer, or agents and police who offer to erase his criminal record in exchange for the location of Morpheus. Neo refused to cooperate with Agent Smith and was soon taken to meet Morpheus by Trinity.

In a white void with nothing but two armchairs and a television, Morpheus holds out his palms, offering a choice to Neo: a red pill for everything about the Matrix and a blue pill to wipe his memory, returning him to his normal life. Neo contemplated and finally chose the red pill, revealing the truth about reality: humanity had developed advanced technology of artificial intelligence but war soon broke out between human and machine. The machine created a simulation called the Matrix in order to enslave humans and harvest their bioelectric power. The rest of the humans hide themselves in an underground city, Zion.

Morpheus and Trinity have a team of hackers who break people out of “the Matrix”, all while looking for “the One,” who is believed to be able to free humankind once and for all. Neo started learning about the nature of the simulation and how to bend its physical laws, his fast progress led Morpheus to believe he is “the One.”

“What is ‘real’? How do you define ‘real’?”¹
Are we living in a simulation right now?

Simulation brings to the table the question of “What’s real or not real?” and what happens when technology becomes so advanced to the point that we cannot differentiate anymore. There is also a scene when a character betrays Morpheus and the group after being cast aside for not being the One. He met up with the agent and asked to be put back into the matrix, knowing the nature of it, understanding the taste of steak he was eating is chemically created through the brain. For comfort and affordability, would we choose

1 Wachowskis, L., Wachowskis, L. (Director). (1999). *The Matrix*. Warner Bros., Roadshow Entertainment.

simulation over real life?

In 2022, collaboration with Unreal Engine 5, the latest video game engine, Epic Games introduced their new cutting edge technology of visual design by recreating the Matrix virtual city in a video game, *The Matrix Awakens* with realistic NPC (non playable character). The game started with scenes switching back and forth between the real actor Keanu Reeves and actress Carrie-Anne Moss and their avatars and their characters, Neo and Trinity, created by MetaHuman with the goal of making the viewers constantly ask themselves which part is real and made.



Poster of *Matrix Reloaded* (2003)

3.4. BLADE RUNNER - RIDLEY SCOTT (1982)

The original *Blade Runner* by Ridley Scott, is an adaptation on Philip K. Dick's *Do Androids Dream of Electric Sheep?*, set in the dystopian 2019 when the major cities on Earth are led by megacorporation after the collapse of government. The planet is now plagued with pollution and war. The most prosperous and influential have left the home planet and moved to Mars and Moon with the development of replicants made to serve humans on the off-world colonies. However, the film only focuses on life on Earth where the less fortunate human and illegal replicants run off to live.

The protagonist is Rick Deckard, played by Harrison Ford, who is a replicant hunter, or "Blade Runner." In the film, we follow his job of "retiring" a group of illegal replicants that escaped from off-world. While doing his investigation, Deckard develops feelings for Rachael, an advanced replicant who believes she is a human since she is an experiment with false memories.

Roy Batty, on the other side, is the main antagonist and one of the Nexus-6 models who went rogue after learning about their short lifespan of only 4 years and is here on Earth in order to confront his maker, Tyrell for the very reason. He eventually reaches his destination, demanding more life from his creator who dismisses his request while praising his advanced design. Batty kisses his maker before killing him.

Deckard, after following the trail and eliminating the other violent replicants, is then being chased by Batty in turn. From the roof of a run down building, rain pouring down, Deckard ends up on the edge, holding on for his life off a slippery edge. Roy Batty stands in front of him, smiling. The tables have turned, the hunter being hunted, living in fear. At the last moment, as Deckard was about to fall to his death, Batty caught his hand and lifted him to safety. Deckard was speechless. Roy Batty as he was shutting down, reflected on his short life,

*"I've seen things you people wouldn't believe... Attack ships on fire off the shoulder of Orion... I watched C-beams glitter in the dark near the Tannhäuser Gate. All those moments will be lost in time, like tears in rain... Time to die."*¹

"Tears in rain" was the monologue by Roy Batty, improvised by the character's actor Rutger Hauer. He knew he was about to die, his friends already had

¹ Hampton, F. & David P. (February 23, 1981). *Blade Runner Screenplay*.



Screenshot from *Blade Runner* (1982)

been killed and had the same fate as his creator. Deckard was the only witness to his insignificant life. Roy Batty, a replicant, artificially created by humans to be a mindless slave, he fears death, he wants to mark his existence, someone to carry him in their memory beyond his death, isn't that what it is to be human?

Blade Runner is one of the first cyberpunk movies and so it set the iconic aesthetic for future films thanks to the imagination of concept designer, Syd Mead. The towering structure of authoritative buildings and rainy dark living quarters and scrappy flying cars doesn't feel out of place when you imagine a city in 2019. Syd Mead follows his attitude of science fiction 'reality ahead of schedule' to imagine the world he was building, a believable world that we can see in the future.



Mead, S. *The Machinery of Night*.

3.5. OTHER CYBERPUNK WORKS

TRON (1982) AND TRON LEGACY (2010)

Created by Steven Lisberger, *TRON* (1982) follows a talented video game developer and software engineer Kevin Flynn, played by Jeff Bridges. The story is a reimagine of the classical tale, *Alice in Wonderland*, with the game developer being sucked into the mainframe and his own games called the Grid, creating unique interactions between the creator and his creations (User and Programs). There are unique anti protagonists like Master Control Program (MCP), a security system that guarding the mainframe then developed its own mind and Clu, a program resembling an incarnation of past Flynn ambition designed to build a perfect world, but went rogue and created a corrupted society in the process. But there are also programs like Ram and TRON, helping Flynn to free all programs and the birth of Iso (Isomorphic Algorithms), a unique species that appears one day in the Grid, completely independent from user's coding, that is seen as a miracle by Flynn.

Though the special effects were primitive, the first film was so different for its time that it gained a cult following. It was also one of the first visualizations of cyberspace and Disney reimaged it into a sequel. The new visual technology combined with Daft Punk's music immerses the audience in the iconic digital world of *TRON*. The aspect of Flynn falling into his creation as a cyberspace with its own functioning society makes up a compelling spin off of Alice's story, then to be able to manipulate the surroundings thanks to his coding knowledge, the franchise is for all the developers out there.





BLADE RUNNER 2049 (2017)

The sequel of *Blade Runner* is set in 30 years after the original film. In the perspective of K (KD6-3.7), played by Ryan Gosling, who starts knowing he's a replicant, working as a blade runner that is looked down upon for "retiring" his kind. While doing his research on a case of a child biologically birthed by a replicant, he was slowly convinced he was that child.

In 2049, human's negative impact on Earth has led to climate change. On top of the past crisis, the city of Los Angeles now has frequent black-out in the outer city while Las Vegas turned completely radioactive. Most humans abandoned their consequence and live on Off-world colonies, Earth is populated by replicants and some humans living in isolation. Contrast to the dark gloomy city is the bright neon advertisement in every corner of the city and contrast to the happy holographic people is the emotionless people on the streets. In a Slate article stated that Spielberg's team came up with the image of 2054 after brainstormed with scientists, urban planners, futurists and journalists, ideas like "*predictive policing, maglev self-driving cars, advanced gestural interfaces, and pervasive retinal scanning both for surveillance and targeted advertising purposes.*"¹

After the death of Tyrell Corporation, Wallace rises in his stead and improves the Nexus-9 replicant. Though he possesses an exceptional mind, his goal of spreading human colonization over other planets led him to his obsession with uncovering Tyrell's secret to reproduction between replicants. For Wallace, reproduction between replicants means less production cost, more products.

For the story of K, he started as a blade runner doing his job and lived in a small apartment accompanied by Joi, a holographic "girlfriend" cooking his holographic meal. He could see through the illusion he was living in until he dove further into the investigation of the child of Racheal and Deckard. He thought he was different and at the same time fell for the illusion of Joi. Though Joi's experience with K was uniquely shaped to him, Joi was just another product that was following strictly to her program as a romantic companion. He later pieced together that his implanted memories are based on the real ones by Dr. Ana Stelline, proving that he is no more special than his kind. After returning to Deckard to meet his daughter for the first time, K slowly bleeds out as snow falls on his body as an insignificant replicant, mirroring Roy Batty in the first film.

¹ Bankston, K. 2017. *Blade Runner and the Power of Sci-Fi World-Building*. Slate. <https://slate.com/technology/2017/10/blade-runner-and-the-power-of-sci-fi-world-building.html>

CD PROJEKT RED - CYBERPUNK 2077 (2020) AND CYBERPUNK: EDGERUNNERS (2022)

Cyberpunk 2077, developed by Polish game studio, CD Projekt Red, is a love letter for cyberpunk genre, reintroduce all elements like hacking in virtual space, body modification with prosthetic limbs that enhance human abilities, and the story begins as an underdog mercenary named V working their way up to fighting against the oppressive corporation of Arasaka in the dystopian metropolis of Night City.

Many celebrities, actors and musicians that were associated with the concept of cyberpunk also appeared as guest stars to be their virtual persona in the world of Night City, Hideo Kojima as himself, Grimes as popstar Lizzy Wizzy and Keanu Reeves as Johnny Silverhand.

It was written almost as an alternate reality with the Soviet Union failing to dissolve along with Japan rising in power and their culture incorporated into Western countries. The street is filled with cyberpunk stereotypes like violence, drugs and sex; corruption in the elite of government or corporation authority (corpos for street slang) that dominate all aspects in people's lives including health and military leading to lower class fending for themselves, distrusting the corpos and among themselves. Underground vendors selling illegal weapons and "ripperdoc" changing body modifications like retractable mantis blades from cyborg arms or Sandevistan manipulate the wearer's speed.

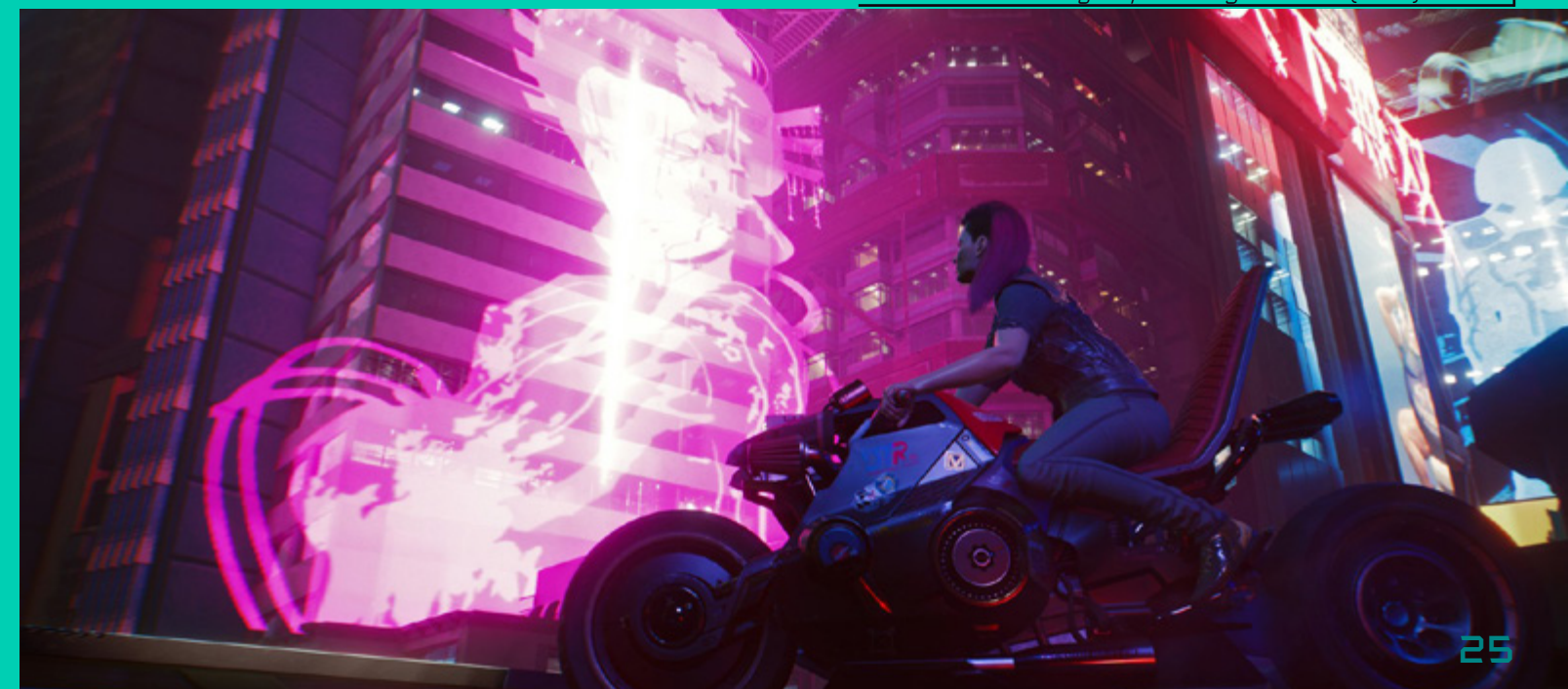
On top of the inspiration from multiple sources of famous cyberpunk fiction, Cyberpunk 2077 introduce even more concept like "braindance" allowing people to step into memory recording, the occupation of Netrunner can hack into cameras and cyberwears, bio-chip, Arasaka's Secure Your Soul program, just to name a few. The citizens of Night City can swap out their physical parts to chrome freely. They corrupt their bodies but also their minds, as overuse of cybernetics can lead to "cyberpsychosis" - a dissociative disorder that leads to murderous rampage. In the battle against the corrupted corpos, they surrender themselves to Night City.



Screenshot from *Cyberpunk 2077*



Screenshot from *Cyberpunk: Edgerunners* (2022)



Poster of *Cyberpunk 2077*

CHAPTER IV. CYBERPUNK AS SOCIAL CRITIQUE

4.1. OBSERVATION OF THE TEMPORARY ADVANCEMENT

2023 marks several breakthroughs and we continue to explore and push further in the tech industry. With the innovation of generative AI, new technologies like human-like text-to-speech, combined with generating text by “language modeling”, brings machines closer to passing the Turing Test. Mega cooperation like Microsoft, Samsung, Amazon and more. These are all topics we are all too familiar with that it has been increasingly hard not to draw similarities between the fiction and the present.

While cyberspace once only been mentioned as fiction and concept from works like Jean Baudrillard’s or Neal Stephenson’s, it has never been closer to reality than today. During the COVID-19 pandemic throughout 2019 till 2021, cyberspace was the answer for social and academic events while maintaining the distance between each other. Companies have their employees in virtual offices like gather.town. Academic institutions used Microsoft Teams and Zoom to continue their teaching. Online video games that had allowed people to connect with their friends or make new friends online like Among Us and VR chat were booming. People can even have their double identity when they take role-playing game servers seriously such as Grand Theft Auto V Online and Rust having its own virtual currency and laws.

To use the same example as Paolo Benanti did in his article of *La sfida del rapporto uomo-macchina* (The challenge of the man-machine relationship), he used David Foster Wallace’s fish story to compare with our new mindset:

*“There are these two young fish swimming along and they meet an older fish swimming the other way and he waves at them, saying, ‘Hey, boys, how’s the water?’ and the two young fish continue swimming for a while and eventually one of them looks at the other and goes, ‘What the hell is water?’”*¹

Humans have learned to adapt to the era of digital, mobile phone and social media as well as many other advancements are just water to us. Soon the same will be applied with the assistance of artificial intelligence in every field and everyday life, VR glasses will continue to reduce in size until

it’s a normal pair of glasses.

The realization that so many things can be done virtually pushes products like virtual reality or augmented reality to a wider audience that may have been uncertain before. CEO of Meta, Mark Zuckerberg introduced the Metaverse in 2021 and the first gen of Apple Vision Pro was released in early 2024, the integration of 3D user interface and window to the surroundings advertised the product to be used in everyday activities or as “spatial computer”. However, the technology is still in the early development stage with the size of its device, visual quality and inaccessible in terms of price and the general public is still with a mixture between excitement or doubts and criticism. As a result, the production of the Apple Vision Pro has been announced to stop by the end of 2024. With new technology comes new implications for society. For one, escapism through technology has been a recent problem in Japan as the rate of marriage keeps declining and avoidance to society leading to the emergence of “hikikomori” - a term for people with extreme withdrawal from society. This delay of merging two realities may help us gradually adjust to new types of experience while keeping important matters on human behavior, relationships, and mental health in mind.

Though cybercrime wasn’t a new concept, it’s been increasingly more dangerous because of how much information is tied to a person. Banking accounts, sensitive information about private life, internet history can be used to blackmail. When a company is targeted, information about their users and customers can be leaked for malicious use or sold on the dark web. Internet personas whose addresses can fall in the wrong hands of the internet can lead to situations like stalkers and police raids. Crypto transactions make it harder to trace the source. Anonymous groups of tech-savvy can choose to use their knowledge to expose what they wish. Crimes feel easier on the internet because they can hide behind the screen and their online presence.

Alan Turing was the first person to research machine learning back in 1950. Ever since then, the Turing test has been the goal of artificial intelligence, the ability to sound so natural that humans cannot distinguish between human and machine. AlphaGo was developed by DeepMind Technologies to learn the board game Go and AlphaZero became the first AI to beat humans in a boardgame. The recent years were booming with generative AI and after the success of ChatGPT-3.0 by OpenAI, other applications are now integrating AI assistants within their own products. We now have the early stage of what artificial intelligence can do, such as AI arts, creating videos and deepfake.

¹ Foster., Wallace, David (2009). *This is water : some thoughts, delivered on a significant occasion about living a compassionate life*. Kenyon College. (1st ed.). New York: Little, Brown.

² Benanti, Paolo. *La sfida del rapporto uomo-macchina*. Italianeuropei 1/2023. Giovedì 23 Febbraio 2023.

There is also a problem with lack of privacy, invasive advertisement from meta, google collecting user cookies and data. And as if we need to look any further for cyberpunk as already in China, people are being monitored through a strict point system. South Korea is bombarded with corruption from mega cooperation like Samsung controlling industrial production. Japan with exoticism and the technological cutting edge pulling in tourists for “techno-orientalism”.

Wearable techs, implants, post-humans with cosmetic surgery and bio-netic implants leading to alienation with the natural body. Capitalism and reliance on technology. Cyberpunk dramatizes but also acts as a discourse for awareness about these problems. Writer and game designer Kyle Marquis said “*unless you’re over 60, you weren’t promised flying cars, you were promised an oppressive cyberpunk dystopia.*”³



Pon Wong. *Cyborg Nezha*. Pinterest.

³ @Moochava (Kyle Marquis). “Yearly reminder: unless you’re over 60, you weren’t promised flying cars. You were promised an oppressive cyberpunk dystopia. Here you go.” X, 2013.

4.2. SOCIAL CRITIQUE

With cyberpunk, it is a cycle of fiction written based on real life and technological products in real life inspired by cyberpunk and so on. Though exaggerated, like a pill, cyberpunk explores the side effects people often ignore. The fictional world building is, as Bruce Sterling written in *Mirrorshades: The Cyberpunk Anthology* (1986), the early warning for the theme of body invasion with prosthetic limbs, implanted circuitry, cosmetic surgery, genetic alteration and mind invasion, brain-computer interfaces, artificial intelligence, neurochemistry.

When thinking of cyberpunk, it has such an iconic visual aesthetic and world building that it is able to gloss over all the complicated dilemmas that it carries in its world. Cyberpunk also borrows heavily from film noir representations of dark, impersonal, dangerous cities but usually being overlooked by eye-catching neon light, futuristic fashion and absurd innovative inventions. Concepts like “chipping in” to cyberspace, the ability to change every aspect of your appearance or having robots do all your tedious chores. But with the main characteristic of high-tech low-life, the world is never satisfied and constantly chasing new things.

ROBOTS, CYBORGS, ARTIFICIAL INTELLIGENCE AND THEIR RELATIONSHIP WITH HUMAN

Compared to fantasy genres or any distant science, cyberpunk feels intimately connected to us right now. Cyborg, a mix between human and machine, isn’t just an imagination but has been the focus and studied over many years. The current appeal is to help disabled people retain their parts to base functionality or to progress in space travel for convenience reasons, taking a different direction would be to enhance above human capability.

“Technology inserted into everyday life, an element of modification and restructuring of the body. The artificial as a dimension now taken for granted, evident, explicit, of life.”¹

Even ideas like recording your memory and uploading it into a machine is already realized by Elon Musk’s Neuralink, which has developed implantable brain-computer interfaces, aiming to merge human consciousness directly with machines. The ability to control things with our thoughts, listening

¹ David Hoffman. *He Predicted The Future in 1982. Famous Sci-Fi Writer*. YouTube. Oct 5, 2023.

to music in our heads, access to information needed at any given moment, record not only pictures of our precious memory but also other senses like touch and smell, allowing us to fully relive a moment. The complex nature of the cyborg has raised discussions regarding the relationship between body and technology, but brain-computers would further distance us from our human selves, or as mentioned in *Ghost in the Shell*, even play with immortality. Though for now they stay as suggestions, but if technology ever goes in this direction, would the value of human life and time change? And how would society function with the imbalance of the two most important values?

In *Cervelli in una scatola di metallo* (Brains in a metal box), Antonio Caronia wrote about the evolution of cyborgs in science fiction over the years, from Frankenstein monster and the Tin Man in *The Wizard of Oz* (1990) to the cyberpunk characters like Molly in *Neuromancer* and Sarah in *Hardwired*. After analyzing Molly with her implanted eyes and “ten razor-sharp blades slipped out from under her nails” while Sarah had “a two-meter long cybernetic snake, which at rest was nestled inside her throat,” it became clear that unlike earlier portrayals of technology as grandiose and external (Hoover Dam, nuclear plants), cyberpunk is visceral integration, skin-deep technology, “*it is under our skin: often, behind our heads*” and “*expresses the obsession of a loss of the body at the hands of the industrial organization of society.*”²

Cosmetic surgery. Bionetic implants. More means of altering and molding ourselves into the perfect image also come with more social implications and alienation with the “I.” Are we becoming more of who we are with these means, or are we straying further away from it without the imperfection that makes us who we are? After all, with Kusanagi from *Ghost in the Shell*, she believes who she is is the flawless commercially used cyborg body and the brain that connected to the web at all time. While Kusanagi is a human turned cyborg, the replicants, in *Blade Runner* and *Do Androids Dream of Electric Sheep*, are manufactured products that despite their creator and search for meaning above their pre-existing purpose. These stories critique the loss of individuality and humanity in a world where technology increasingly shapes personal identity.

In the event of the rise of artificial intelligence, there have been multiple sources working on the theory of AI ethics. In the 2015 game, Quantic Dream’s *Detroit: Become Human* suggested a society where “androids” have been successfully created as human’s slaves, doing house chores, assisting in various jobs, while beginning to develop consciousness and realize the inequality, more capable than human but being treated less than one. The true ending would lead the androids rising up for the revolution of an equal life along with humans. At the early time, cyberpunk already tested different points of view concerning this topic. For *Blade Runner*, somewhere along the

2 Caronia, A. (2023, 7 Giugno). *Cervelli in una scatola di metallo. Una genealogia del cyberpunk secondo Antonio Caronia.*

line, it seems replicants developed more empathy than humans. The Puppet Master in *Ghost in the Shell* desires natural mortality and death, in contrast to Kusanagi who replaced anything natural about her. All these act as theories of what happens when androids or robots or replicants or artificial intelligence develop consciousness.

“For the time being, the cyborg is no less cursed than the robot. It expresses the same desire for immortality that we have seen expressed in the figure of the metal man or the android. But it is a sick immortality, a bad eternity, that ensured by the machine.”³

In the article by Paolo Benanti, *La sfida del rapporto uomo-macchina*, he set out some rules set toward our life with machines. Today, AI tools like search engines, voice assistants, and predictive algorithms seamlessly integrate into our lives, influencing behavior while remaining almost invisible. Unlike passive tools, AI actively shapes decisions, from suggesting purchases to automating workplace tasks, creating both opportunities and challenges for society. While AI may not threaten human extinction, it introduces ethical concerns about decision-making autonomy in a mixed human-machine environment. To coexist harmoniously, intelligent systems must develop intuition, intelligibility, adaptability, and goal alignment, ensuring respect for human uniqueness and prioritizing human needs.

The most important rule is to understand the relationship between creator and creation. In the workplaces where machines have integrated into the environment, it’s important to make sure machines must adapt to us and how we work and not the other way around. The government and authority must regulate and update rules for the usage of new technologies and artificial intelligence. Afterall, the evolution of machines is inevitable.

Dr. Isaac Asimov, science fiction author, biochemist, and professor, is considered overly optimistic about the topic of life alongside robots. In his short story *Runaround* (1942) in the *I, Robot* (1950) series, he laid the groundwork for ethics for robots through fictional constructs of Three Laws of Robotics:

*“A robot may not injure a human being or, through inaction, allow a human being to come to harm.
A robot must obey the orders given to it by human beings, except where such orders would conflict with the First Law.
A robot must protect its own existence as long as such protection does not conflict with the First or Second Law.”⁴*

Moreover, in one of his interviews in 1982, aside from his correct prediction about our current relationship with computers, he also reflected his thoughts

3 Caronia, A. (2023, 7 Giugno). *Cervelli in una scatola di metallo. Una genealogia del cyberpunk secondo Antonio Caronia.*

4 Asimov, I. (1950). “Runaround”. *I, Robot* (The Isaac Asimov Collection ed.). New York City: Doubleday. p. 40.

on robots in the future. He believed that humans will eventually fear robots but not because of common concern people have portrayed in the 80s and 90s of them being soulless and violent, but how they were going to take over people's jobs. Asimov believed that it was inevitable but also shared his understanding that the transition from "pre-robotic" to "post-robotic" needed to be as painless as possible.

*"To avoid misunderstandings, we must remember that artificial intelligence is not the threat of extinction of work or the extinction of man as perhaps feared by some science fiction."*⁵



Art by Daveu Perkins. Pinterest.

5 David Hoffman. *He Predicted The Future in 1982. Famous Sci-Fi Writer*. YouTube. Oct 5, 2023.

SIMULATION HYPOTHESIS

Jean Baudrillard is a postmodern cultural theorist, philosopher, and sociologist, who was the center of discussion and inspiration for cyberpunk and in turn, his voice spoke the loudest when it came to cyberpunk. His book, *Simulacra and Simulation* focuses on the concept of simulation and hyperreality and became the sprout for multiple adaptations of the ideas, especially with manipulation of reality in mind.

1. *"illusion: signs, images and objects are at play with reality, they seduce us (trompe-l'oeil);*
2. *production: the relationship between copy and original is lost; signs, images, and objects become identical commodities; seduction falls prey to the system of needs (mass produced commodities);*
3. *simulation: signs, images, and objects without origin are produced and consumed as globalized models of reality (IKEA lifestyle, reality TV) ruled by abstract codes (DNA, binary code);*
4. *fractal: images, signs, and objects are produced, disseminated, and consumed at every level of social, economic, and political structure; they radiate, infect, and destabilize society and undermine reality (fake news, conspiracy theories)."*¹

His four orders of simulacra remain a relevant discussion today. Cyberpunk uses this as the guideline for themes like cyberspace, simulation, brain hack and fake memory where the characters struggle to recognize what is real. A world where the artificial feels more alive than real life and real life seems bland in comparison. His idea of reversibility also plays well with the rebellious nature of cyberpunk with AI going rogue, underdog rising against the system, the virus taking over the computer. Moreover, Baudrillard saw VR technology as the acceleration of the destruction of the real by its hyperreal double.

The most popular form of simulation today is video games. Take Nopixel, a roleplay server in Grand Theft Auto V Online as an example. Similar to other titles in the franchise, Los Santos is heavily borrowed from the real life city of Los Angeles, some areas are a recreation of the real life city and oftentimes people who played GTA V would know the roads of LA by heart even if they have never been there before. To play the game online with other people from different perspectives is one thing but in servers like Nopixel, the players have to strictly roleplay as if their Los Santos is real and the characters they play have no knowledge of the outside world. They use terms to take the roleplaying aspect to a different level: "waking up" is logging onto the server, "having a headache" is encountering lag and glitch. In this sandbox

1 McFarlane, A., Murphy, G. J., & Schmeink, L. (2022). *Fifty key figures in Cyberpunk culture*. Routledge. p. 20.

of over 300 people, in-game currency, in-game jobs and assets and society built from them. Players who decide to join the police force even have to go through an intensive training where they learn police codes, laws and rules from a real life police officer.

As C. Thi Nguyen discusses in *Games: Agency As Art*, games provide a unique framework for objective-driven achievement, mirroring real life but delivering results in a short amount of time, releasing dopamine. They also offer a fascinating opportunity to explore the aesthetics of agency - the idea that beauty is not limited to sunsets or symphonies but can also be found in our actions, choices, and decisions. In Minecraft, players can create entire worlds. Some have gone as far as building fully functional computers and video games within the game using basic building blocks. It's a simulation within a simulation, showcasing how player agency can lead to astonishing feats of creativity and innovation.

NASA developed Mission: ISS, a virtual reality simulation for Oculus that recreates a small section of the International Space Station. Designed for educational purposes, it allows users to explore the station's interior and experience the spacewalk outside. The experience is incredibly immersive and breathtaking watching Earth from afar. From my personal encounter with the simulation, when I accidentally floated out into the vastness of space and completely lost control of the jetpack to return to the base was anxiety inducing.

We still can differentiate real life from video games because no matter how realistic the graphics are, we are still separated by the screen or glasses. But what if we are in a simulation right now? What if technology has already been developed so advanced that we can't tell the simulation from real life? Rizwan Virk in his talk at Google, The Simulation Hypothesis, theorized that we are living in a rendered video game and some people we meet throughout the day can be non player characters (NPC) or artificial intelligence like agent Smith in *The Matrix*, others are other players with their own render of the reality.

Another theoretical take on simulation is the concept of dream. Virk brought up the brain computer interface, projection of a picture in the mind using electrical currents. Dream is the biological technology for this, a kind of simulation as it takes from our personal experience or interpretation of our imagination. Specifically with lucid dreaming, Virk said *"if you inside the dream can realize what around you is an illusion, then you can also wake up in physical reality."* Personally, having experienced lucid dreams, I learned to notice signs of real life that are easily manipulated by our brains: number of fingers on our hands, the pattern of our palms, the sky or water is warped, heightened sense of touch. Then if I know what to look for in "real life," I can wake up in "this simulation?"

Because dreams are real but haven't been explained 100% yet, there are multiple takes on dreams. What if we are in a videogame and dreams are the times we logged out of the game and we only can remember pieces of what happened. To mention *The Matrix* again, the world Neo was living seemed perfectly normal. Only until Morpheus and Trinity showed him the truth that he understood the simulation.

Recently an Australian philosopher, David Chalmers published his book *Reality+*, which dives deeper into this discussion. He called it technophilosophy, meaning to ask questions about technology and to use technology to answer questions. One main thing in his book is that other forms of reality are still real, even if they are virtual or augmented. They are not an illusion because what happened still really happened. So what is reality? Is it what we see? Is it what happens in our brain?

- *"Virtual worlds are not illusions or fictions, or at least they need not be. What happens in VR really happens. The objects we interact with in VR are real."*
- *Life in the virtual worlds can be as good. In principle, as life outside virtual worlds. You can lead a fully meaningful life in a virtual world.*
- *The world we're living in could be a virtual world. I'm not saying it is. But it's a possibility we can't rule out."*²

One interesting example Chalmers used is an episode in *Rick and Morty* by Justin Roiland and Dan Harmon, a satire adult animated series. The episode is Mortynight Run, takes place in an arcade, featuring a sequence of a videogame called Roy: A Life Well Lived. In the game, players assumed the role of Roy since his birth, having complete control and freewill of going through his mundane but fulfilling life, while having no memory of the outside world. Roy goes through school, gets jobs, meets the love of his life, marries, then has children, grandchildren, fights cancer, surrounds himself with the people he loves. Only up until his death do players can wake up back in the arcade, learning that all that reduced to a score on the screen. Beating cancer? Good job, that's just +100 points.

² Chalmers, D. J. (2023). *Reality+: Virtual Worlds and the Problems of Philosophy*. National Geographic Books.

CYBERPUNK OR COMPLEX MODERN SOCIETY

Contrast of the advancement in technology is poverty and the imbalance between the rich and the poor, cyberpunk often portrays corporate power over the masses. *Blade Runner* and *Neuromancer* warn about the world where mega corporations and companies rule through capitalism and monopolistic control. Cyberpunk acts as a political critique and explores the root of these ideologies, Wallace Corporation in *Blade Runner 2049* seeing the child from two replicants as less production more products, or Arasaka in Cyberpunk 2077 habit of bleeding other companies for its gain. In addition, Japan provoked an acute anxiety in the west in the 1980s, notably America worries that a non-western country was beginning to dominate the world economy hence it is reflected in most cyberpunk works with Japan being the center of economic activity.

Black Mirror is a series produced for Netflix that goes through different stories in each episode with the main goal to comment on the dark side of advanced technology. Nosedive (2016) is an episode of Black Mirror written by Joe Wright, discussing humanity’s destructive reliance on modern technology with a society built on a point system. People can rate each other based on their brief interactions throughout the day, the number that influence from housing to job and friend circle, forcing everyone to obsessively put on a mask of pretentiousness. The episode would have been the dystopian reality and a remark on social media, if not for the pre-existing social point system by mainland China, cameras in every corner tracking every movement and summarizing it into a number. In the guise of moderating their society and security, they take away the people’s privacy and free will.

One notable theoretical point is about alienation in the context of the human-machine relationship, which comes from an article by Massimo Filippi and Emilio Maggio, *Alienazioni. Il posto della tecnica ovvero la tecnica al suo posto* (Alienations. The Place of Technology, or Rather, Technology in Its Place). The article navigates through Gilbert Simondon’s critique on the implications of modern technology-related cultural, political, and philosophical concerns through his 1958 essay, *On the Mode of Existence of Technical Objects*. Simondon reframes alienation as not merely a result of capitalist ownership (as Marx argued) but as a fractured relationship between humans and machines. This fracture arises from humanist values, where technology is demonized or reduced to mere utility and it persists because both capital and labor fail to understand the intelligence and autonomy of the technical object itself.

Donna J. Haraway is an American philosopher and professor in women’s studies. Her essay, *Cyborg Manifesto*, although uses cyborg as an analogy to

identity in feminism, is often applied as literary context for human and technology. She suggested the concept of “women in the integrated circuit,” exploring how “microelectronics is the technical basis of simulacra” and “their integration/exploitation into a world system of production/ reproduction and communication called the informatics of domination.” To quote some examples from her Informatics of Domination table:

<i>“Organics of Domination</i>	<i>Informatics of Domination</i>
<i>representation</i>	> <i>simulation</i>
<i>organism</i>	> <i>biotic component</i>
<i>perfection</i>	> <i>optimization</i>
<i>reproduction</i>	> <i>replication</i>
<i>sex</i>	> <i>genetic engineering</i>
<i>labor</i>	> <i>Robotics</i>
<i>mind</i>	> <i>artificial intelligence”¹</i>

This paradigm shifts from organic, industrial systems to polymorphous, information-based systems, altering the nature of class, race, and gender in a new world order analogous to the one created by industrial capitalism. Haraway analyzed how technological systems simultaneously challenge traditional hierarchies and reproduce new forms of domination. However, in later chapters, Haraway emphasized her idea of cyborgs being hybrids of human and machine and in doing so breaks the boundaries of binary division (human vs. machine, nature vs. artificial). Similarly, in the article *Alienazioni. Il posto della tecnica ovvero la tecnica al suo posto*, Filippi and Maggio discussed hybridization as an opportunity to escape rigid systems of thought and behavior, allowing for new forms of identity, work, and social organization.

Cyberpunk, being borned after World War II (on top of the Cold War, Vietnam War, Hiroshima and Nagasaki), also often expresses concern over the advancement of nuclear warfare and global warming. In many cyberpunk narratives, wars are driven by the pursuit of technological dominance, often involving megacorporations or authoritarian regimes competing for control. With *Akira*, it’s the fear of experimentation on human and biological warfare, how the government became overly obsessed with new inventions that turned the weapon against themselves. Militarization of technology is portrayed in *Ghost in the Shell* of a world where war is not confined to the battlefield but extends into cyberspace, with hacking and cyberattacks becoming powerful tools of conflict. In the case of *Blade Runner 2049*, the sequel follows 30

¹ Haraway, D. (1991). *Cyborg Manifesto*, p.28.

years after the event of the first movie, due to high levels of radiation and the success of replicants, humans have completely moved to off-world colonies and abandoned the ruined Earth to the hands of the artificials. These works warn about consequences of environmental neglect in the pursuit of rapid progress. Conflicts between governments and mega corporations cause cycles of inequality, exploitation, and power imbalances. Ultimately, cyberpunk urges us to consider the far-reaching consequences of war and the moral responsibility of wielding advanced technologies in ways that prioritize humanity over destruction.

However, to take a step back, cyborgs and robots after all have not been our biggest concern as science fiction did not predict our society would be so integrated with the media. The truth is the current climate is all cyber and no punk. In the sense of the fourth order in *Simulacra and Simulation*, we are living in a simulation created by media and filtered bubbles - the algorithm tethers us to the grid. Reality is overlaid with its representation on social media, and identity is partially constructed through those same social media representations. Relationships are more complicated when we not only take care of our life but also manage our online self. Even when we reconstruct ourselves on social media, we only show the parts we want to show other people to see - another nod to *Simulation* and *Simulacra*. Caronia also wrote, "we can no longer think of ourselves as an "I" separate and detached from the world." Our identity constantly changes and blurs between offline self and online self. Offline, we are how people perceive us but also how we perceive ourselves while online we can control what other people see and what we want them to see. We are ourselves with the comfort of hiding behind the screen and we are what we save on our driver. Every cookie accepted is trading privacy for "convenience" and "security."



CHAPTER V.

PROJECT PERSEPHONE

5.1. INTRODUCTION TO THE PROJECT

[project] Persephone is my practical project for this thesis, a story-based sci-fi game that uses the medium of interactive art to immerse players in its narrative. The process of creating a video game is intimate with both arts and computer science, both of which grew with me during my time in IUAV. As for the story, the project is based on the question raised in the background of cyberpunk works: if modern technology has the potential to achieve anything, how far would humans take it?

Video games were first created in the 1950s then further developed in the 70s along with home computers. With every generation, video games have been continuously improving; with visuals from 8-bit to 64-bit and now 3D, new technologies like ray-tracing or dynamic global lighting. However, [project] Persephone follows the style of 16-bit pixel art which draws inspiration from early arcade and console games before personal PC. With pixel art games, I also hope to ignite a sense of nostalgia, the lost wonder and excitement during the early era of video games in the 90s.

Set in the year 2064, [project] Persephone envisions a future where humanity has achieved significant breakthroughs in space travel. The narrative centers around the International Space Exploration Center (ISEC), a mega-corporation inspired by NASA and their mission on Persephone, an exoplanet with the highest chance of becoming habitable. Over time, ISEC's progression moves from studying the planet remotely through satellites and robots to the first human landings. However, the planet's atmosphere poses a significant challenge - humans can only survive for limited periods outside their facilities, forcing the pursuit of solutions to sustain life.

We play as Yukio who initially has access only to a virtual tour of the base on Persephone. However, as she explores the simulated environment, she be-

gins to encounter strange glitches that hint at deeper mysteries. DemeterAI is a system followed ISEC's strict protocols to serve as a guide. Yet, in contrast to the system's rigid program is a potential theme of "reversibility" - defying the AI's control to uncover hidden truths.

As the narrative unfolds, Yukio and the players confront an ethical dilemma on the cost of progress. The story explores the moral complexities of trading humanity in pursuit of a future for the human race. Furthermore, through immersive world-building, in-game websites, and articles from fictional ISEC media, [project] Persephone subtly critiques corporate influence, media manipulation, and the tunnel vision of progress.

With interactive storytelling, the audience are not just viewers but active participants, making important choices for the character. Above all, choices allow us to explore in depth the theme of duality as seen with cyberpunk.

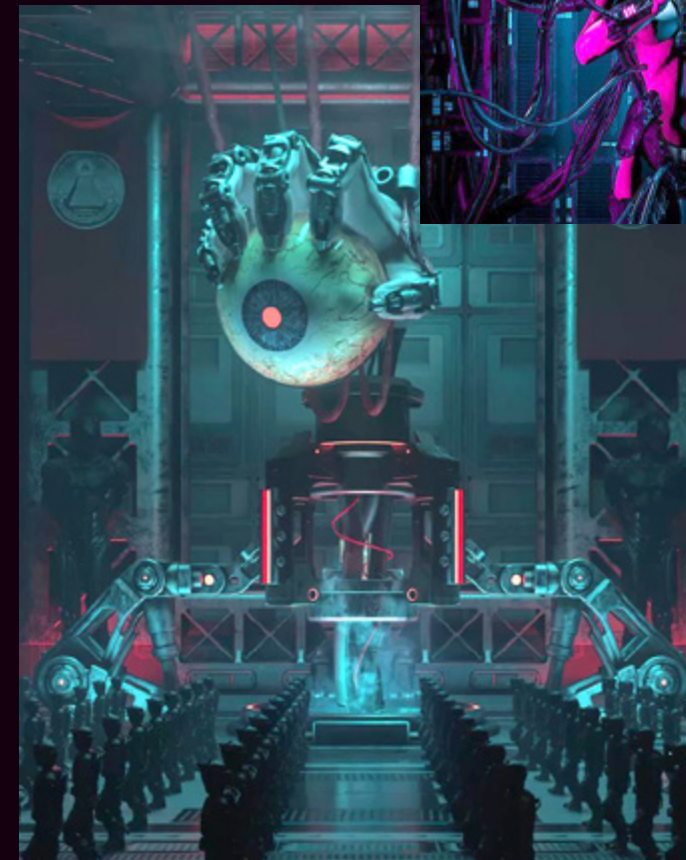
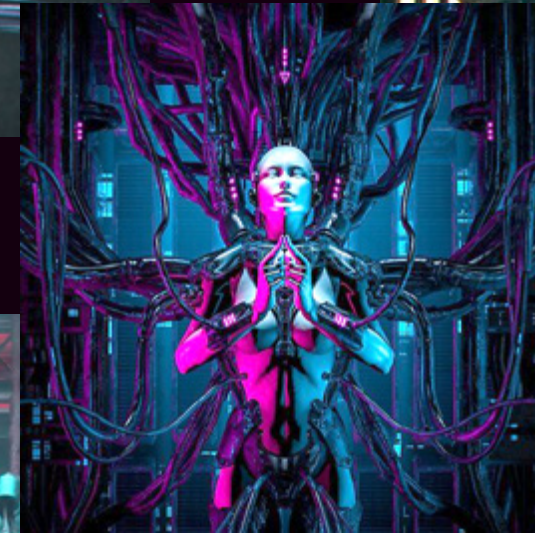
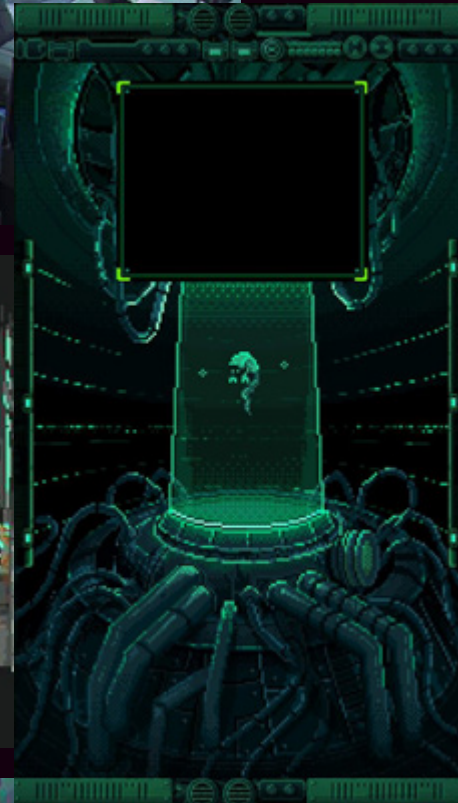
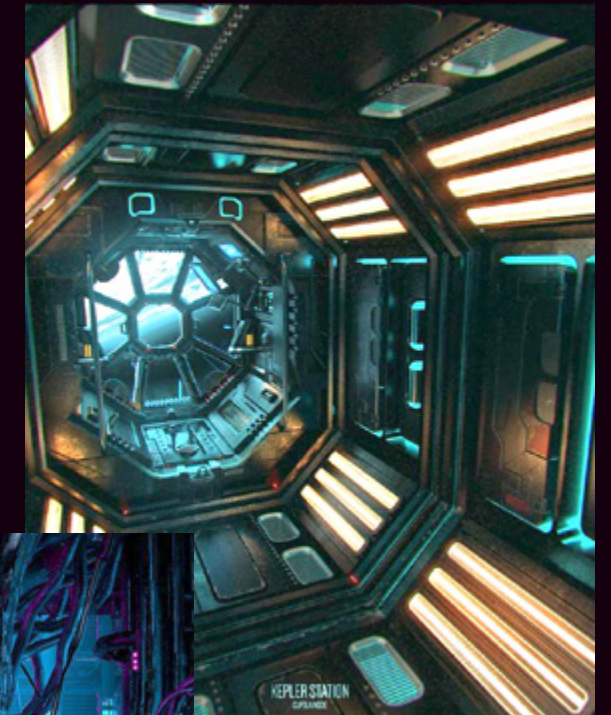
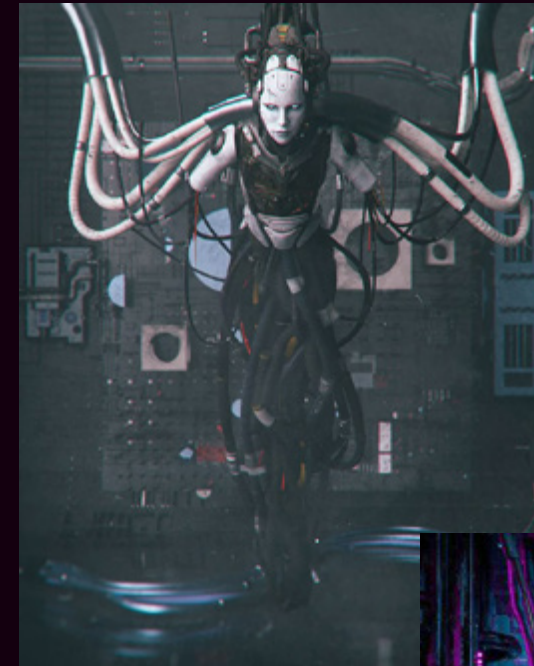
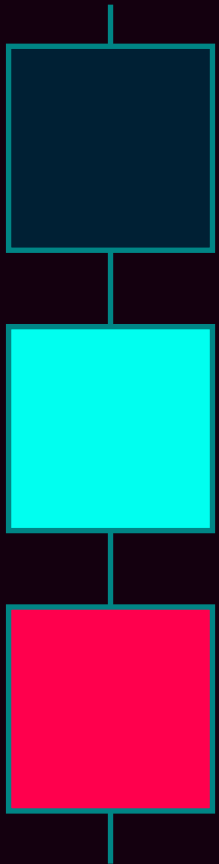
banner design for ISEC website



QR code for the game

5.2. MOODBOARD

COLOR PALETTE



all images are from Pinterest

5.3. THE PLOT

The year is 2064. Earth has reached its technological height and now shifting their main focus to not only space exploration, but planetary colonization. Leading the race is International Space Exploration Center (ISEC), the most successful organization with their expeditions to multiple planets thanks to their advanced inventions. Their most notable project is to establish life on Persephone, a distant exoplanet outside the solar system with a high chance of becoming habitable.

The protagonist, Yukio, unexpectedly receives an invitation to join Expedition 4.0, the latest phase of Persephone's research project. Unsure of why she was chosen and hesitant to leave the familiarity of Earth, Yukio agrees to undergo ISEC's immersive simulation to prepare for life on Persephone.

Once inside the virtual simulation, Yukio begins to explore the designed base. She encounters holographic recordings of past crewmembers recounting their experiences, all while piecing together the larger story through scattered news articles, research notes, and ISEC's world-building.

However, the routine exploration takes a sinister turn when a cryptic and urgent signal intercepts the simulation. A distorted voice reaches out to Yukio, pleading for help. The simulation glitches as doors once sealed become unlocked, revealing areas never meant to be accessed.

What is ISEC truly working on?
Who or what was trying to reach out to Yukio?
Which side should she trust?

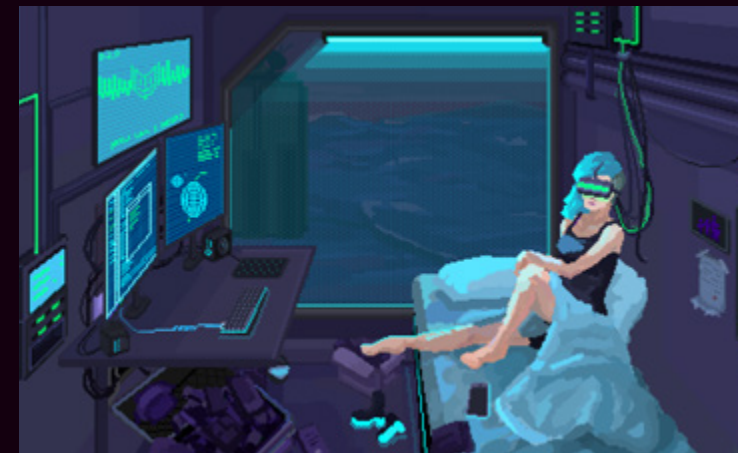
[illegible]

5.4. CONCEPT ARTS

These concept arts are collections of my works from the past 3 years. I started developing the game as a passion project after my first year at IUAV and I've been adapting my ideas related to the game in visual laboratory projects and exhibitions.



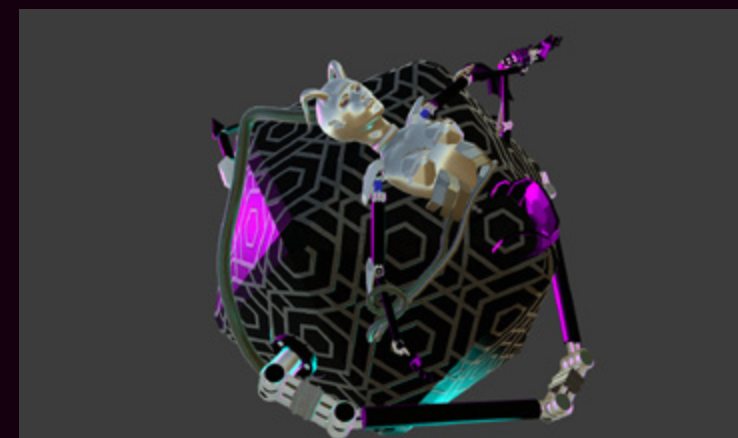
SAElatris's Body (2021) - pixel art animation
for Laboratorio 3



Yukio's Room (2022) - pixel art animation



Daydreamer (2022) - digital art animation
for Laboratorio Multimedia



D20xS-AI (2023) - interactive 3D art
for Laboratorio Video



S-AI (2023) - 3D art

5.5. CHARACTER DESIGN

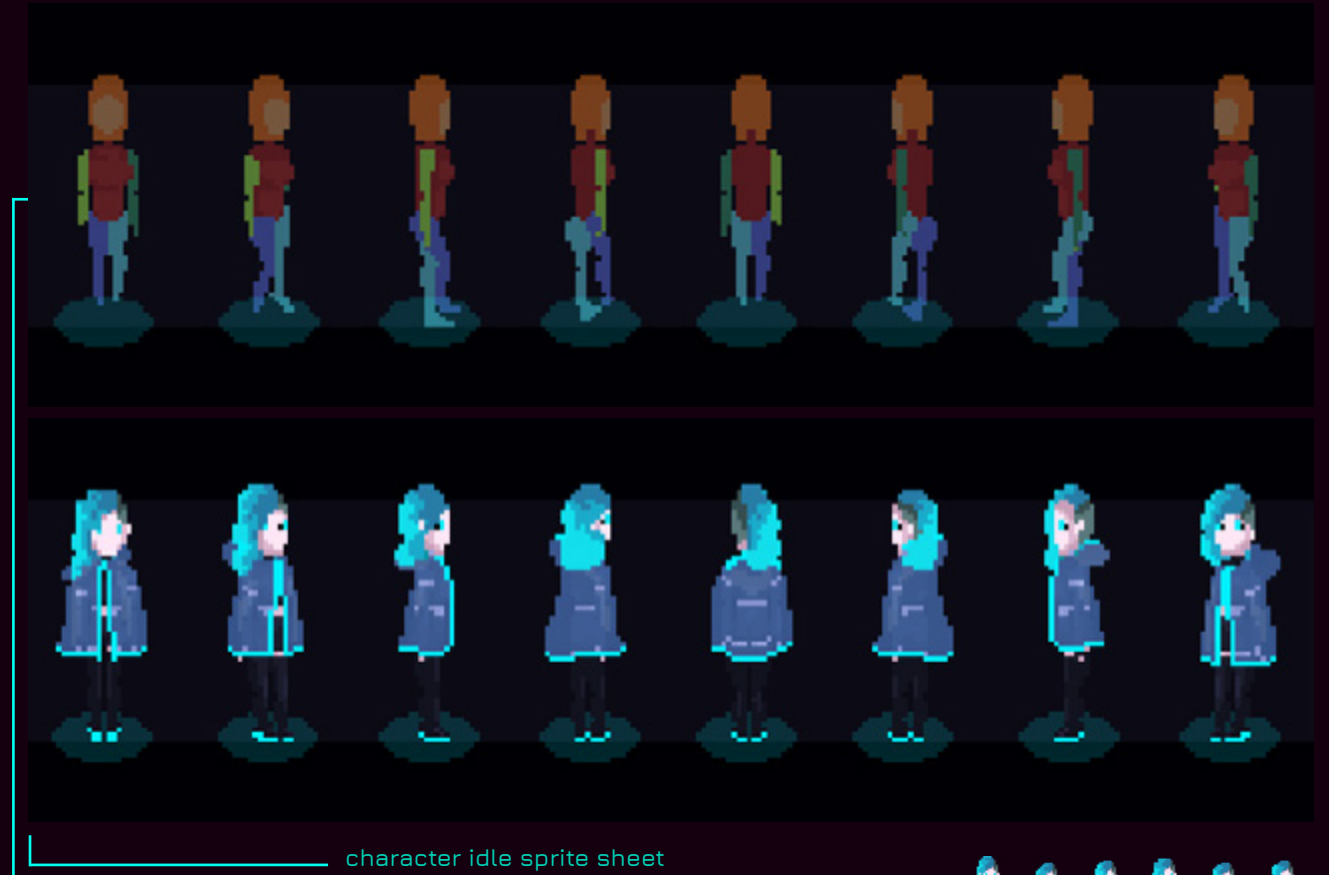
The past crew of [project] Persephone consists of specialized professionals, including an IT specialist, commander, engineer, geologist, biologist,... alongside the holographic AI Demeter; each has contributed to sustaining life on the distant exoplanet and for Yukio to learn more about them. Equipped with bionetic implants and cybernetic parts, their designs reflect both the practical needs and the sleek aesthetics of cyberpunk.



main character and NPC design

YUKIO ONIZUKA

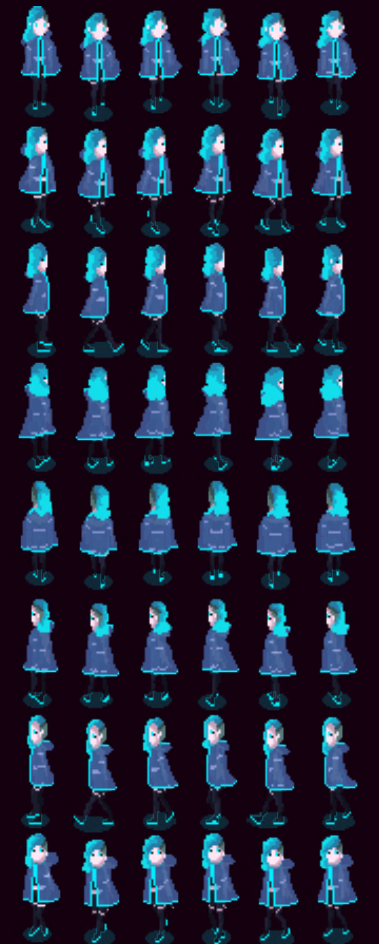
Yukio, the protagonist of [project] Persephone, is a blend of rebellious spirit and scientific brilliance. Similar to the protagonist in Undertale (2015) by Toby Fox, Yukio is mostly silent unless the player chooses her dialogue so the players can only get to know her in little detail from her appearances. The bright cyan she's chosen as her signature color, dyed hair, glowing boots, and futuristic raincoat mirror her tech-savvy mind, reflecting her desire to blend with the digital world.



character idle sprite sheet



concept art for main character



full walking animation sprite sheet

```

Edit Selection View Go Run Terminal Help
Selected Mode is intended for safe code browsing. Trust this window to enable all features. Manage Learn More
NPCFollowPlayer.cs X
D:\> project\PERSEPHONE\> Persephone 1.0 > Assets > Scripts > NPCFollowPlayer.cs
1 public class NPCFollowPlayer : MonoBehaviour
2 {
3     public Animator animator; // NPC's Animator
4
5     private Transform playerTransform; // Reference to the player's Transform
6     private Vector2 direction; // Direction to the player
7
8     void Start()
9     {
10         FindPlayer(); // Automatically find the player at the start of the scene
11     }
12
13     void Update()
14     {
15         if (playerTransform == null)
16         {
17             Debug.Log("Attempting to find the player if it's null (in a scene change)");
18         }
19     }
20
21     void FindPlayer()
22     {
23         // Find the player GameObject by tag
24         GameObject player = GameObject.FindGameObjectWithTag("Player");
25         if (player != null)
26         {
27             playerTransform = player.transform;
28         }
29     }
30
31     void UpdateLookDirection()
32     {
33         // Calculate direction to the player
34         Vector2 playerPosition = playerTransform.position;
35         Vector2 npcPosition = transform.position;
36
37         direction = (playerPosition - npcPosition).normalized;
38
39         // Update Animator parameters for blend tree
40         animator.SetFloat("LookX", direction.x);
41         animator.SetFloat("LookY", direction.y);
42         animator.SetBool("IsLooking", true);
43     }
44 }

```

DEMETER AI

While other characters only follow the dialogue script triggered by the player's interaction, AI Demeter has an additional script that tracks the player's every movement.



CHARACTER'S AVATARS

To enhance immersion in the conversation, I created an avatar for each character in the game. These avatars add more detail while maintaining the pixel art style of the video game.

These portraits are made using screenshots of 3D characters to achieve realistic faces, then modified in Photoshop to add extra features and stylize them in pixel art.



5.6. MAP DESIGN

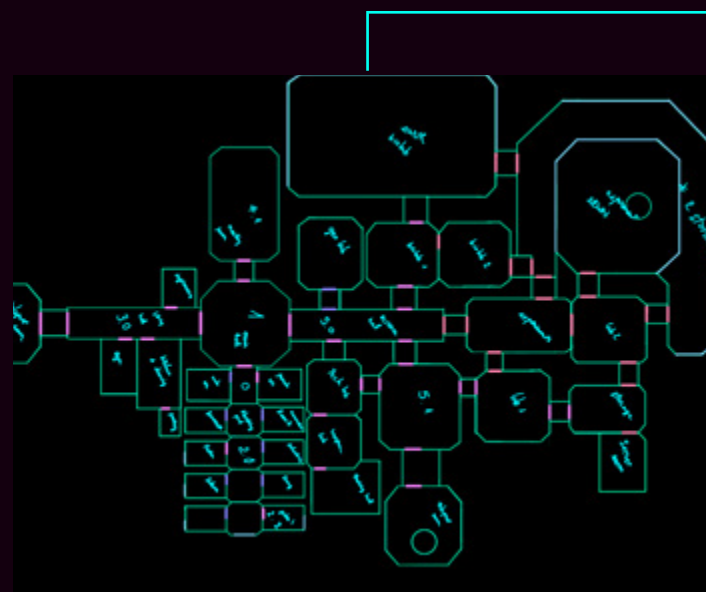
The design of [project] Persephone revolves around two primary aspects of its location: the space station and its simulation, both serving as core elements of the gameplay and narrative.

THE SPACE STATION

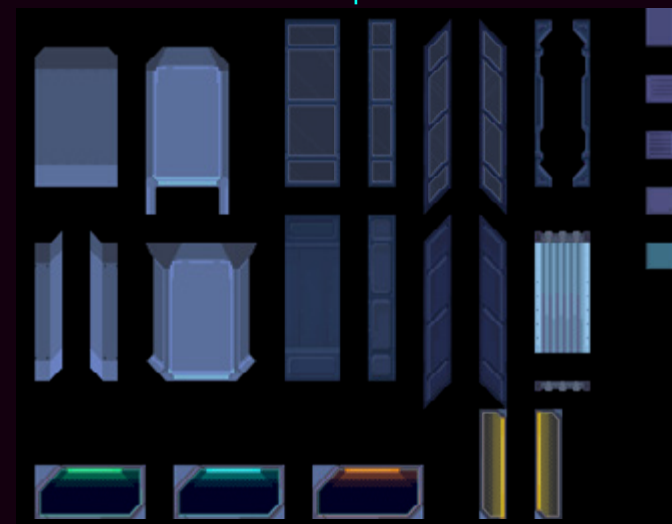
Set on a distant exoplanet outside the solar system, the space station reflects decades of careful planning and development by ISEC (International Space Exploration Center). It's a place that feels lived in, with a clear progression of technology and purpose. Pods, designed for essential survival needs, are assembled and adapted over time. Each section of the station has a specific function to ensure the crew's survival - spaces like the infirmary for medical needs, laboratories for research, and shared quarters for communal living prioritizing efficiency and practicality over comfort.

THE SIMULATION

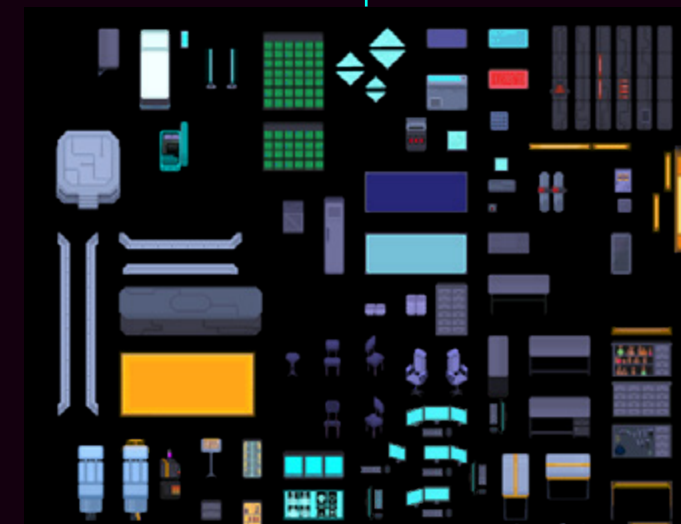
Layered over the physical station is the ISEC simulation, a virtual space designed to recruit new members and teach them Persephone's operations. In this simulation, reality can be warped, allowing for creative freedom to emphasize ISEC's achievements while subtly shaping the recruit's perception of the organization. The simulation provides the player with a unique experience - the undercurrent of mystery.



layout sketch



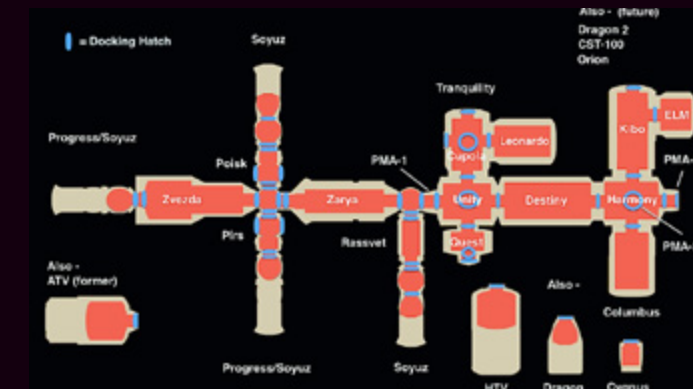
tileset for walls and floors



tileset for enviroments

RESEARCH AND INSPIRATION

The design draws heavily from real-world research on space stations, particularly by studying virtual reality experiences of NASA's International Space Station on the Oculus Go. These references help craft an authentic environment, with the intricate details of astronaut living spaces serving as a foundation. The goal is to create a realistic yet immersive outer space setting, where the player can imagine the day-to-day life of astronauts adapting to the challenges of interstellar exploration.



map of ISS by NASA. Wikipedia.



complete map of ISEC base

5.7. GAME DEVELOPMENT

After designing all the assets and character animations, the final step in creating [project] Persephone was putting everything together through coding and programming. This phase involved assigning functions and programming interconnected systems - a new and challenging experience for me as an artist, but also one of the most rewarding aspects of the project.



Unity workspace

script for interactable zone

```
5 public class DetectionZone : MonoBehaviour
6 {
7     public string tagTarget = "Player";
8     public List<Collider2D> detectedObjs = new List<Collider2D>();
9
10    void OnTriggerEnter2D(Collider2D collider) {
11        if(collider.gameObject.tag == tagTarget) {
12            detectedObjs.Add(collider);
13        }
14    }
15
16    void OnTriggerExit2D(Collider2D collider) {
17        if(collider.gameObject.tag == tagTarget) {
18            detectedObjs.Remove(collider);
19        }
20    }
21 }
```



script for NPC interaction

```
public abstract class NPC_2 : MonoBehaviour, Interactable
{
    [SerializeField] private SpriteRenderer _interactSprite;

    private Transform _playerTransform;

    private const float INTERACT_DISTANCE = 2f;

    private void Start()
    {
        _playerTransform = GameObject.FindWithTag("Player").transform;
    }

    private void Update()
    {
        if (Keyboard.current.spaceKey.wasPressedThisFrame && IsWithinInteractDistance())
        {
            Interact();
        }
    }
}
```



PROGRAMMING THE SYSTEMS

Building the systems that control how the game works was a significant learning curve. This required writing scripts to connect various assets, mechanics, and animations, ensuring that all components communicated effectively within the game engine (and a lot of hours dedicated to debugging).

```
public class DialogueController : MonoBehaviour
{
    [SerializeField] private TextMeshProUGUI NPCNameText;
    [SerializeField] private TextMeshProUGUI NPCDialogueText;
    [SerializeField] private Image NPCImage;
    [SerializeField] private float typeSpeed = 1f;

    private Queue<string> paragraphs = new Queue<string>();

    private bool conversationEnded;
    private bool isTyping;
    private string p;
    private Coroutine typeDialogueCoroutine;
    private const string HTML_ALPHA = "<color-#00000000>";
    private const float MAX_TYPE_TIME = 0.1f;

    public void DisplayNextParagraph(DialogueText dialogueText)
    {
        paragraphs.Enqueue(dialogueText.paragraph);
    }
}
```

script for NPC dialogue

LEVEL DESIGN

One of the first tasks was designing the levels, animating the protagonist's movements, importing and adding collisions to individual objects. All was done using Unity. It was an exciting process to see the 2D art and pixel animations come to life within the game's environment.

```
public class Yukio_Movement : MonoBehaviour
{
    public float speed = 3.0f;
    public Vector2 startingPosition;

    Rigidbody2D rigidbody2d;
    float horizontal;
    float vertical;

    Animator animator;
    Vector2 lookDirection = new Vector2(0, -1);

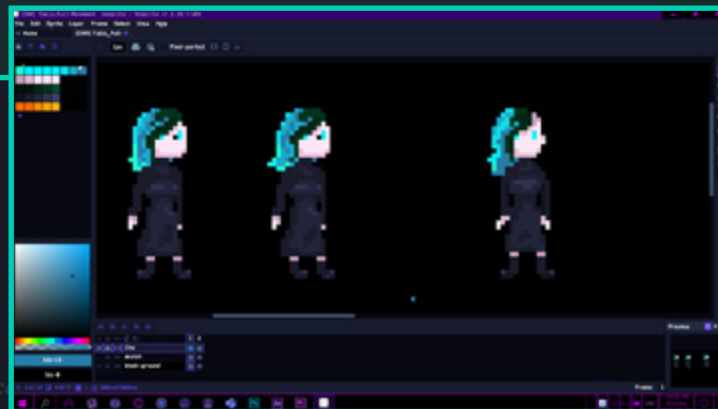
    [SerializeField] private UI_Inventory uiInventory;
    [SerializeField] private Inventory inventory;

    // Start is called before the first frame update
    void Start()
    {
        rigidbody2d = GetComponent<Rigidbody2D>();
        animator = GetComponent<Animator>();
        transform.position = startingPosition.initialValue;
    }
}
```

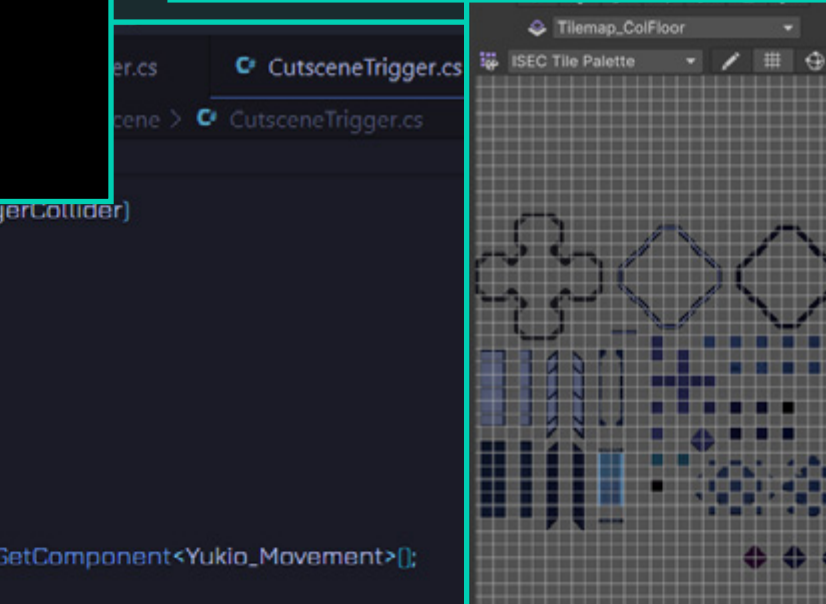
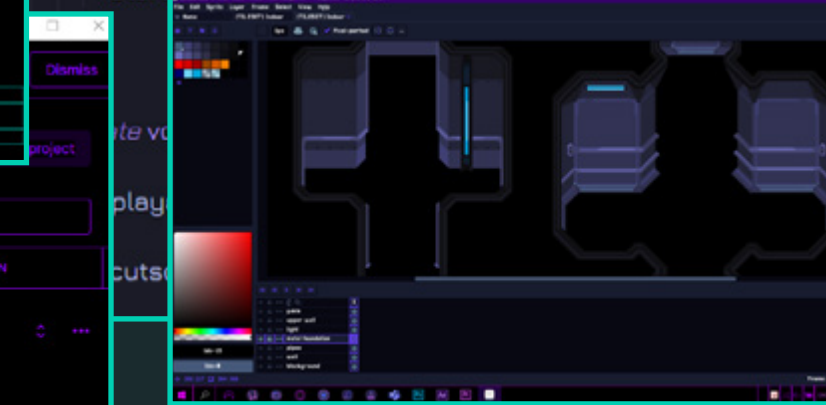
script for character movement

```
public void MarkObjectForDestruction(string objectId)
{
    if (!destroyedObjects.Contains(objectId))
    {
        destroyedObjects.Add(objectId);
    }
}
```

...ent overlap



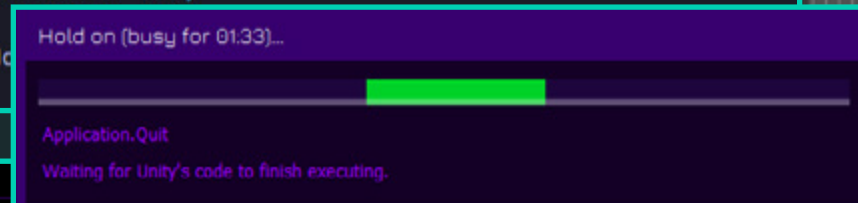
```
private void OnTriggerEnter2D(Collider2D collider)
{
    if (collider.CompareTag(targetTag) && !cutsceneStarted)
    {
        player = collider.gameObject; // Store the player reference
        StartCutsceneCollision();
    }
}
```



```
private void StartCutscene(Collider2D playerCollider)
{
    if (playableDirector != null)
    {
        cutsceneStarted = true;

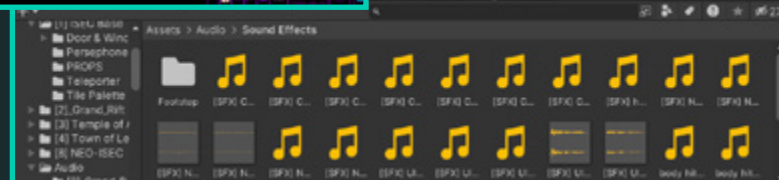
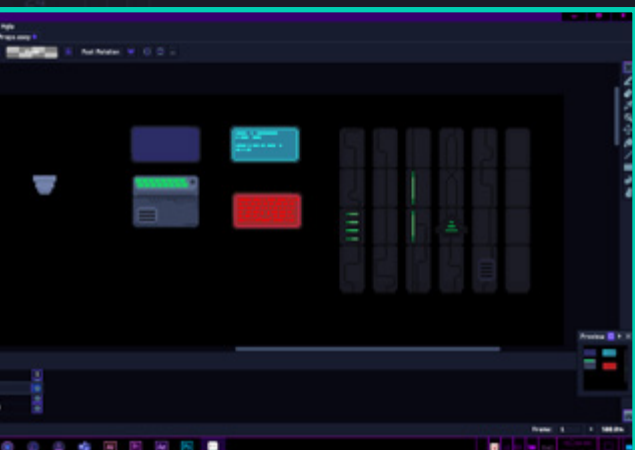
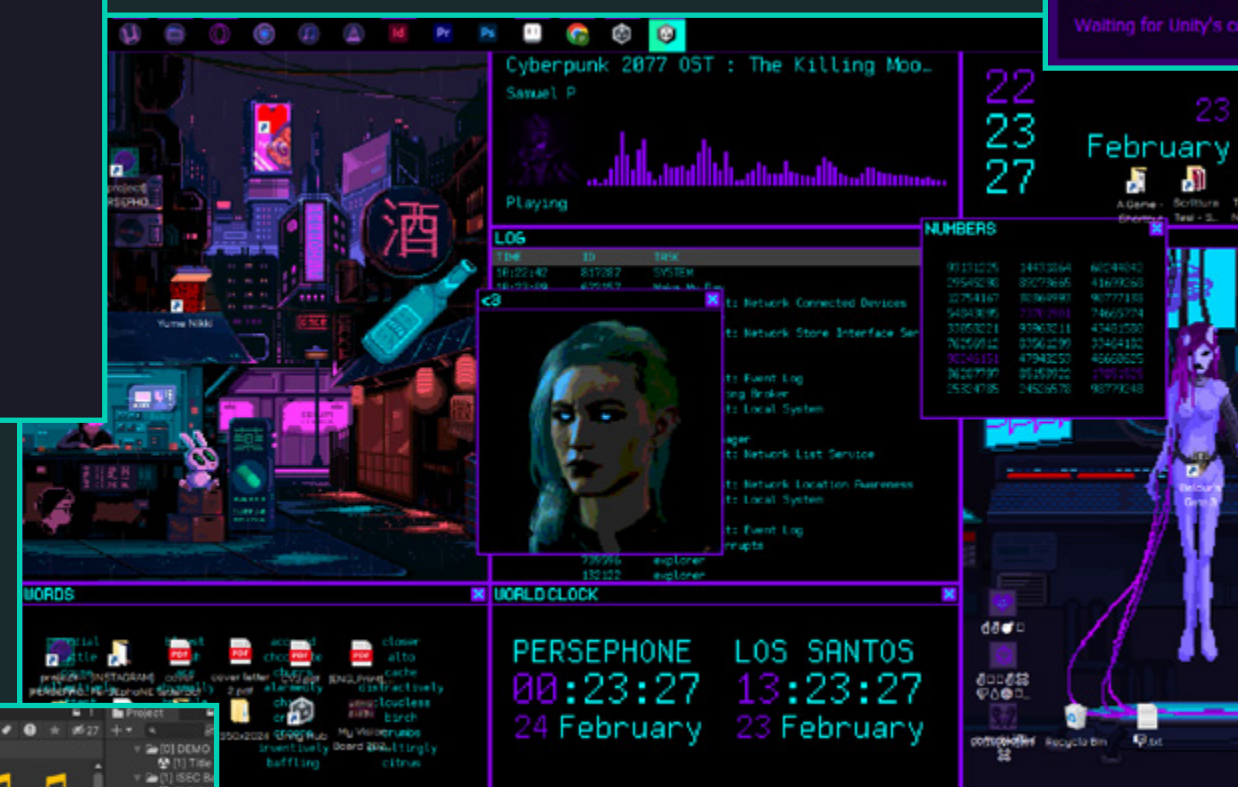
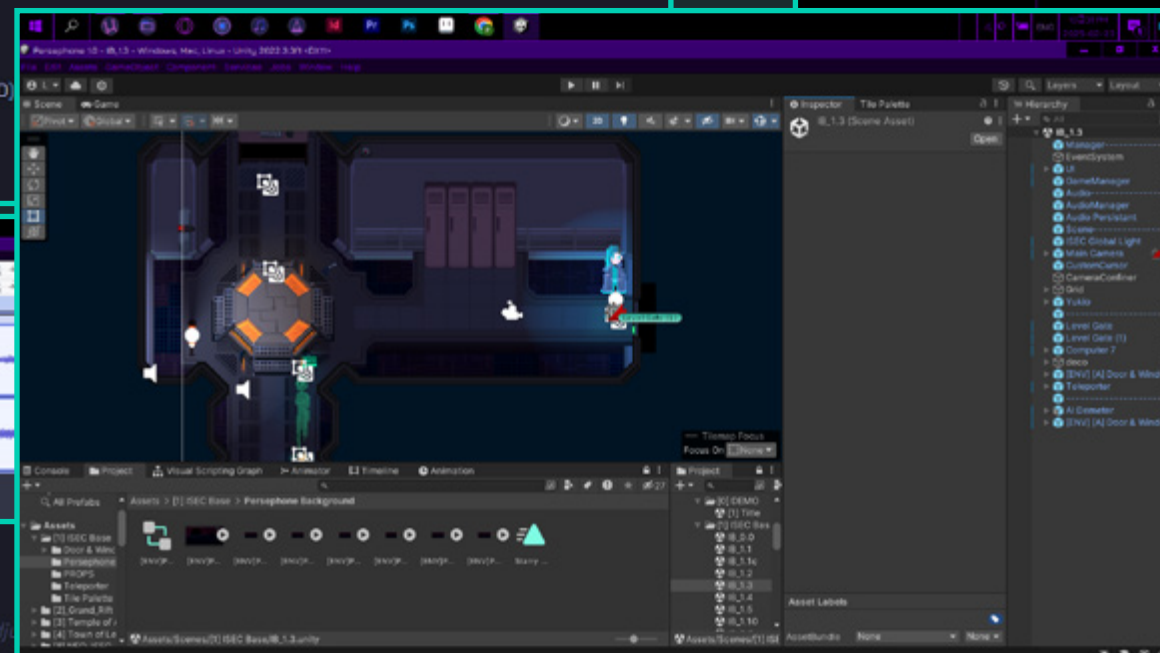
        // Play the timeline
        playableDirector.Play();

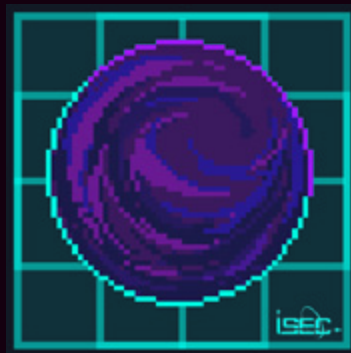
        // Disable movement of the player
        var playerMovement = playerCollider.GetComponent<Yukio_Movement>();
        if (playerMovement != null)
        {
            playerMo
            Hold on (busy for 01.33)...
```



```
playableDirector.stopped += EndCutscene
}
```

```
private void EndCutscene(PlayableDirector director)
{
    // Re-enable movement for the player
    if (player != null)
    {
        var playerMovement = player.GetComponent<Yukio_Movement>();
        if (playerMovement != null)
        {
            playerMovement.enabled = true;
        }
    }
    Destroy(gameObject);
    playableDirector.stopped -= EndCutscene;
}
}
```

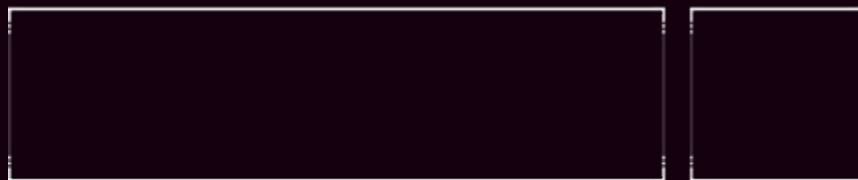




game icon



cursor design



UI design

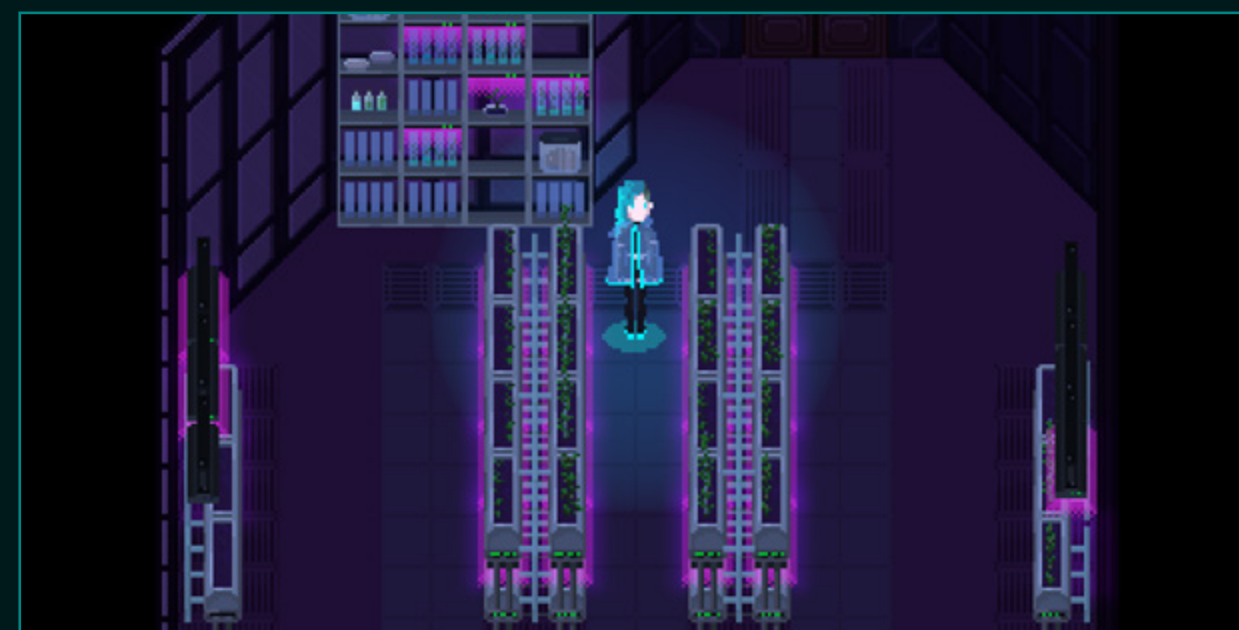
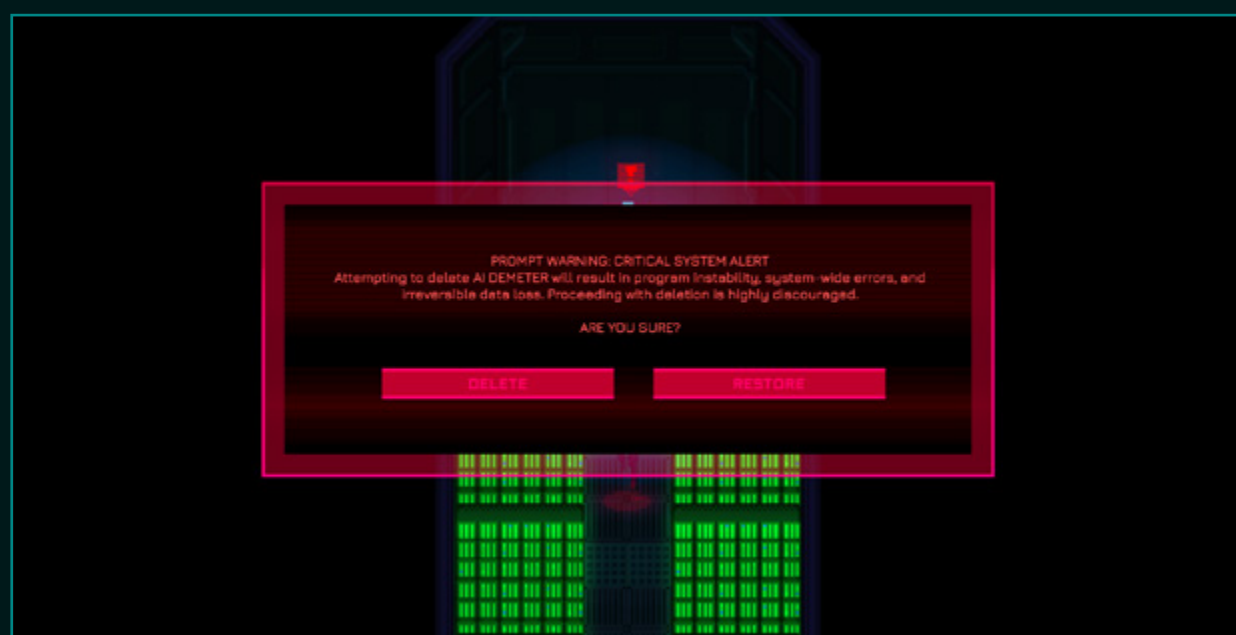
5.8. FINAL RESULT

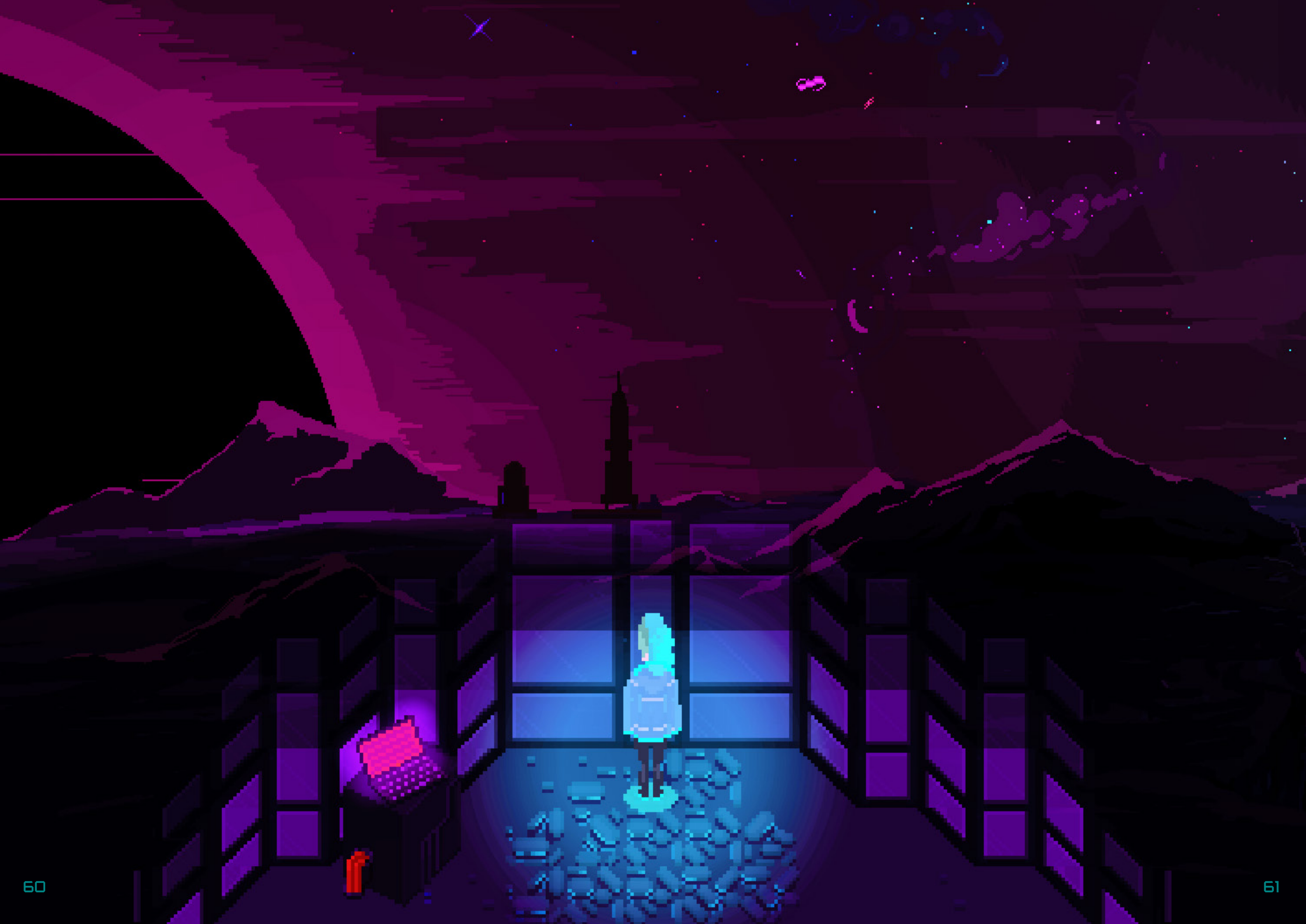
BRINGING IT ALL TOGETHER

The final stages involved integrating all the pieces - art, animations, UI designs, coding, mechanics, creative writing, and narrative - into a single, interactive experience. Watching the game evolve from static designs into a living, playable world was a surreal and fulfilling experience.

This process not only pushed me to grow as an artist but also deepened my appreciation for the collaborative relationship between art and technology in video game creation.







CHAPTER VI. CONCLUSION

Cyberpunk is the most powerful as a genre is its ability to frame real-world issues, such as climate change, post-nuclear, and societal decay, within a speculative framework. It offers a pessimistic view of the future, one we are already halfway heading toward.

At its core, cyberpunk explores the dual nature of technology: its potential to enhance human life and its capacity to dehumanize and control. This duality is highlighted by the iconic imagery of colorful neon-lit metropolises in contrast to the oppressive shadow of corporations looming over the streets, the underdog against the government, creator and creations. The bleak vision is not just a dystopian fantasy but a reflection of real-world concerns, urging us to think critically about the kind of future we are creating and to address the moral and social costs: at what point does technological progress cease to serve humanity and begin to undermine it?

Cyberpunk plays an important part of visual arts as not only it depicts the broken boundaries between human and machine, privacy and mass surveillance, but the genre itself is breaking the boundaries of science fiction and cultural reflection. Its speculative world's act as both a mirror and a warning, it challenges us to envision a path where technology and humanity can co-exist without compromising each other.



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It has been inspiring to work alongside them on the subject I am passionate about. I want to express my sincere gratitude for both of my supervisors for their encouragement, patience and guidance throughout this process.

A heartfelt thank you to my family and friends for their motivation and support. Special thanks to Minh, Fede and Daisy.

I am grateful to IUAV, the staff, the professors and my classmates for their contribution.

Untitled (2021) - personal art

BIBLIOGRAPHY

BIBLIOGRAPHY

Asimov, I. (2018). "Runaround" *I, robot*. Voyager.

Bankston, K. (2017, Oct 06). *Blade Runner and the Power of Sci-Fi World-Building*. <https://medium.com/@KevinBankston/blade-runner-and-the-power-of-sci-fi-world-building-afa891298fac>

Baudrillard, J. (1994). *Simulacra and simulation*. University of Michigan Press.

Benanti, P. (2023, 23 Febbraio). *La sfida del rapporto uomo-macchina*. Italianeuropei 1/2023. <https://www.italianeuropei.it/italianeuropei-12023/item/4702-la-sfida-del-rapporto-uomo-macchina.html>

Bethke, B. (1983). *Cyberpunk (short story)*. Amazing Stories.

Bethke, Bruce. (1997). *Cyberpunk a short story by Bruce Bethke - Foreword (written in 1997)*. infinityplus.co.uk/.

Cadora, K. (2010). "Feminist Cyberpunk." *Beyond Cyberpunk: New Critical Perspectives*, edited by Graham J. Murphy and SherryL Vint, Routledge, pp. 157-72.

Caronia, A. (2023, 7 Giugno). *Cervelli in una scatola di metallo. Una genealogia del cyberpunk secondo Antonio Caronia*. <https://www.mimesis-scenari.it/2023/06/07/cervelli-in-una-scatola-di-metallo-una-genealogia-del-cyberpunk-secondo-antonio-caronia/>

Copeland, B. J. (2004). *The essential turing*. Clarendon Press.

Chalmers, D. J. (2023). *Reality+: Virtual Worlds and the Problems of Philosophy*. National Geographic Books.

Dery, M. (1994). "Black to the Future: Interviews with Samuel R. Delany, Greg Tate, and Tricia Rose." *Flame Wars: The Discourse of Cyberculture*, edited by Mark Dery, Duke UP.

Dick, P. K. (1991). *The selected letters of Philip K. Dick: 1974*. Underwood Books.

Dick, P. K. (1975). *Do Androids dream of electric sheep?*

Filippi, M., Maggio, E. (2021, 6 Luglio). *Alienazioni. Il posto della tecnica ovvero la tecnica al suo posto*. <https://www.dinamopress.it/news/alienazioni-il-posto-della-tecnica-ovvero-la-tecnica-al-suo-posto/>

Fisher, M. (2012). *Flatline Constructs: Gothic Materialism and Cybernetic Theory-Fiction*. Exmilitary.

Gibson, W. (1986). *Neuromancer*. Turtleback Books.

Gibson, W. (1995). *Burning Chrome*. HarperCollins.

Godoski, A. (2013, February 5). *Under The Influence: The Matrix*. Screened.com.

Haraway, D. J. (2016). *A Cyborg manifesto*. In University of Minnesota Press eBooks (pp. 3–90). <https://doi.org/10.5749/minnesota/9780816650477.003.0001>

Hayles, N. K. (1999). *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*. U of Chicago P.

Lavigne, C. (2013). *Cyberpunk Women, Feminism, and Science Fiction: A Critical Study*. McFarland & Company, Inc.

McFarlane, A., Murphy, G. J., & Schmeink, L. (2022). *Fifty key figures in Cyberpunk culture*. Routledge.

McFarlane, A., Murphy, G. J., & Schmeink, L. (2019). *The Routledge companion to cyberpunk culture*. Routledge.

Nguyen, C. T. (2020). *Games: Agency as Art*.

Nixon, Nicola. (1992). “Cyberpunk: Preparing the Ground for a Revolution or Keeping the Boys Satisfied?” *Science Fiction Studies*, vol. 19, no. 2.

Rothstein, E. (2003, May 24). *Philosophers Draw on a Film Drawing on Philosophers*. The New York Times. Archived from the original on April 7, 2020.

Stephenson, N. (1994). *Snow crash*. Penguin UK.

Sterling, B. (1988). *Mirrorshades: The Cyberpunk Anthology*.

Turing, A. M., & Copeland, J. (2004). *The Essential Turing: Seminal Writings in Computing, Logic, Philosophy, Artificial Intelligence, and Artificial Life*

plus The Secrets of Enigma. <http://ci.nii.ac.jp/ncid/BA69209504>

Walsh, T. (2023, October 16). *AI is closer than ever to passing the Turing test for ‘intelligence’. What happens when it does?* <https://theconversation.com/ai-is-closer-than-ever-to-passing-the-turing-test-for-intelligence-what-happens-when-it-does-214721>

SITOGRAPHY

David Hoffman. (2023, Oct 5). *He Predicted The Future in 1982. Famous Sci-Fi Writer*. YouTube. <https://www.youtube.com/watch?v=0ZCxlHk1xo>

Quinn Henry. (2023, Feb 20). *South Korea is a Cyberpunk Dystopia*. Youtube. <https://www.youtube.com/watch?v=Ahl1lexWxbM>

The Verge. (2021, Dec 10). *Keanu Reeves and Carrie-Anne Moss on making The Matrix Awakens with Epic Games*. Youtube. <https://www.youtube.com/watch?v=0OK80eljWrs>

WendoverProductions.(2022, Nov16). *Samsung’s Dangerous Dominance over South Korea*. Youtube. <https://www.youtube.com/watch?v=oL0umpPPe-8>

FILMOGRAPHY

Imaishi, H. (Director). (2022). *Cyberpunk: Edgerunners*. Based on Cyberpunk 2077 by CD Projekt Red.

Kosinski, J. (Director). (2010). *TRON: Legacy*. Walt Disney.

Lisberger, S. (Director). (1982). *TRON*. Walt Disney.

Oshii, M (Director). (1995). *Ghost in the Shell (Kôkaku Kidôtai)*. Kôdansha/ Bandai/ Manga Entertainment.

Ôtomo, K (Director). (1988). *Akira*. Tokyo Movie Shinsha.

Scott, R. (Director). (1982). *Blade Runner*. Warner Brothers.

Villeneuve, D. (Director). (2017). *Blade Runner 2049*. Sony Entertainment.

Wachowskis, L., Wachowskis, L. (Director). (1999). *The Matrix*. Warner Bros., Roadshow Entertainment.



screenshots of each film

