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Advanced Studio Workflow and Techniques (ACCA7036)

MA Animation

Title:

Cyberpunk style in animation effects broadly encompasses

[Link](#)

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Introduction

The city stands as the undisputed heart of the cyber world, a colossal organism that devours everything in its path. It no longer expands horizontally but sprawls simultaneously skyward and subterranean: above, towering skyscrapers and aerial platforms rise in layered tiers, their glass and steel reflecting cold neon hues as cloud-level residences, corporate headquarters, and private gardens float above the pollution; while the lower levels are bottomless labyrinths of districts and pipelines, where sunlight becomes a luxury and dampness, gloom, and rust form the everyday backdrop. The streets are perpetually occupied by light. Giant holographic advertisements flicker overhead, projecting exaggerated smiles, idealized bodies, and instantaneously updated consumer directives—language, images, and emotions all precisely calculated and sold as a package. Commodities extend beyond food and machinery to encompass beliefs, identities, and dreams themselves. Pedestrians traverse the shifting light and shadow of advertisements, their faces illuminated by ever-changing hues only to be swiftly swallowed again. The city never truly falls silent. Aerial vehicles slice through the air, magnetic levitation tracks roar between buildings, while distant factories and server clusters emit a low, persistent hum. Street corner vending machines, repair robots, and illegal vendors operate side by side. The footsteps, whispers, and arguments of the crowd are repeatedly washed over by rain and electrical static, ultimately merging into a ceaseless background noise. Here, time stretches and blurs. People live in an eternal “now,” while the city itself, like an unstoppable machine, operates coldly and efficiently.

Preliminary research:

The core visual elements of Cyberpunk style in animation effects broadly encompass:

High-contrast colour schemes + neon hues: Predominantly dark backgrounds (deep blue/dark grey/black) accented with highly saturated neon lights (electric blue, magenta, cyan, turquoise, etc.).

Futuristic aesthetic + technological texture: Frames frequently incorporate metallic surfaces, glass, fibre optics, wiring, circuit diagrams, and heads-up displays (HUDs).

Glitch/fragmented/electronic effects: Examples include glitches (data disruption, pixel misalignment), scan lines, digital noise, image distortion, and layered transitions.

Lighting and reflections: Such as neon projections, edge reflections, wet surface reflections, glass refractions, neon halos, and particle luminescence.

Cyberpunk is a futuristic aesthetic rooted in dystopian themes, presenting not the civilisational progress brought by technology, but rather the stark disparity between highly advanced technology and the collapse of societal ethical structures. At its core, the conflict extends beyond the simplistic dichotomy of 'advanced technology versus poor quality of life.' It delves deeper into how a society loses its equilibrium amidst the torrent of technological advancement: technology becomes a tool for the powerful to consolidate their authority, while the underprivileged are forced to rely on cheap cybernetic enhancements, illegal modifications, short-term contracts, and the sale of personal data merely to survive. The entire world thus becomes razor-sharp, taut, and perpetually on the brink of fracture—as if all the glittering veneer of advanced technology merely masks a neon-coated layer concealing a rotting society.

The visual and narrative aesthetics of this style are built upon three structural contradictions, the most tangible of which is the first: 'vertical stratification'. Cyberpunk cities do not sprawl horizontally but are instead compressed and

stretched vertically: towering corporate skyscrapers symbolise the concentration of power, resources, and data, while beneath their shadows lie damp, overcrowded slum districts, sprawling underground shantytowns, abandoned pipelines, illegal workshops, and black market networks. The upper towers boast clean air, artificial sunlight, gated compounds, and private security forces; the middle tiers house corporate employees in hive-like residences and endless work spaces; the lower levels dwell in perpetual night, dominated by neon lights, fog, oil stains, and the scent of burning rubbish. The city itself becomes a tangible metaphor for class structure: higher floors signify proximity to the seat of power, while descending resembles a descent into a social abyss. One's vertical position within the space mirrors their true standing in society. This architectural framework generates a potent visual sense of oppression, forming an indispensable existential logic of the cyberpunk city.

The second contradiction manifests as 'cultural hybridisation,' a key wellspring of cyberpunk's distinctive aesthetic. To depict the cultural amalgamation following global imbalance, cyberpunk worlds deliberately interweave Asian (particularly East Asian) visual elements with Western urban landscapes. For instance, neon signs bearing Japanese and Chinese characters hang amidst European-style brick walls, steel structures, and glass curtain walls; street food stalls offer synthetic ramen and bionic tofu, all situated alongside neighbourhoods of old-school American bars and tech company data centres. Languages are jumbled indiscriminately, typefaces are reimagined, religious symbols undergo mechanised treatment, and street patterns and aesthetic elements coexist in a collage-like fashion. This cultural hybridity is not harmonious fusion but a result of capitalist globalisation's folding effect: multiculturalism becomes commercialised, fragmented, and visually layered, forming a future urban texture that is both familiar and alienated. It reveals that in the future, culture will not vanish but be compressed into advertisements, interfaces, trademarks, and virtual experiences.

Case Study:

1. Neon City — Cyberpunk Motion Art (Produced by Raphael Colaço)

Employing vivid neon blue and magenta as primary hues against a dark backdrop creates a visual sensation of neon flashing in the night. Dynamic elements include: digital UI, beam trails, drifting particles, and character edge reflections. Composition emphasises a futuristic, tech-driven urban aesthetic: skyscrapers, aerial vehicles, and mirrored reflections.



Fig 1

2. The cyberpunk aesthetic of Twin Shadows Wonderland blends neon metropolises with futuristic mechanical elements, employing high-contrast electric blue, magenta, and purple lighting to evoke a damp, reflective nocturnal atmosphere. Its settings frequently embody a texture where 'cutting-edge technology coexists with decay', with architecture and neon symbols intertwining to evoke a potent sense of the future. Character designs incorporate cybernetic implants, armour, and energy effects, accentuating the theme of human-machine fusion. The overall aesthetic strikes a balance between motion effects and lighting, blending romanticism with a stark technological aesthetic. It serves exceptionally well as a visual reference for cyberpunk animation effects.



Fig 2



Fig 3

3. Blade Runner 2049 presents a distinctly post-prosperity vision of cyberpunk, where advanced technology stands in stark contrast to a society sliding into decay. The film's world is shaped by bleak industrial ruins, smog-choked cities, towering yet soulless corporate megastructures, and desolate wastelands beyond the urban boundary — all suggesting a civilisation thoroughly exhausted and hollowed out by overwhelming corporate power. Social hierarchy is sharply vertical: corporations such as the Wallace Company control the production of replicants, labour systems, memory engineering, and off-world expansion, while the state has been reduced to a mere executor of corporate interests. Meanwhile, those at the bottom — humans and replicants alike — struggle within poverty, pollution, and systemic exploitation. Replicants, artificial memories and AI companions form the core of the technological landscape, turning identity, emotion and even humanity into purchasable commodities. Within this structure, the protagonist K, designed to be nothing more than a tool, continually questions the value and authenticity of his own existence. His search for meaning reflects the central spirit of cyberpunk: that even under overwhelming technological dominance and entrenched power, individuals still attempt to reclaim a sense of truth and dignity from false memories, controlled lives and an indifferent world. With its muted palette, stark contrasts, cultural layering and austere visual language, the film pushes cyberpunk's social critique and philosophical depth to an exceptional level.



Fig 4



Fig 5

Project planning

On 7th March 2025, a cyberpunk co-op adventure game was released. Developed by Hazelight Studios and published by Electronic Arts (EA), this two-player cooperative title plunged me into a cyberpunk world so profoundly immersive that it inspired my own ambition to create such a universe. My initial vision centred entirely on crafting this cyberpunk realm. Skyscrapers towering amidst swirling smog, flashing neon signs and an array of cyber-style lighting.

For the creation software, I opted for Blender, as it is the programme I utilise most frequently. I can leverage its Shader Editor and various tools to craft cyber-style lighting and smoke effects, achieving the cyber world I envision.

In terms of music, I wish to pair this with music whose timbre resembles fractured data streams, distorted arcs crackling and exploding between beats—cold and mechanical, like the neon heartbeat of a malfunctioning city. Employ the Camera Shaky plugin within Blender to render the animation with a shaky, vibrating appearance. Synchronise this scene with the music.

Mid-production

I shall create this using Blender.

First, create a plane within Blender. Apply six levels of normal subdivision, then add surface subdivision for further refinement. Introduce a displacement modifier, and within the texture properties, adjust the type to Musgrave. Change the noise type to cell noise. By modifying the Size, Nabra, Dimension, Lacunaruty, Octaves, and Intensity, shape it into the architectural form.

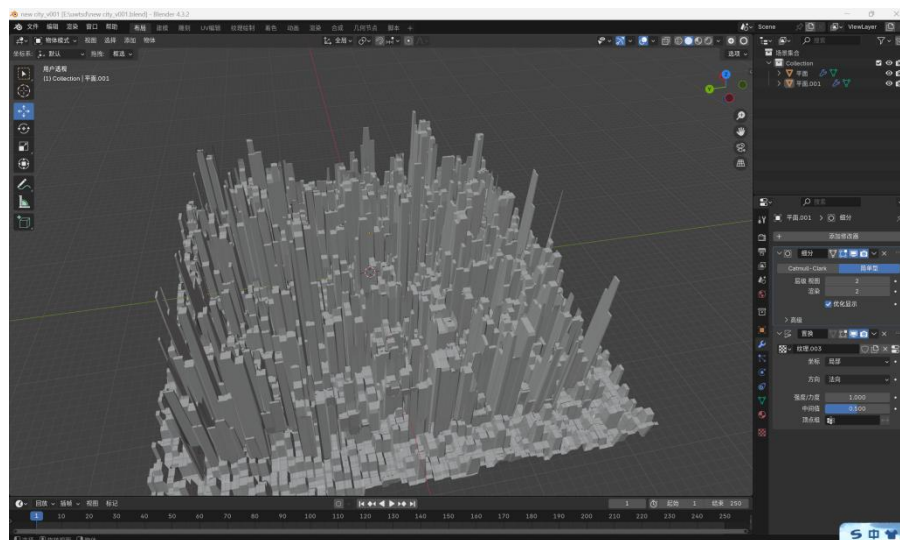


Fig 6

Add a shader editor to this building, incorporate a brick texture within it, and connect the brick texture's colour channel to the normal channel. Ctrl shift click the Brick texture, Then adjust the scale, blas, brick width, row height of the bricks.

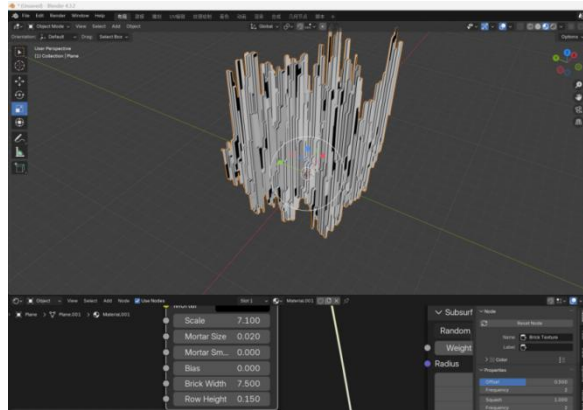


Fig 7

Then Ctrl T to add the Mapping and texture coordinate, Adjust the X, Y, and Z scaling options within the mapping. Then create a new bump map. Then ctrl shift click the principled BSDF.

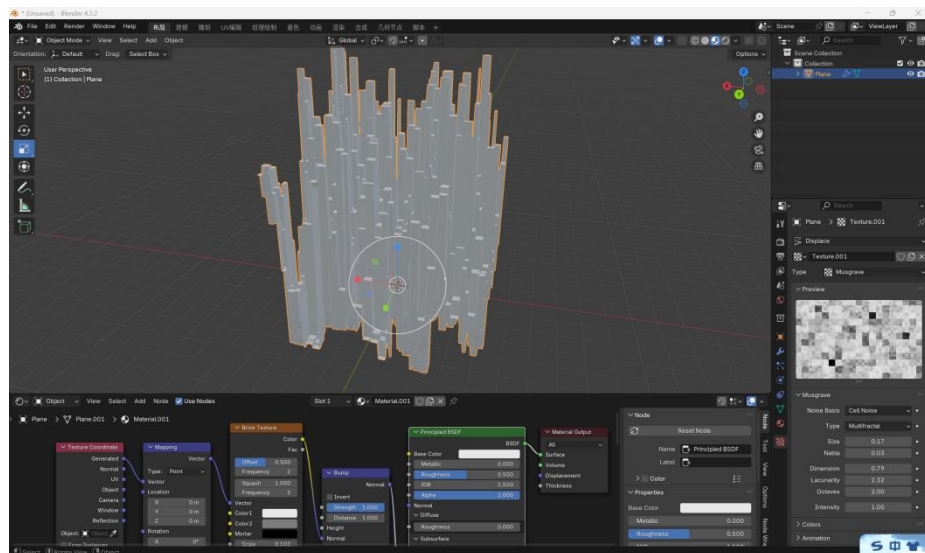


Fig 8

Locate an image depicting a cityscape at night, import it into Blender, and connect the photograph's colour channel to the base colour input of the Principled BSDF shader. In Object Mode, press Ctrl+A to convert the visual geometry to a mesh. Proceed to the UV Editor to adjust the UVs, ensuring the object fully covers the entire image.

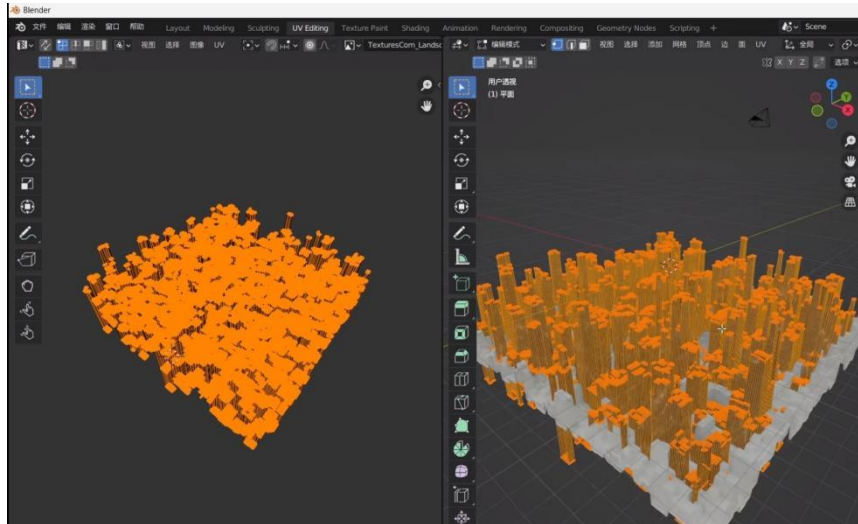


Fig 9

Connect the image's colour channel to the Principled BSDF's emission, add a colour ramp to control the emission brightness, and so forth. Subsequently, add a multiply shader for further adjustment. Darken the city's base colour tone, then adjust its metallic, specular, and roughness values. After adjustment, press Ctrl+L to assign the ground material to the city.

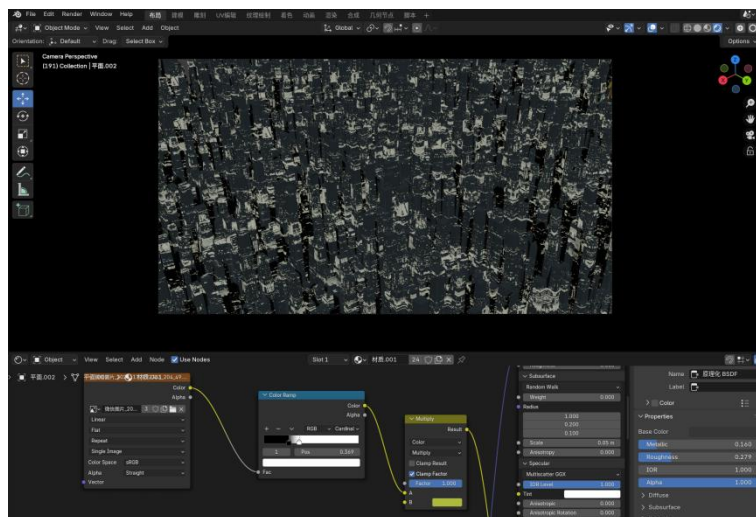


Fig 10

Shift A Create a new cube, remove the default BSDF, create a new volume scatter, connect the volume to the material output, adjust the Density to 0.1,

change the colour to blue, add a point light, set the power to 2000W, and set the colour to blue.



Fig 11

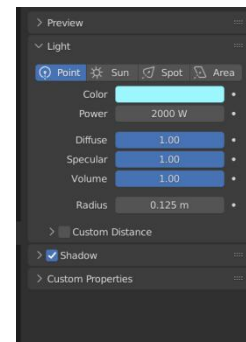


Fig 12

Shift A Create a new cube, delete the Principled BSDF, create a new Principled Volume, add a noise texture, colour ramp and multiply, link these four together, adjust the parameters to transform it into mist, then change the mist to blue by adjusting the Multiply.

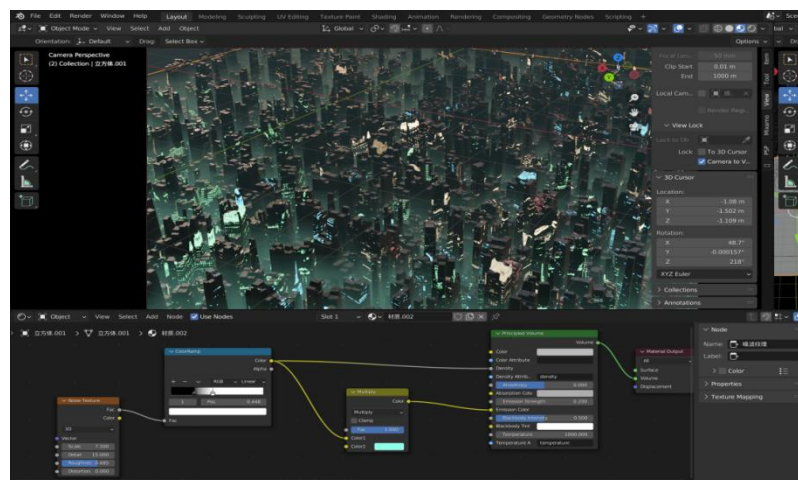


Fig 13

Construct several large buildings using cubes to make them stand out within the environment. Duplicate two or three of these, then create several billboards using cubes to place atop the large structures for texturing. Duplicate multiple cities to create a denser, more populous appearance. Apply textures to large buildings and billboards using the same procedure as for major cities. Utilise

the shader editor for editing: import the image, then add a Colour Ramp, Multiply, Mapping, and Texture Coordinate to connect and adjust the settings.

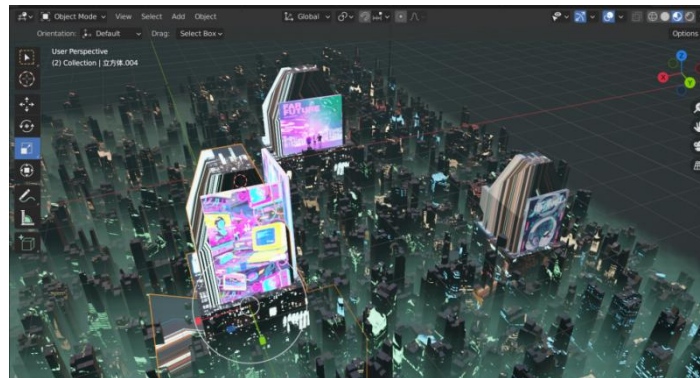


Fig 14

Finally, fine-tune the remaining details to complete the creation of the cyberpunk world.

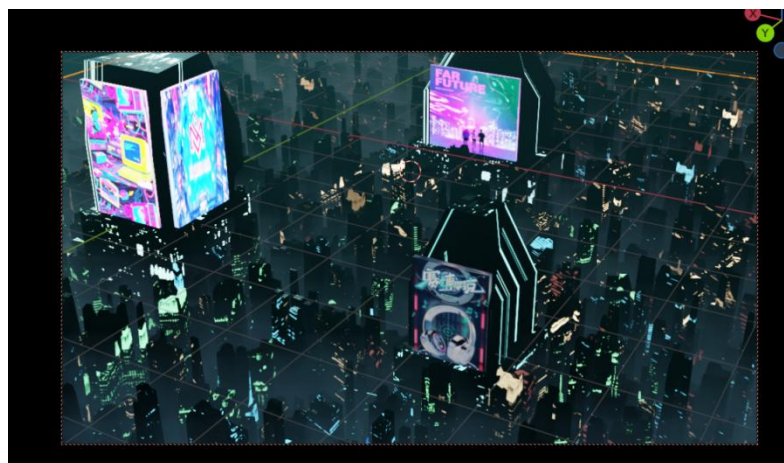


Fig 15

Recreate a camera, first display the entire environment and keyframe the camera. After keyframing, pull the timeline to the appropriate position, adjust the camera, keyframe again, and once adjusted, install a Camera Shakify plugin. Set the scene to shake mode to simulate a cyberpunk world in the midst of disaster. Within Camera Shakify, create an “Investigation” and set the “Influence” to 0.4 to reduce the intensity of the shaking, lending it a more technologically advanced appearance.

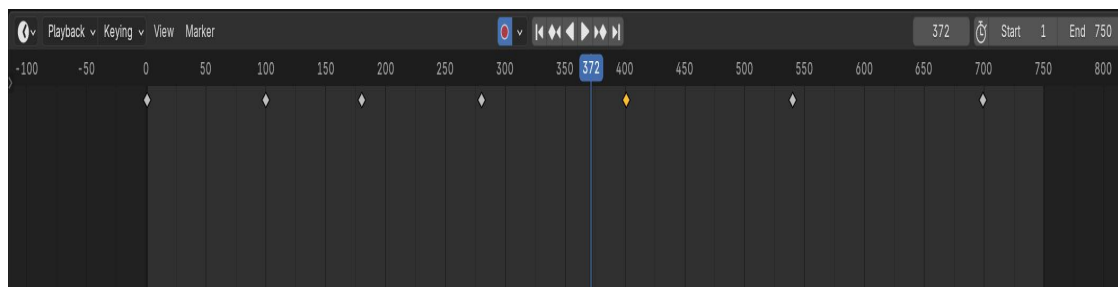


Fig 16

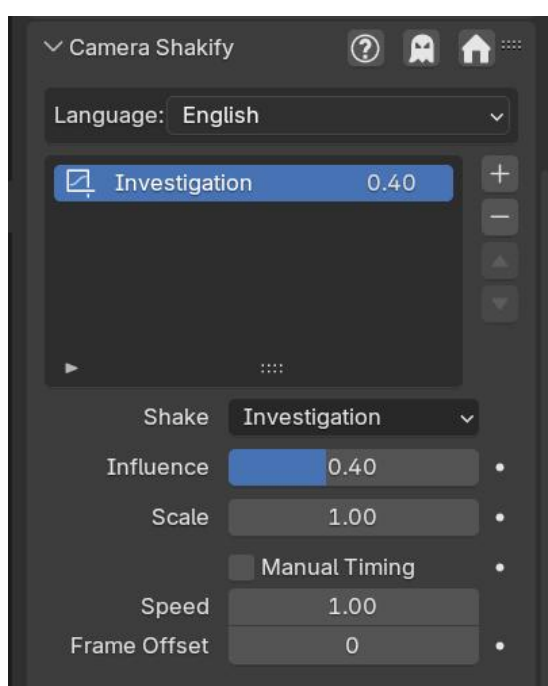


Fig 17

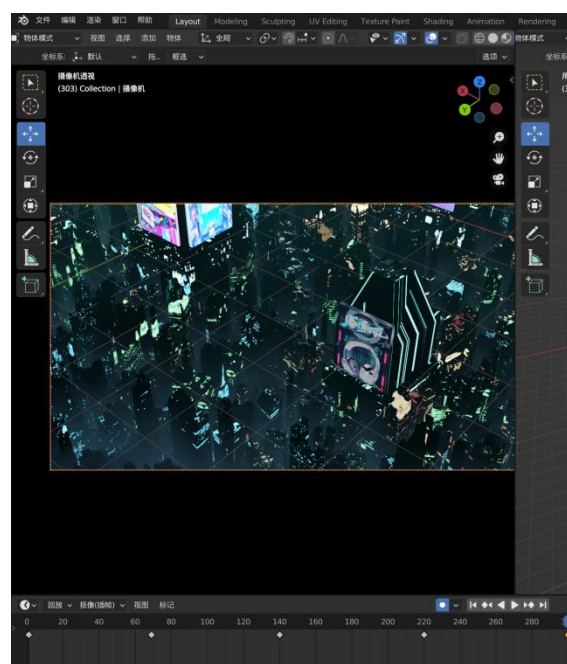


Fig 18

Issues encountered

1. When applying UV mapping, the model always appears as a flat plane in the UV interface rather than the city model. I have attempted adjustments myself but have been unable to resolve the issue.
2. When creating smoke, after connecting the components within the shader editor, the result did not resemble smoke but merely displayed the model's edges, failing to achieve the desired effect.
3. During the installation of the Camera Shakify plugin, persistent issues arose with the installation path. Although the installation was reported as successful, the path could not be located, rendering the plugin unusable.

Solution

1. In Object Mode, convert the visible geometry of the city model to a mesh. Then, in the UV Editor, press U and right-click to select Project from View. You can now proceed with texturing the city.
2. Due to issues with Blender version 4.3, I re-downloaded Blender 3.6, and the smoke effect was successfully created.
3. Place the downloaded add-on into the "scripts" folder within the Blender installation directory. Then, install it via the "Get Extensions" option in Blender's Preferences. This will resolve the path error issue.

Summary

I use Blender because it features a plugin called Camera Shakify, which enables the camera to simulate a shaking effect. My ideal full-scale vision combines the fractured aesthetic of a cyberpunk city with a constant hum and ground tremors. Blender's Camera Shakify plugin excels at achieving this ground shaking effect, allowing for seamless production. It effectively conveys the city's overall appearance and the prevailing conditions to the audience.

Self-assessment

Throughout the creation of this cyberpunk cityscape, I navigated the entire workflow from model construction and lighting design to special effects implementation, gaining new insights into my technical understanding at each stage. Overall, the main city structure and lighting system progressed relatively smoothly. However, challenges in texture mapping, volumetric smoke effects, and precise camera motion control revealed gaps in my material handling and dynamic simulation skills. These issues prompted me to reevaluate my entire workflow and deepen my understanding of the critical importance of “visual consistency” and “technical stability” in Blender production.

Using the Shader Editor, I created neon lighting and self-illuminating materials characteristic of cyberpunk aesthetics. This process was executed with considerable proficiency, and the color contrast of the lighting met expectations, demonstrating my growing mastery in handling large-scale environments and material nodes. However, issues surfaced during the texturing phase: due to complex UV layouts on some building surfaces and my limited proficiency with Blender's texturing tools, early textures appeared blurry and rotated incorrectly. Resolving these problems made me realize that maintaining resource organization and consistent texturing logic in large

scenes impacts not only visual quality but also the stability of later effects and rendering.

Creating smoke and fog proved to be one of the most challenging aspects of this project. I initially underestimated the impact of volumetric lighting effects on rendering performance and visual depth. This led to scenes where the fog was either too dense, obscuring architectural details, or too sparse, failing to capture the “air density” atmosphere characteristic of cyberpunk. Additionally, due to issues with my Blender version, the smoke only appeared on the surfaces of cubes rather than throughout the entire volume. This experience taught me that volumetric effects are not merely technical challenges but also involve aesthetic judgments about balance and atmosphere. Through continuous adjustments to density, sampling, light penetration, and Blender version tweaks, I gradually mastered the techniques for creating smoke within the Shader Editor.

In summary, this project not only deepened my understanding of cyberpunk visual language but also highlighted the importance of resource management, material standards, volumetric lighting effects, and camera grammar within the Blender workflow. Despite challenges like texture confusion, uncontrollable fog effects, and unnatural camera movements, each obstacle pushed me toward greater precision in technical details and artistic judgment. Moving forward, I aim to establish more standardized texture strategies early in projects, pre-plan special effects assets, and draw inspiration from real cinematography for camera movements. This approach will elevate the overall narrative quality and professionalism of my work.

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