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“Trained as a software engineer, Sam Hains is a 3D artist whose practice centers around the critical examination of digital tools and their connection to modernity. His work explores the oft-forgotten spaces that have come to define our contemporary era: abandoned netscapes, machine-created mistranslations, and uncanny simulated realities... his work seeks authenticity in an increasingly simulated world.

Though he often employs post-cyberpunk aesthetics that are informed by science fiction, Hains’s practice is less about understanding speculative futurity and more about unpacking authenticity in a technologically-mediated world. 3D rendering is a primary tool in Hains’s digital workbench, but he also integrates newfangled, popularly lauded techniques and technologies—like artificial intelligence, generative algorithmic processes, and software-enabled data analytics—with a critical eye to their points of breakage. At times seduced by technology, his work seeks realness while constantly wading through artificiality.

Human-machine interfaces play a particularly important role in his practice; and the slippages in between the cracks of biological and artificial interactions shine through in his pointed examinations of the production of sociality and labor in late techno-capitalism. Fantastical virtual landscapes and shiny machine renders belie an, at times, cynical view of the role of the human in a world no longer designed for them.

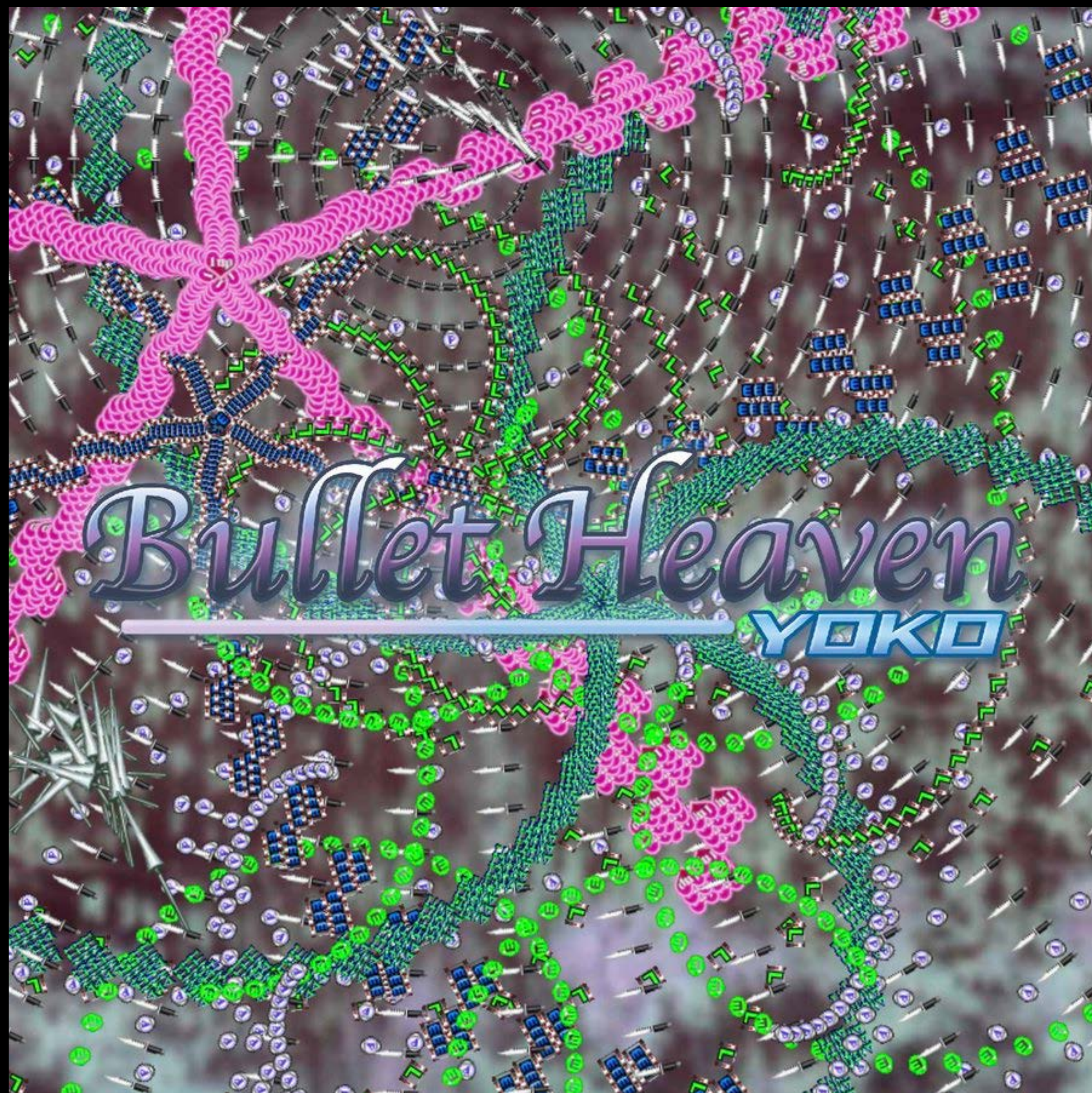
In the past, his commercial collaborations have included creative work for PAPER Magazine, music videos with live simulation elements for artists like Antiboy and Sean La’Brooy, and live experience visual design for theater productions. His artwork has been featured in the Vice Creators Project, Nowness, Neural Magazine and The Wrong Bienalle. ”

-[Wade Wallerstein](#) for [Wild.xyz](#)

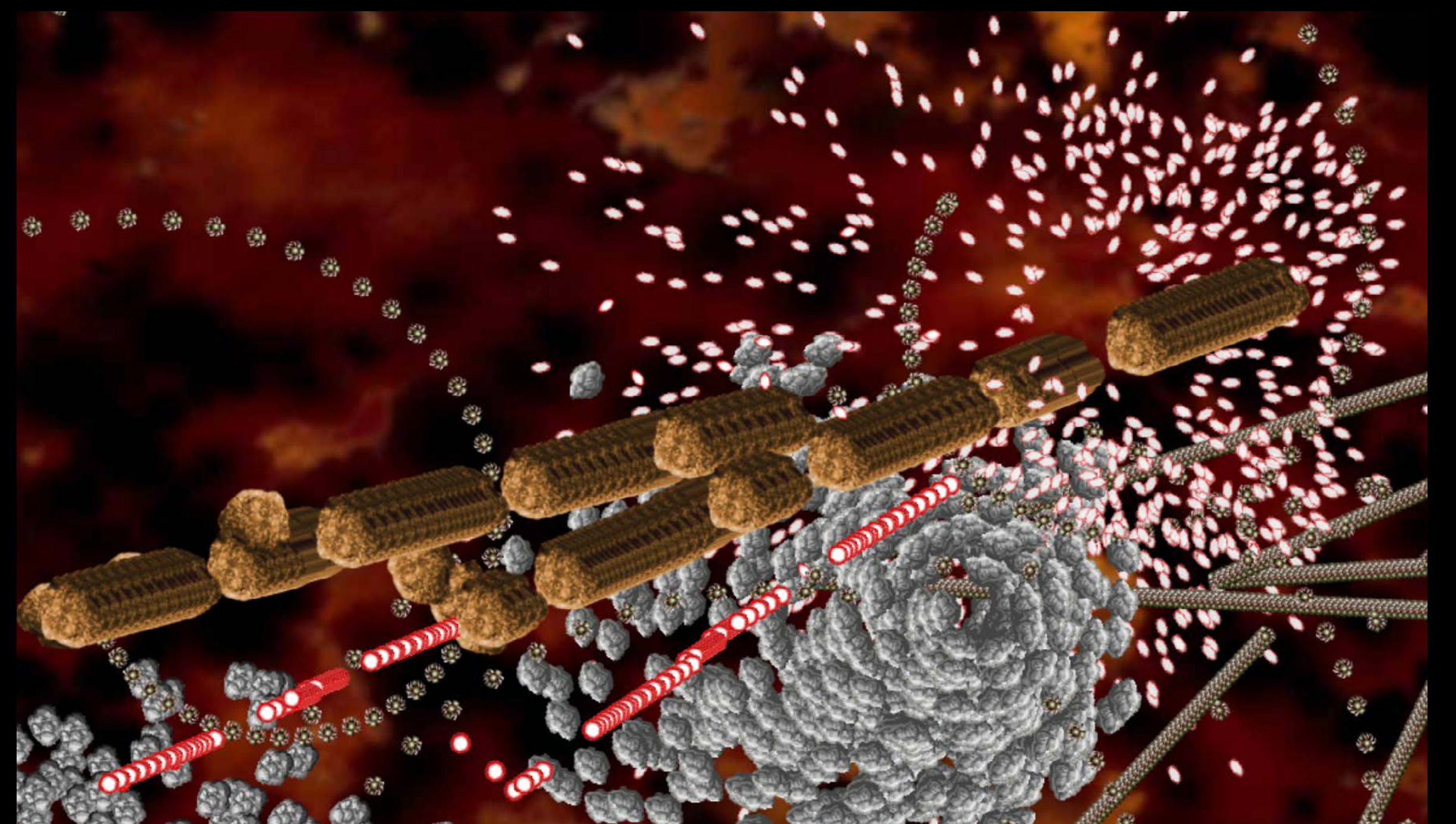
Bullet Heaven [YOKO] is an interactive bullet painting, from a series of works inspired by Danmaku (“Bullet Curtain”) arcade games characterized by complex patterns of bullets that fill the screen.

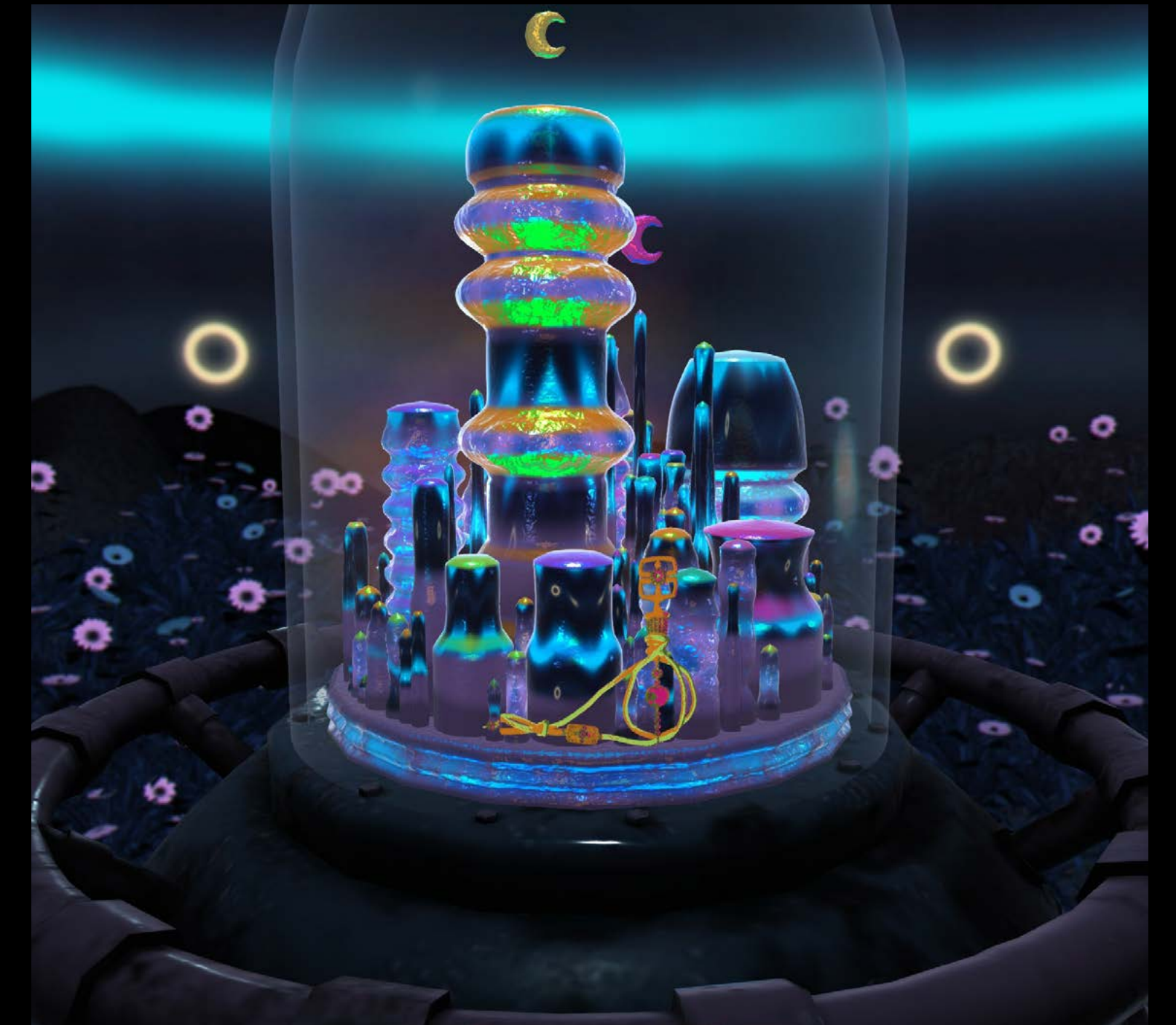
A special Open Edition of this project was released with Galerie Yeché Lange on Highlight.xyz in December 2023. Made in collaboration with Wretched Worm with soundtrack by Manapool.

This project makes use of highly optimized, custom particle emitters built with javascript and GLSL.



To overcome the extreme difficulty of Danmaku games, the gamer must train extensively, feeding the machine with time and money. The project examines the toxic, psychologically abusive relationship between gamer and game and the transcendental dark flow state one achieves when merging with machine.



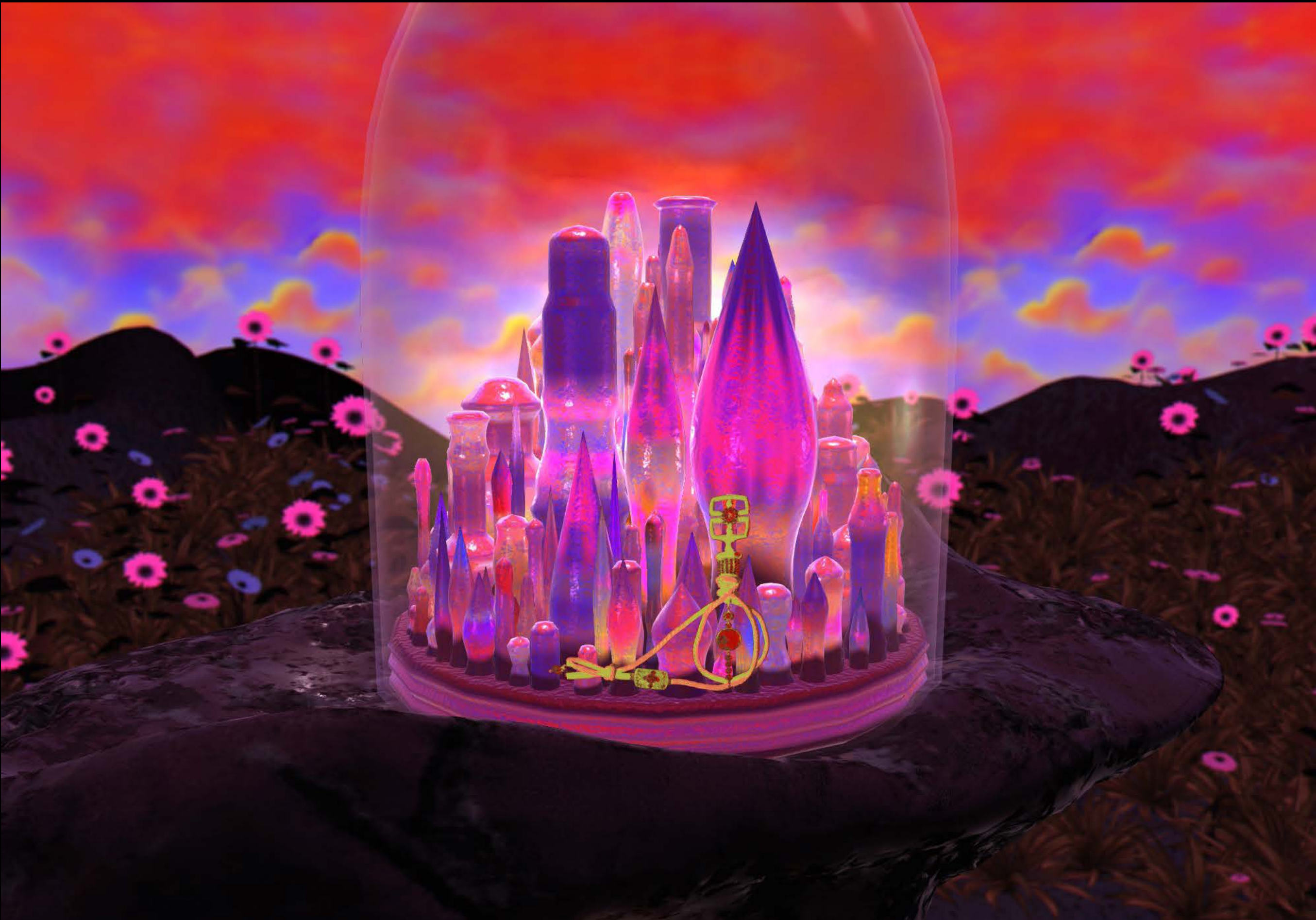
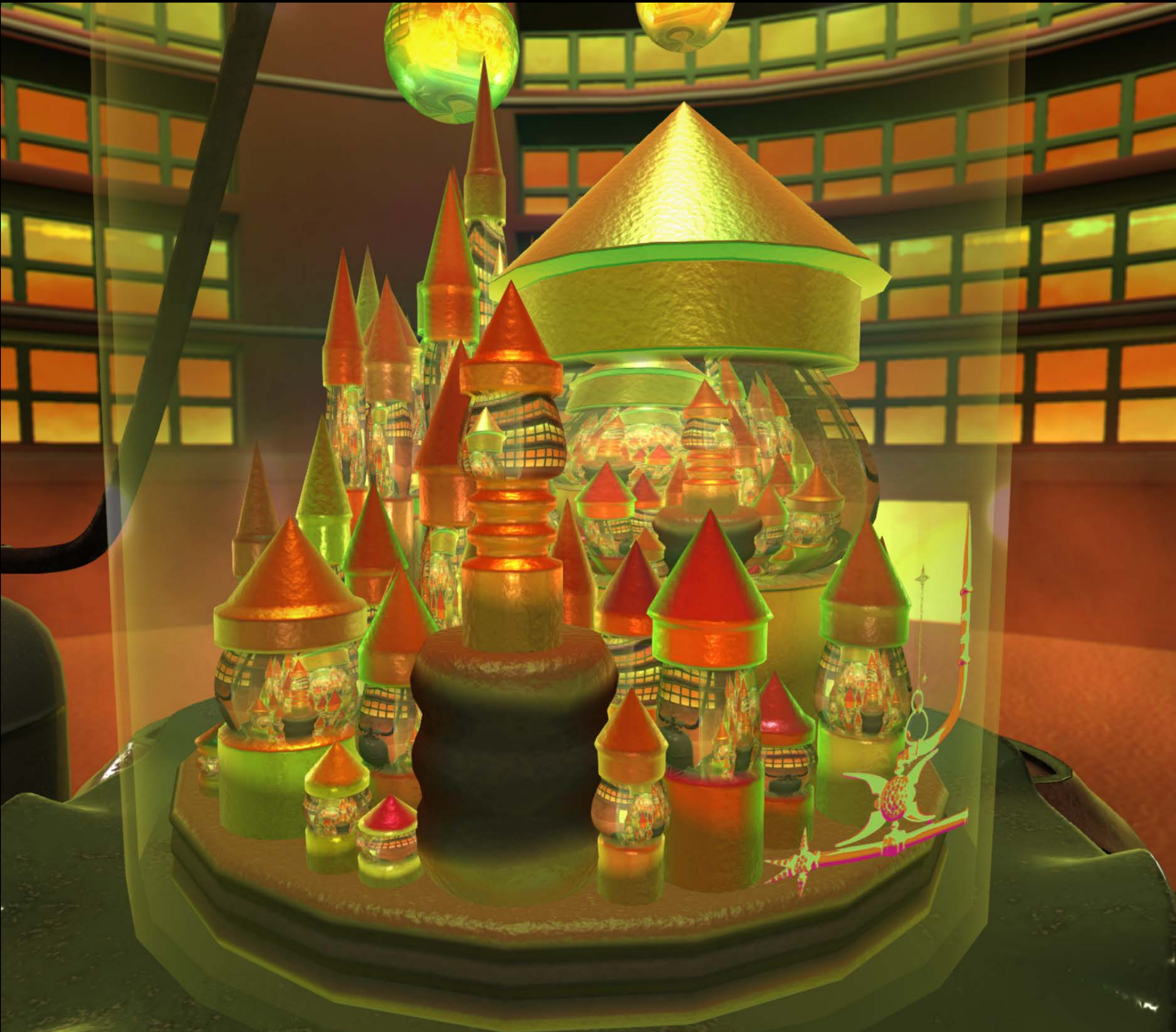
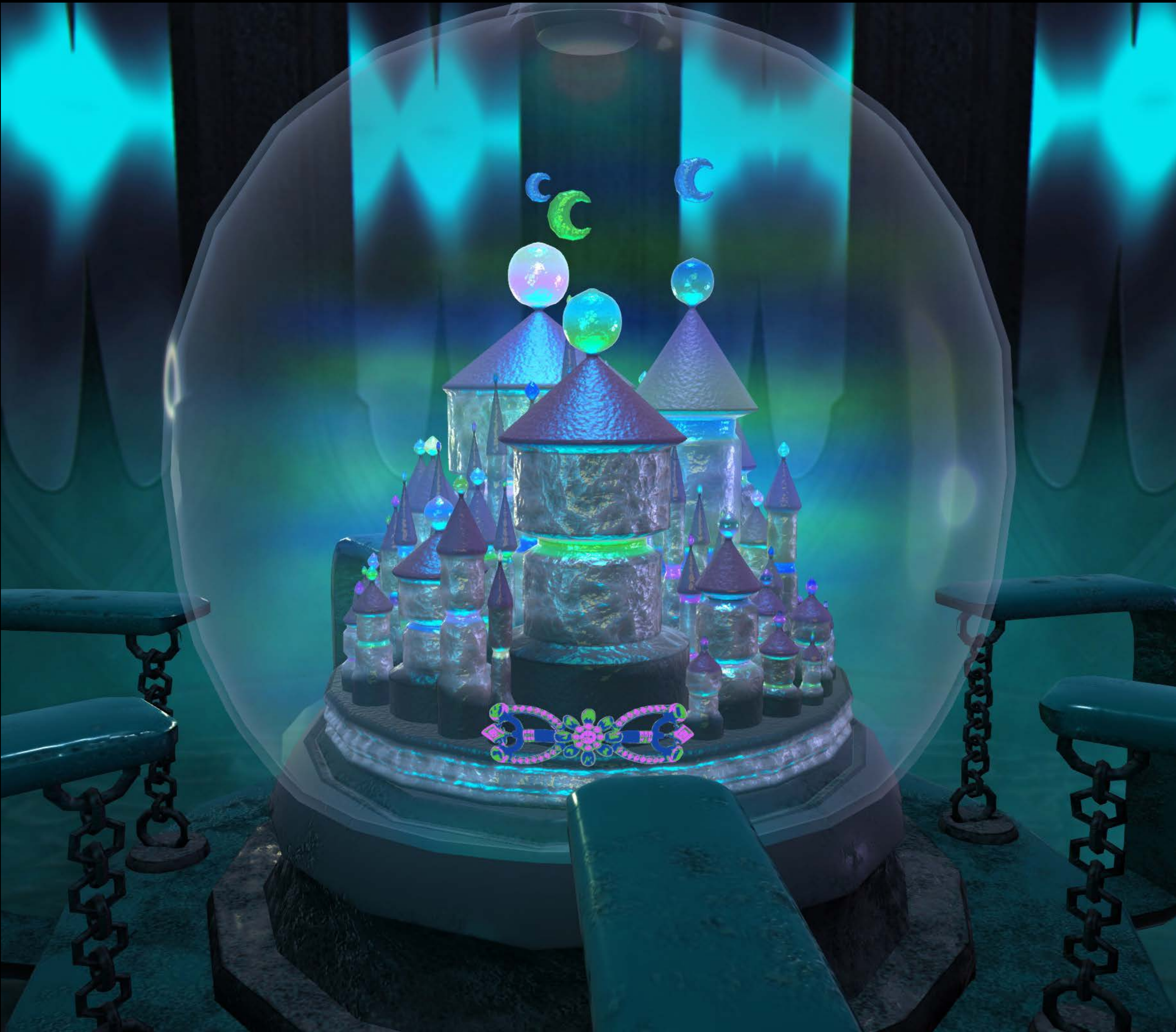


Lost Home Worlds is a collection of 250 generative, interactive NFT artworks which explore ideas around grief and memory. It is inspired by Mike Kelley's "Kandors" (1999-2011), and uses the metaphor of the shrunken city in the bell jar to investigate the idea of memory palaces and their role in trauma processing.

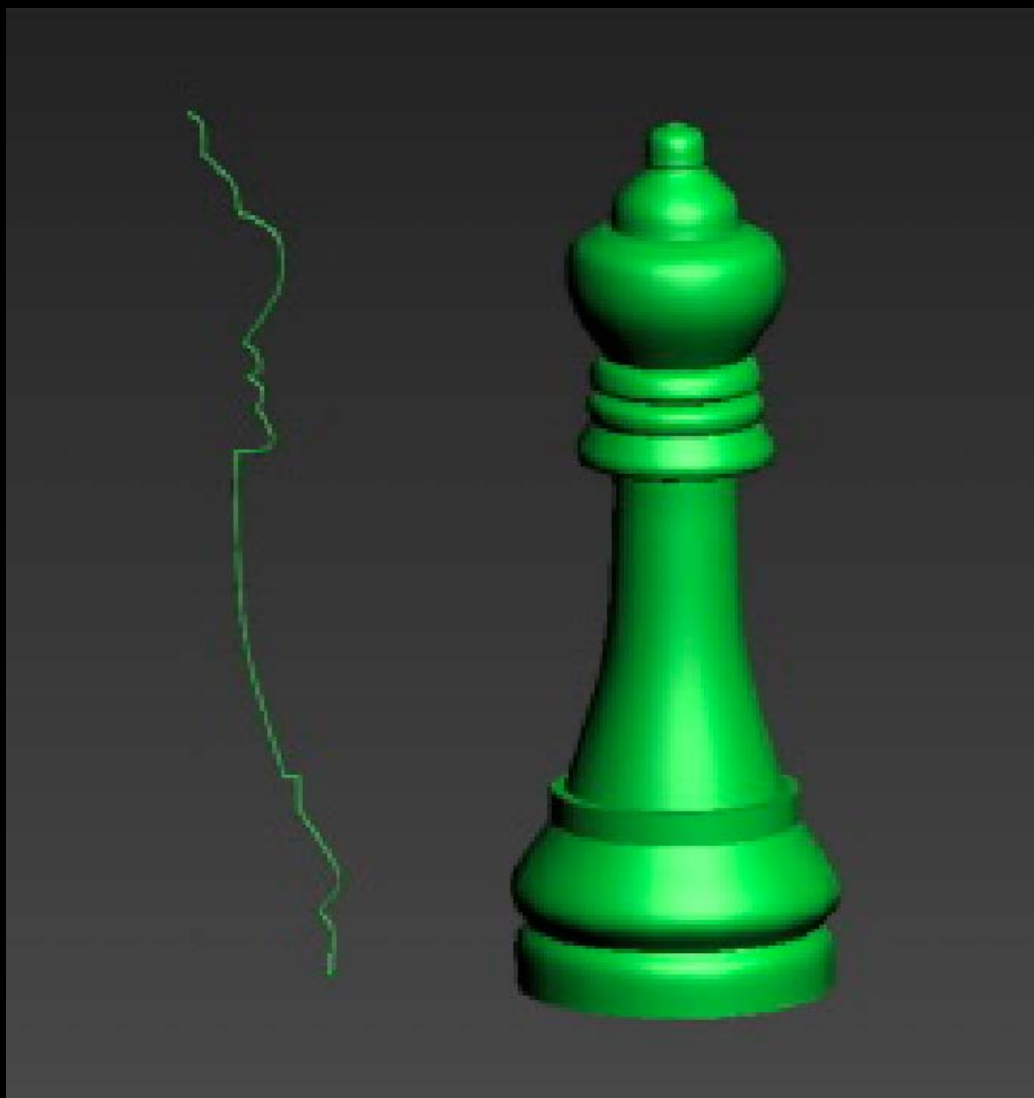
Lost Home Worlds was released on June 13th, 2023 via Wild.xyz and sold-out to collectors in 8 hours.

Javascript, GLSL, WebGL, Three.js, Houdini

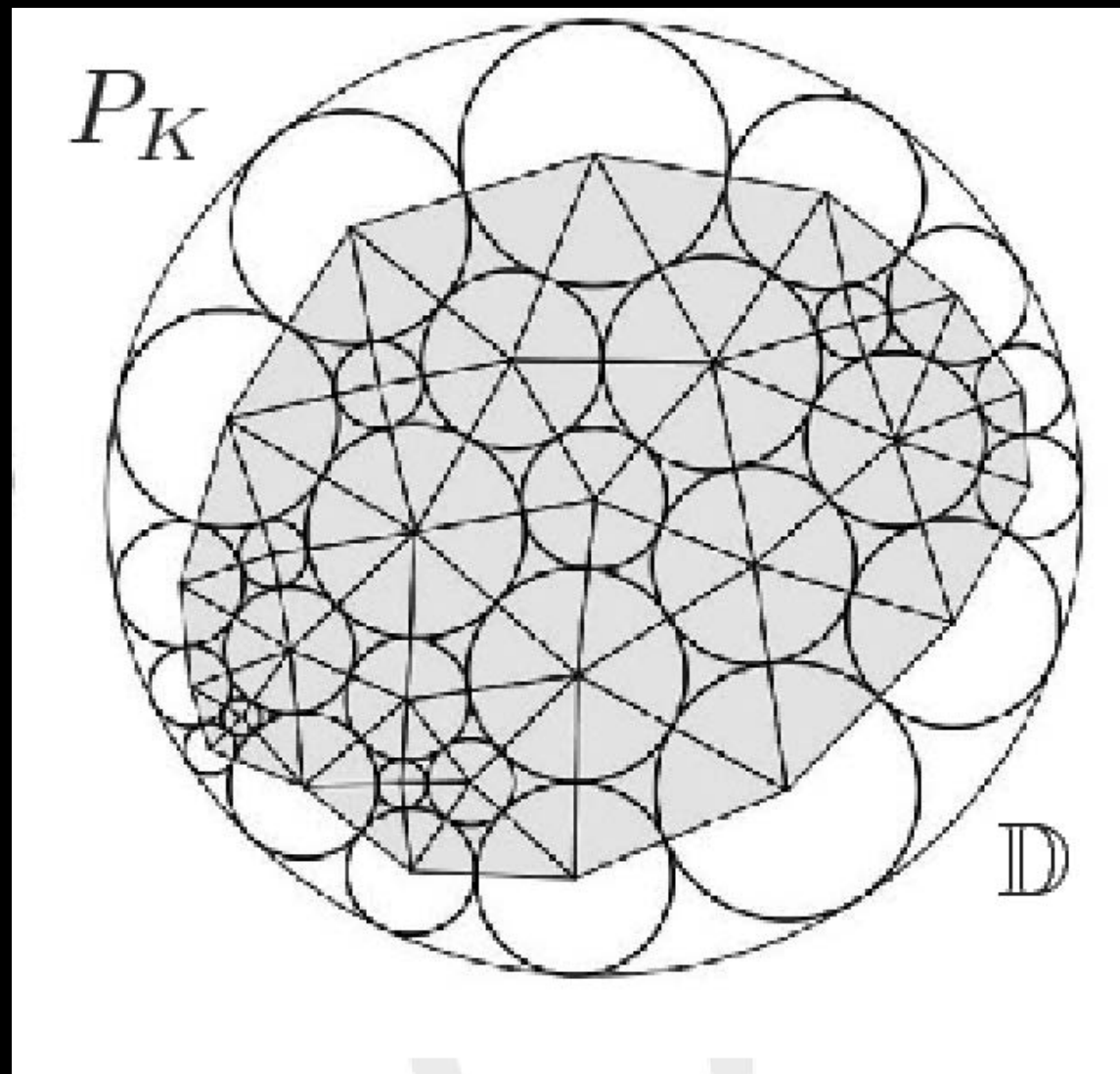




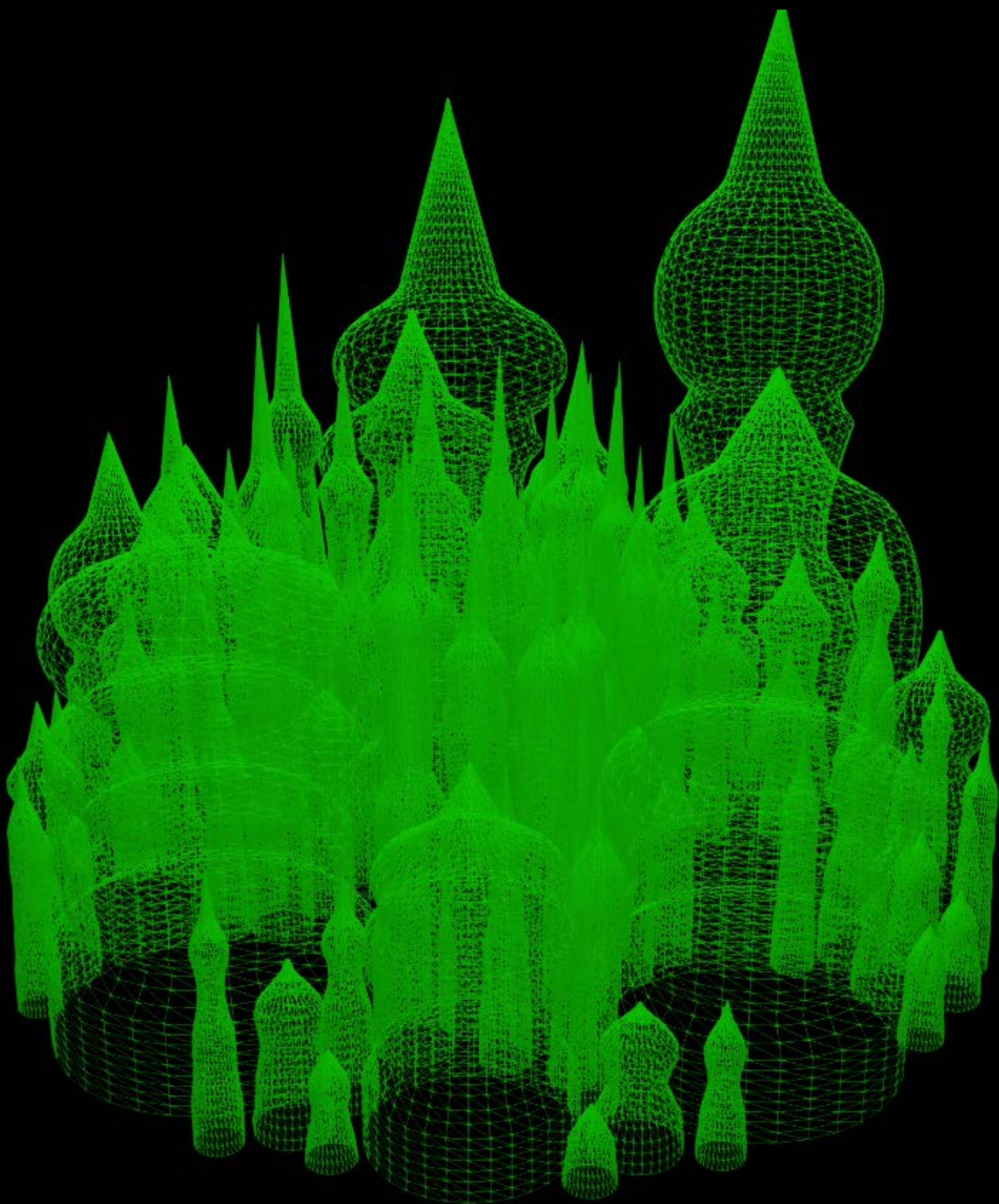
I created a custom javascript library that generates each tower using linear geometry functions. Each tower is composed of a series of randomized 2D curves which are then transformed into 3D towers through a geometry lathe function. A circle packing algorithm is then used to place the towers on a circular base.



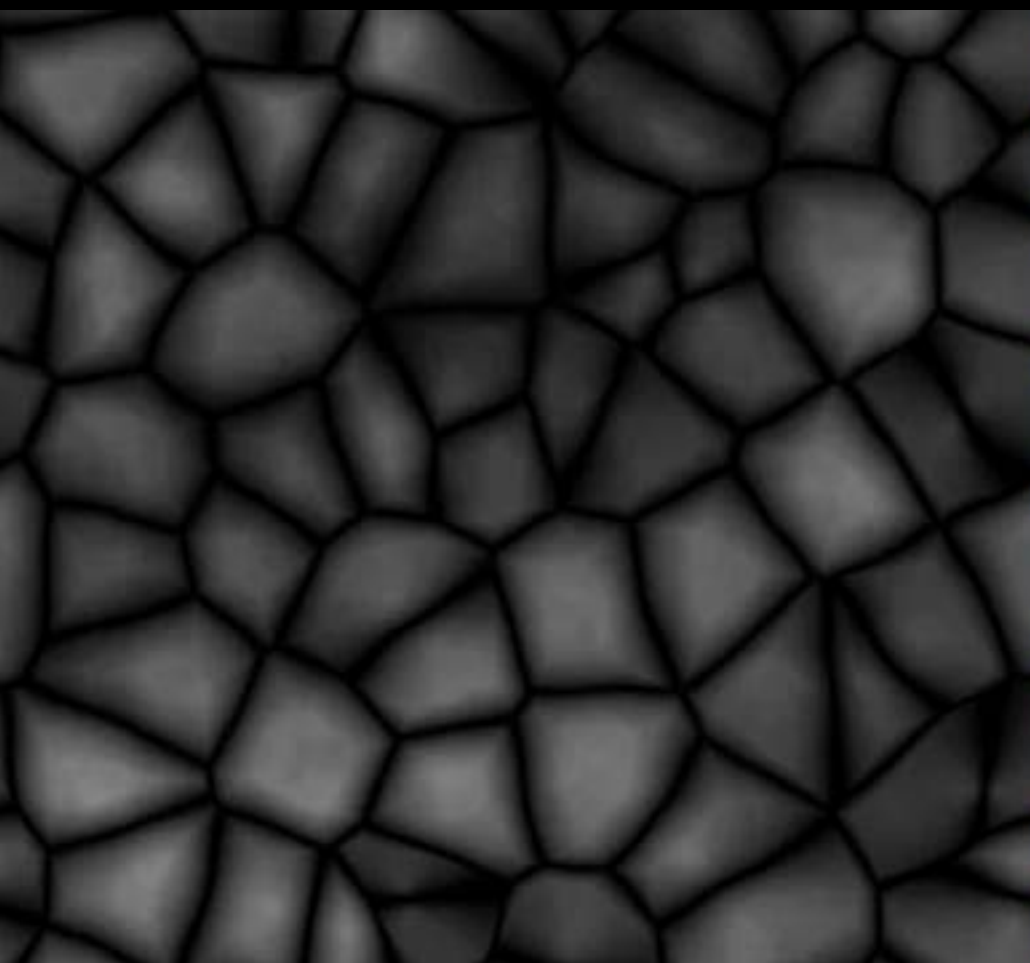
Geometry lathe function



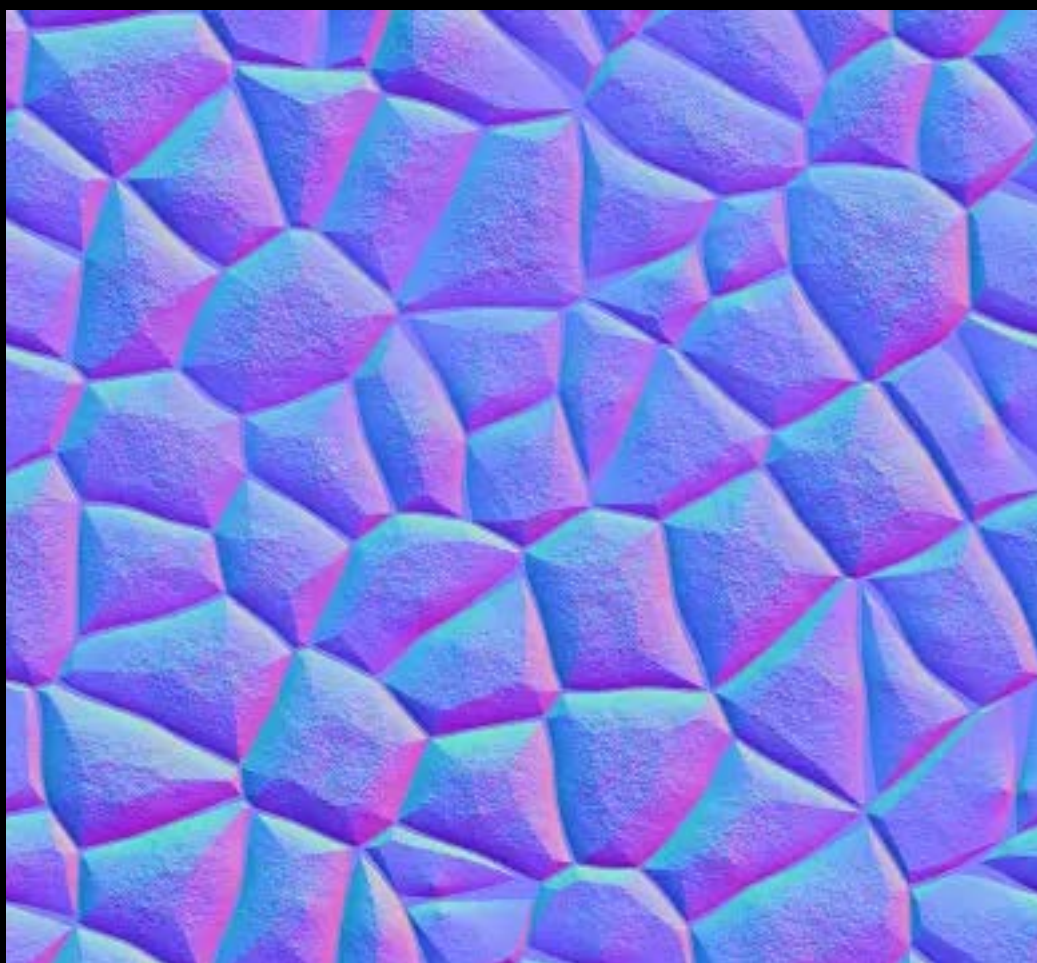
Circle packing algorithm



A sample of the code used for procedurally generating a tower can be seen [here](#). The example code also features methods for geometry resampling, smoothing and curvature calculation (used in the material shader).



Code generated texture



Normal transformation



Final Material Render

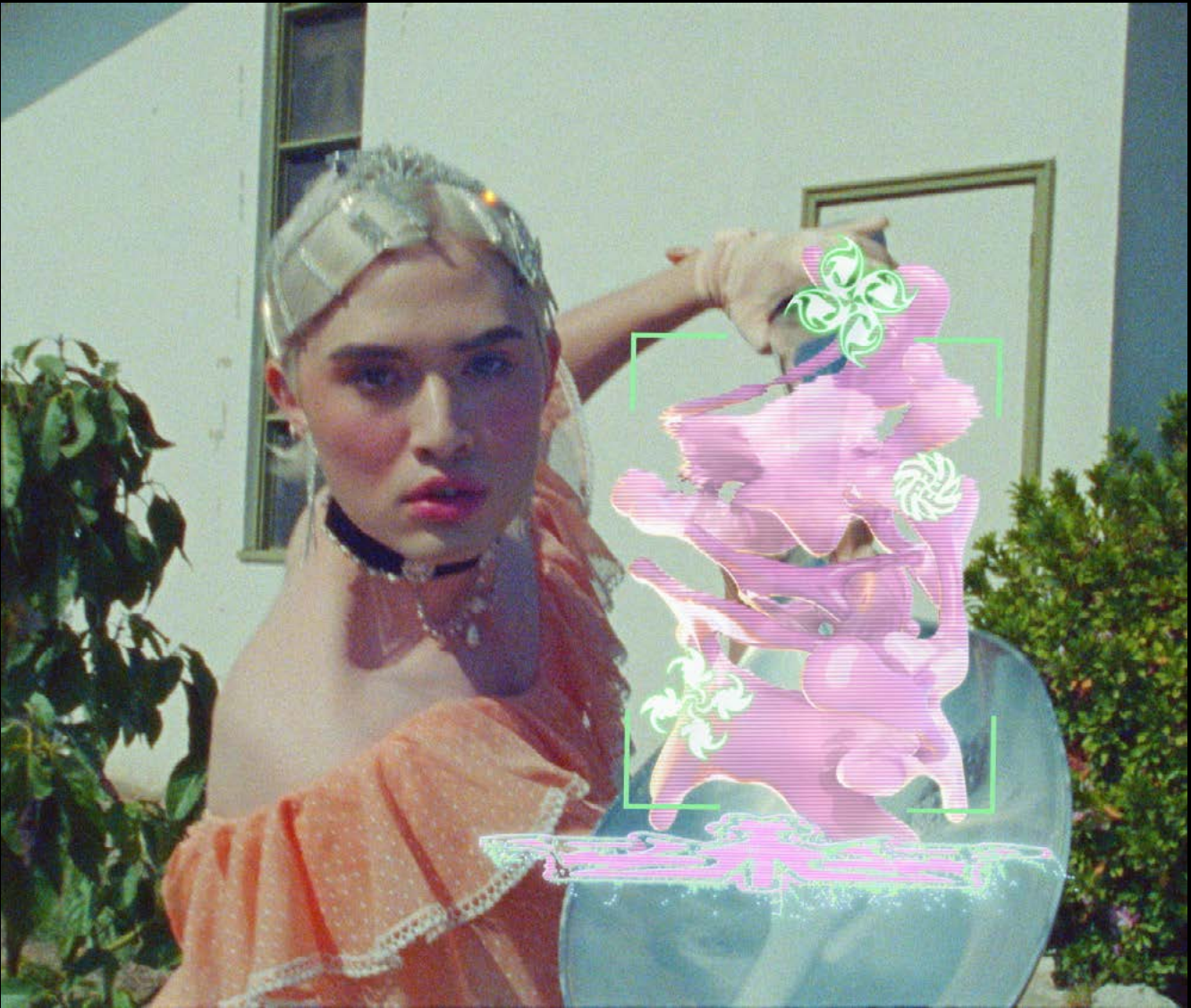
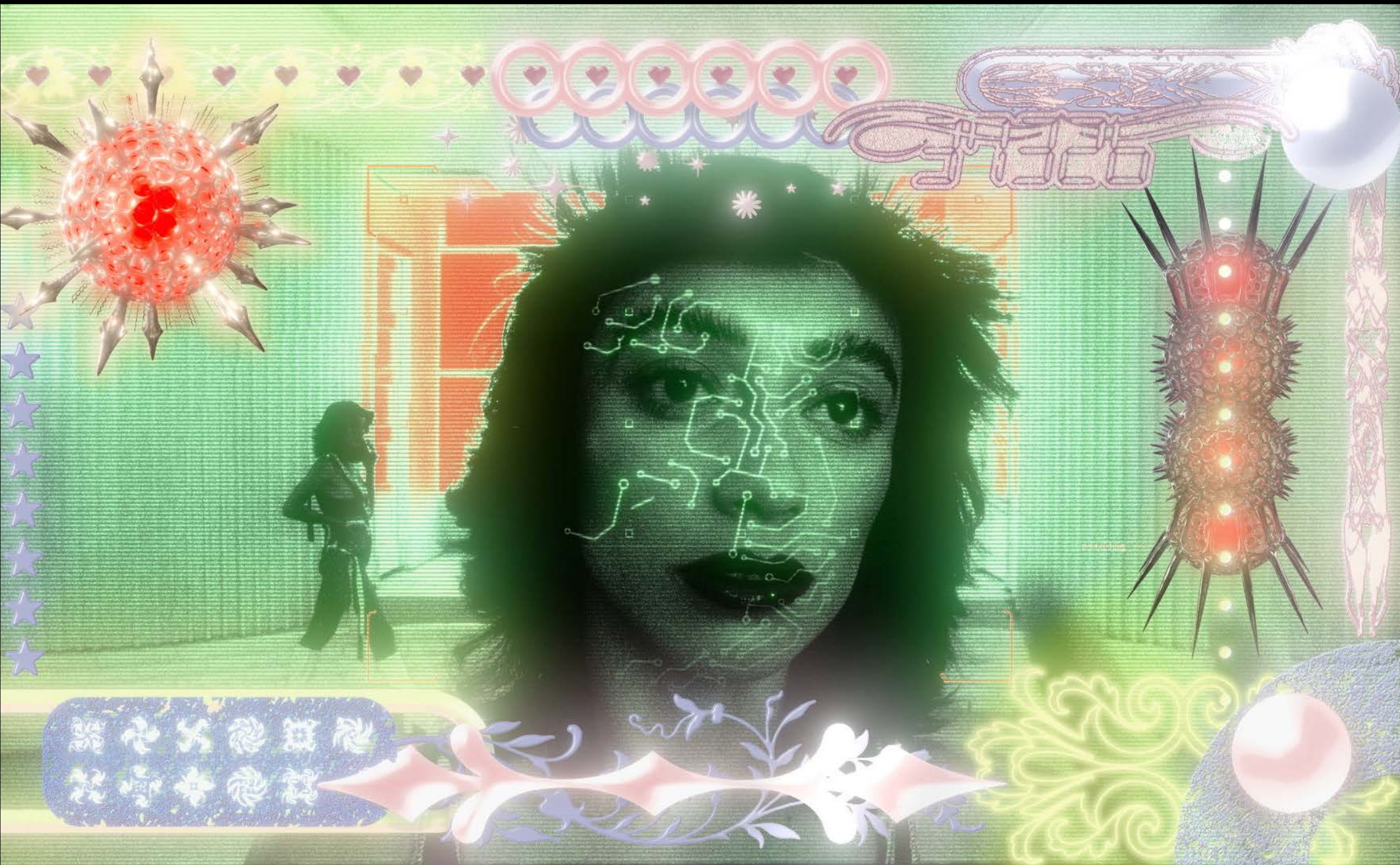
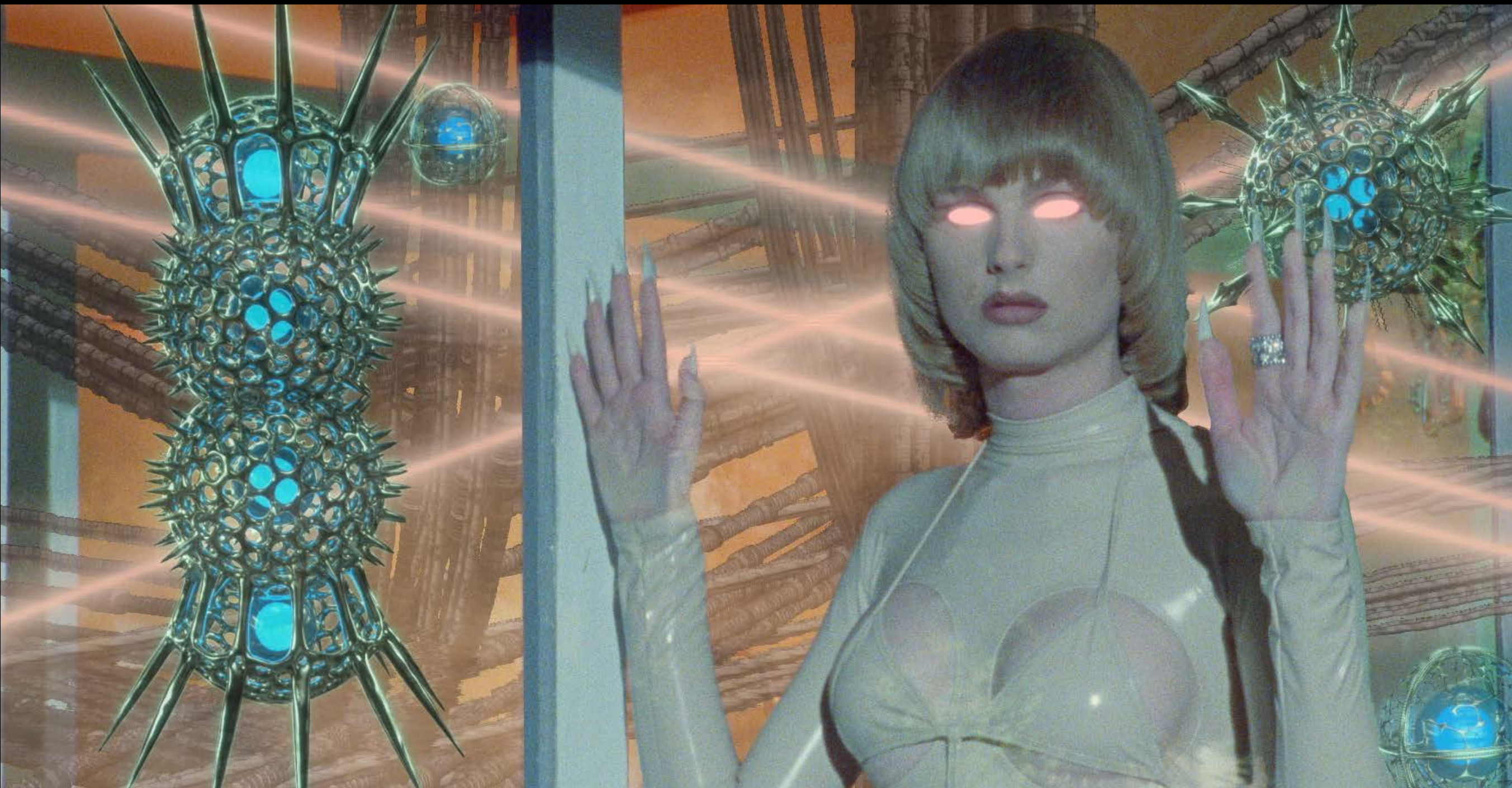
I also created a GLSL material rendering library which generates black and white textures and transforms them into ‘normals’ that dictate how light effects the material surface. This results in a highly textured, realistic final render look that is entirely code generated.

The same shader library is used for generating the color, roughness and ‘metalness’ of the towers.

Animation and VFX for pop musician ANTIBOY's music video for 'Dream'. This video was selected for the 2021 Berlin Music Video Awards Silver Screenings.

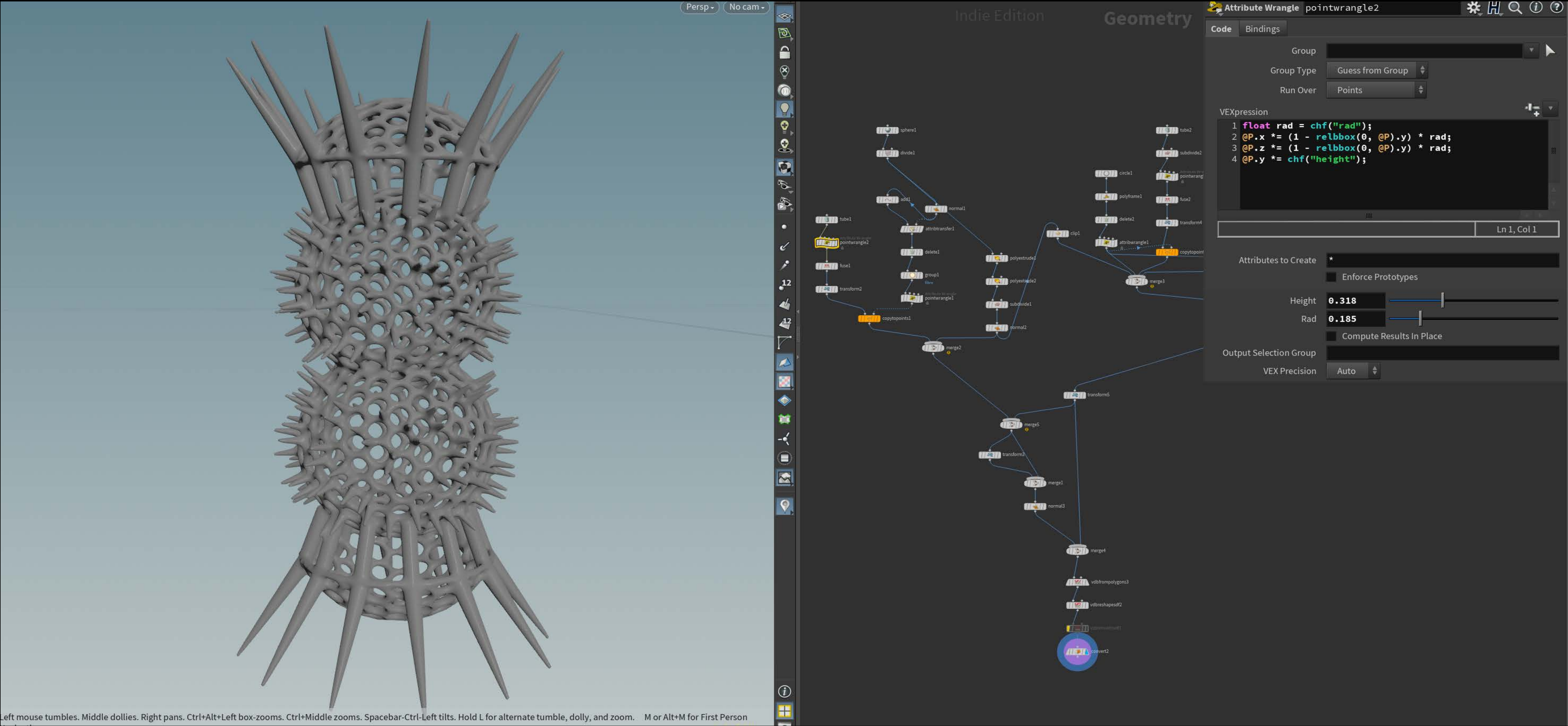
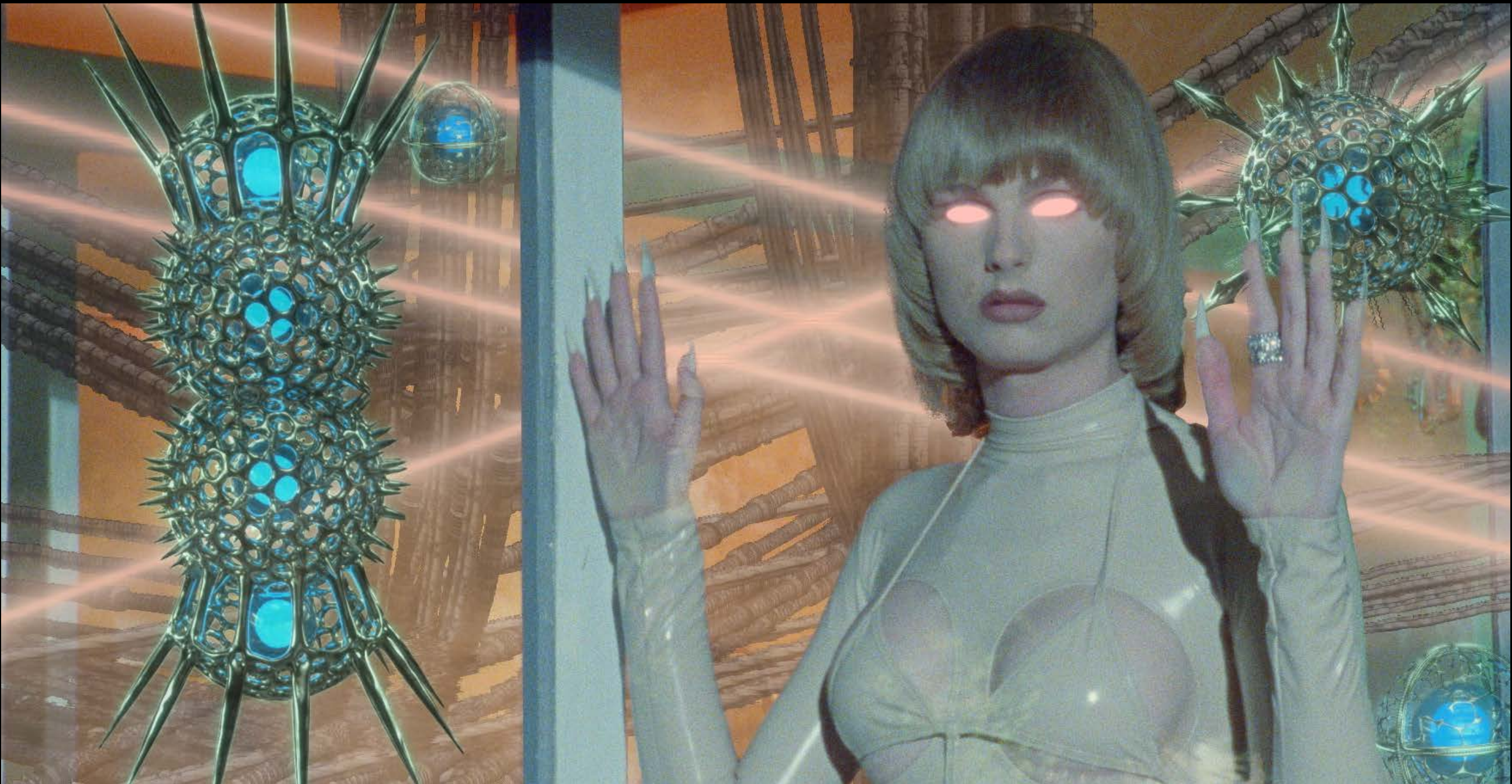
PRESS  
Sam Hains PAPER magazine interview

Dream (2020)



These Ernst Haeckel inspired forms were created using advanced procedural geometry techniques in Houdini VFX software. The technique uses a combination of node-based programming, VDB operations, HScript (coding language) and vector math.

Other technologies used:  
Unity, After Effects, Cinema4D, Python

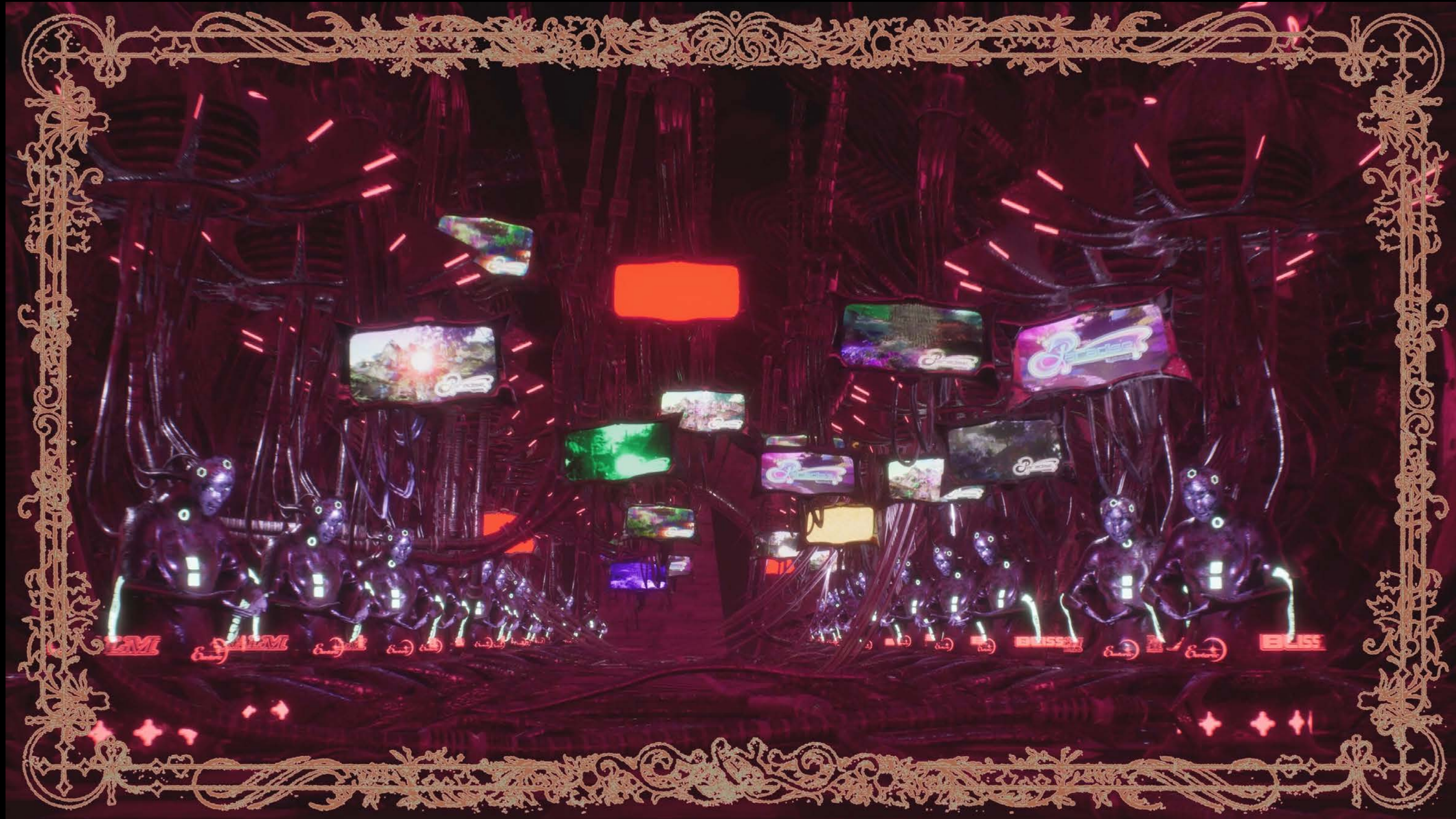
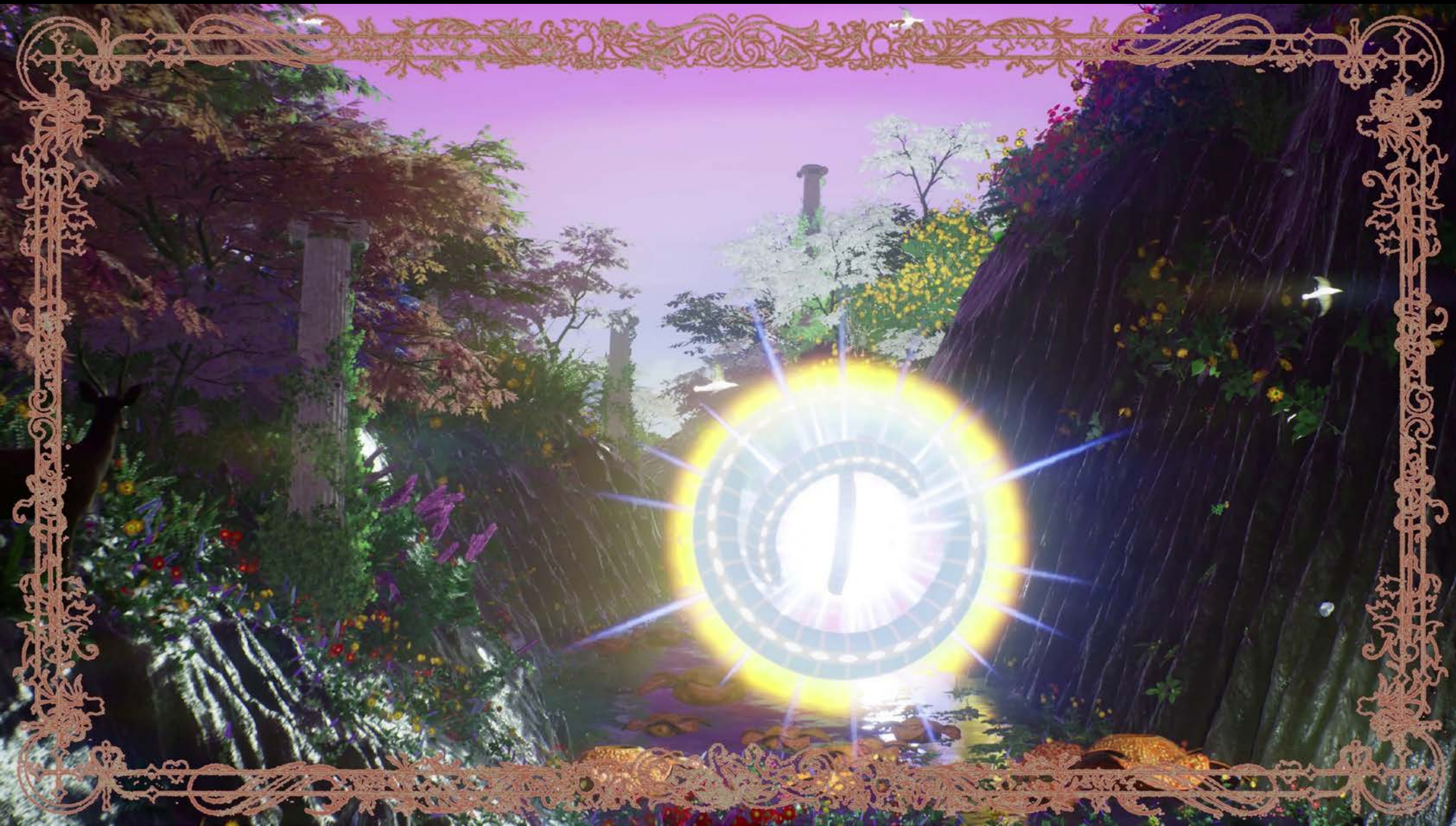




Direction and animation for ANTIBOY's 'Paradise' music video.  
This video was selected for [NOWNESS Picks](#).

Unreal Engine, C++, Houdini, Cinema4D

[Paradise \(2020\)](#)



Bang Bang (2020)

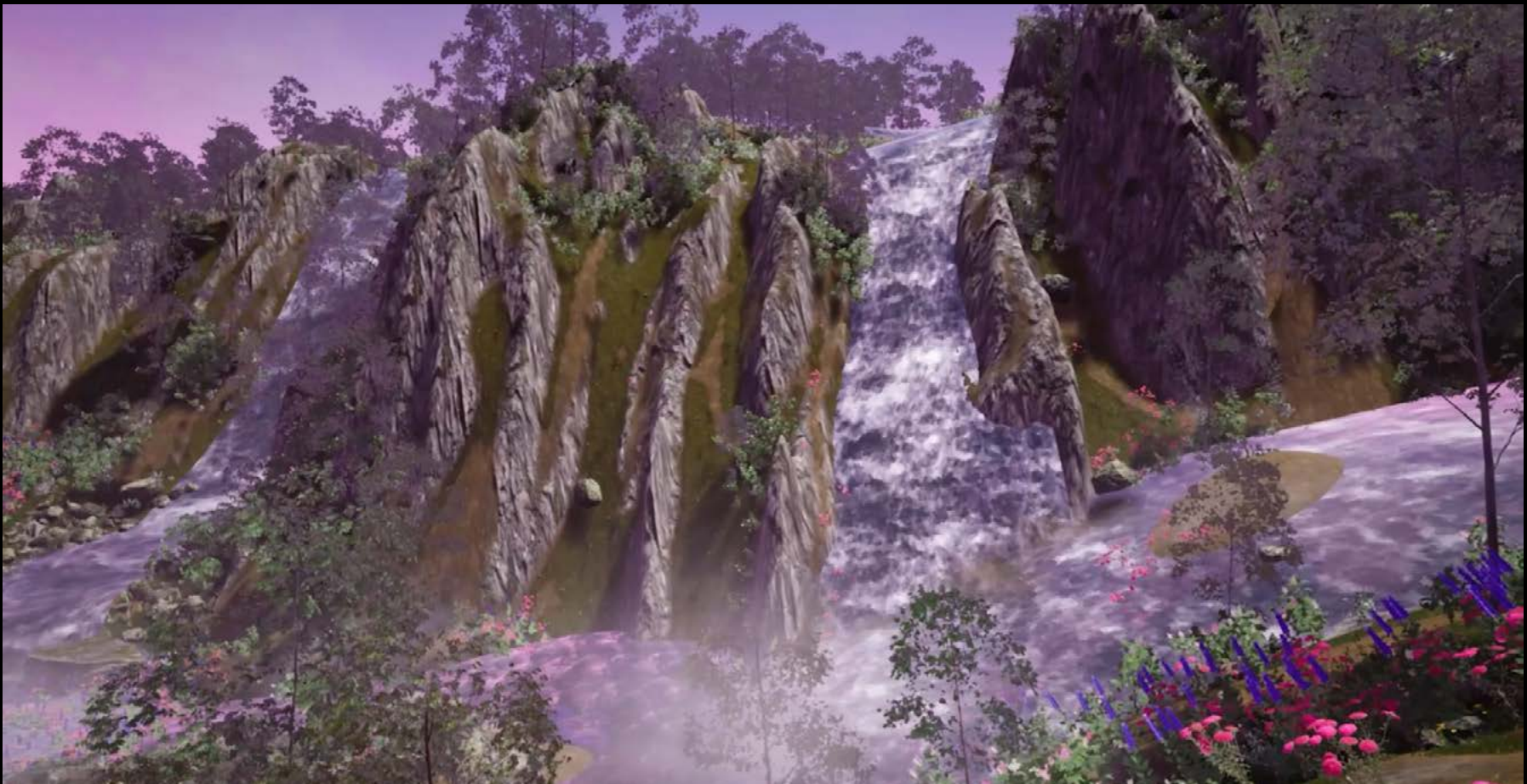
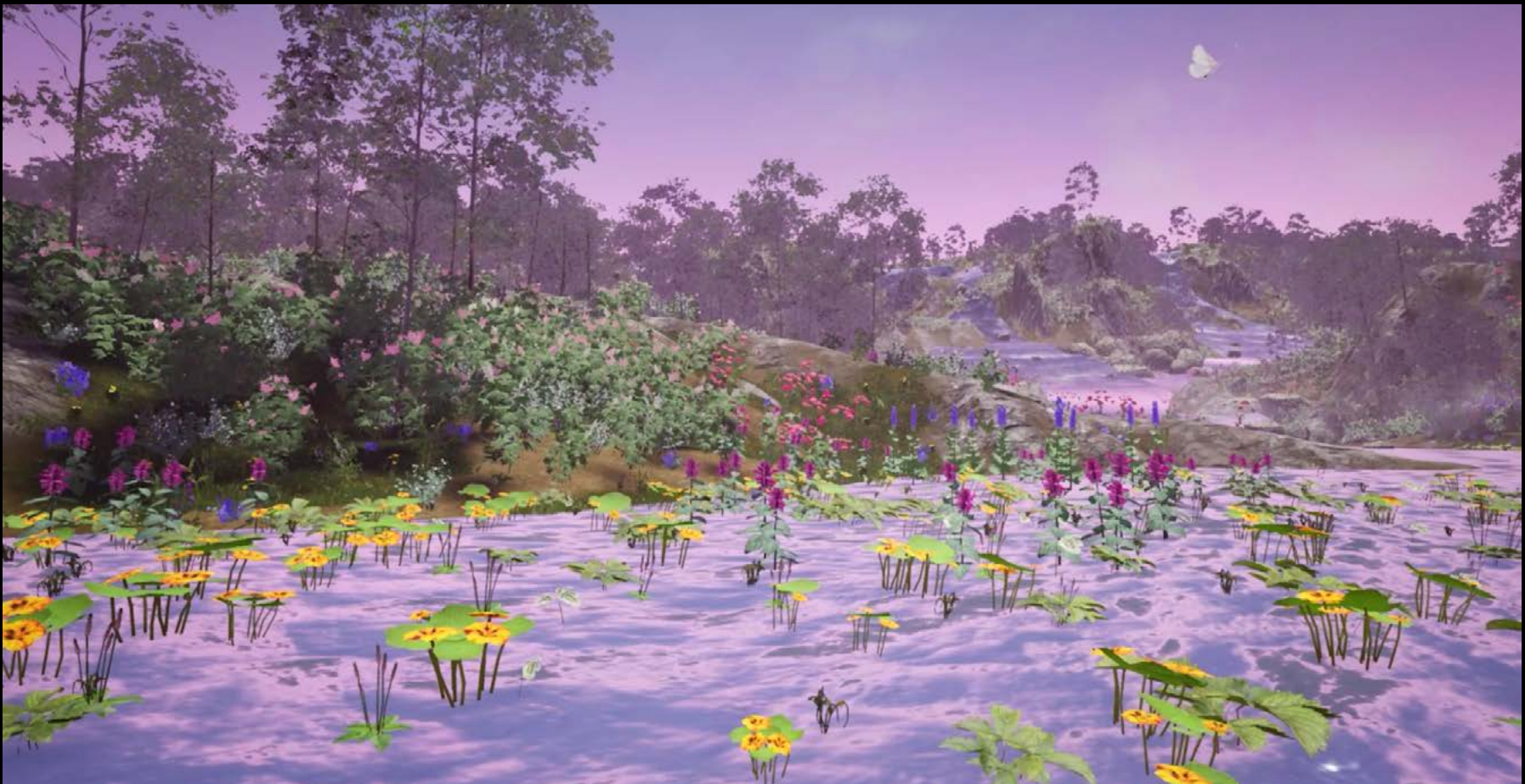
Direction and animation for ANTIBOY’s ‘Bang Bang’ music video.



Unreal Engine, C++, Houdini, Cinema4D

Visuals for an improvised performance by musician Sean La'Brooy, which premiered live on Public Records TV in July 2020. An hour long expedition through a vast, procedurally generated digital world. Full recording [here](#).

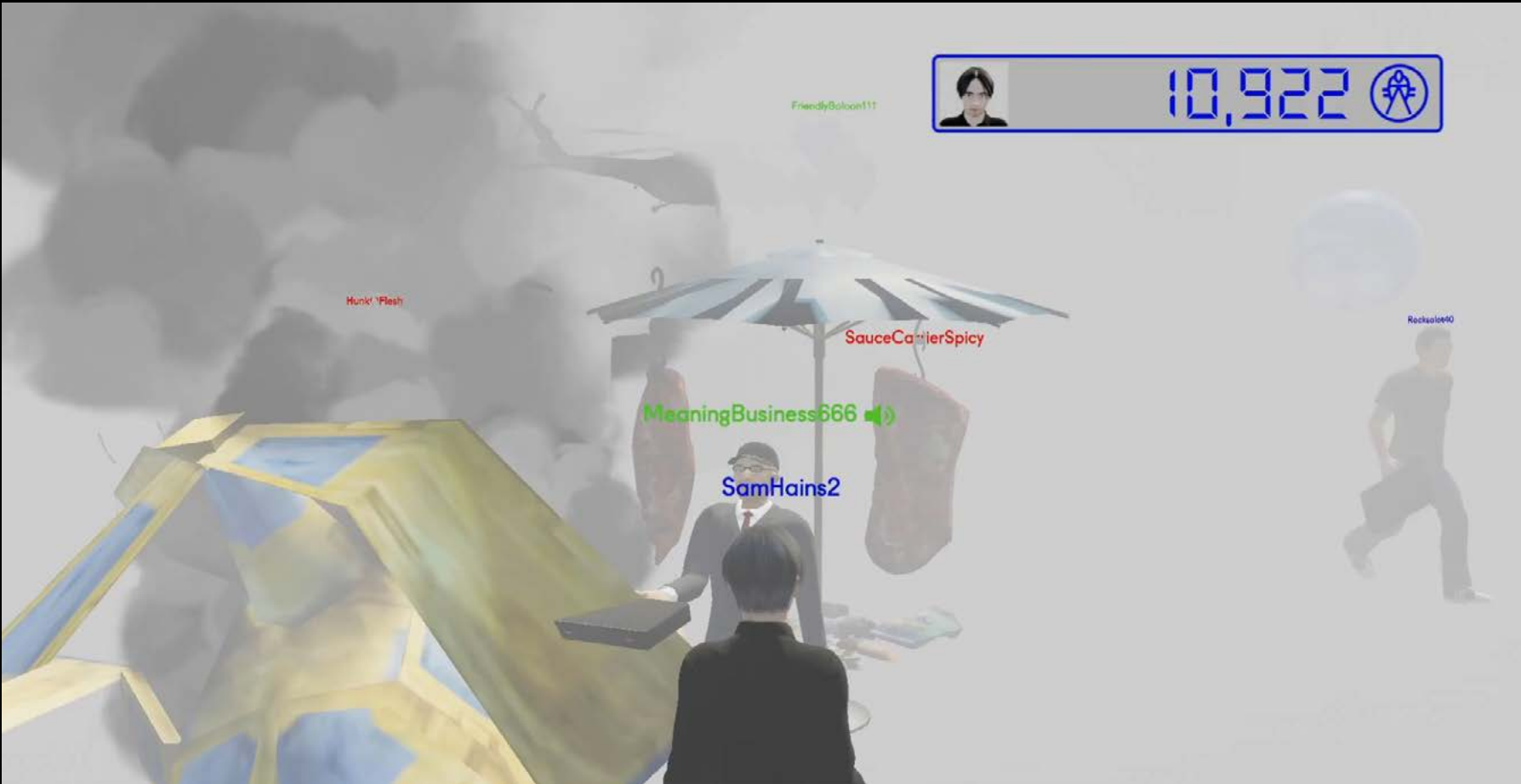
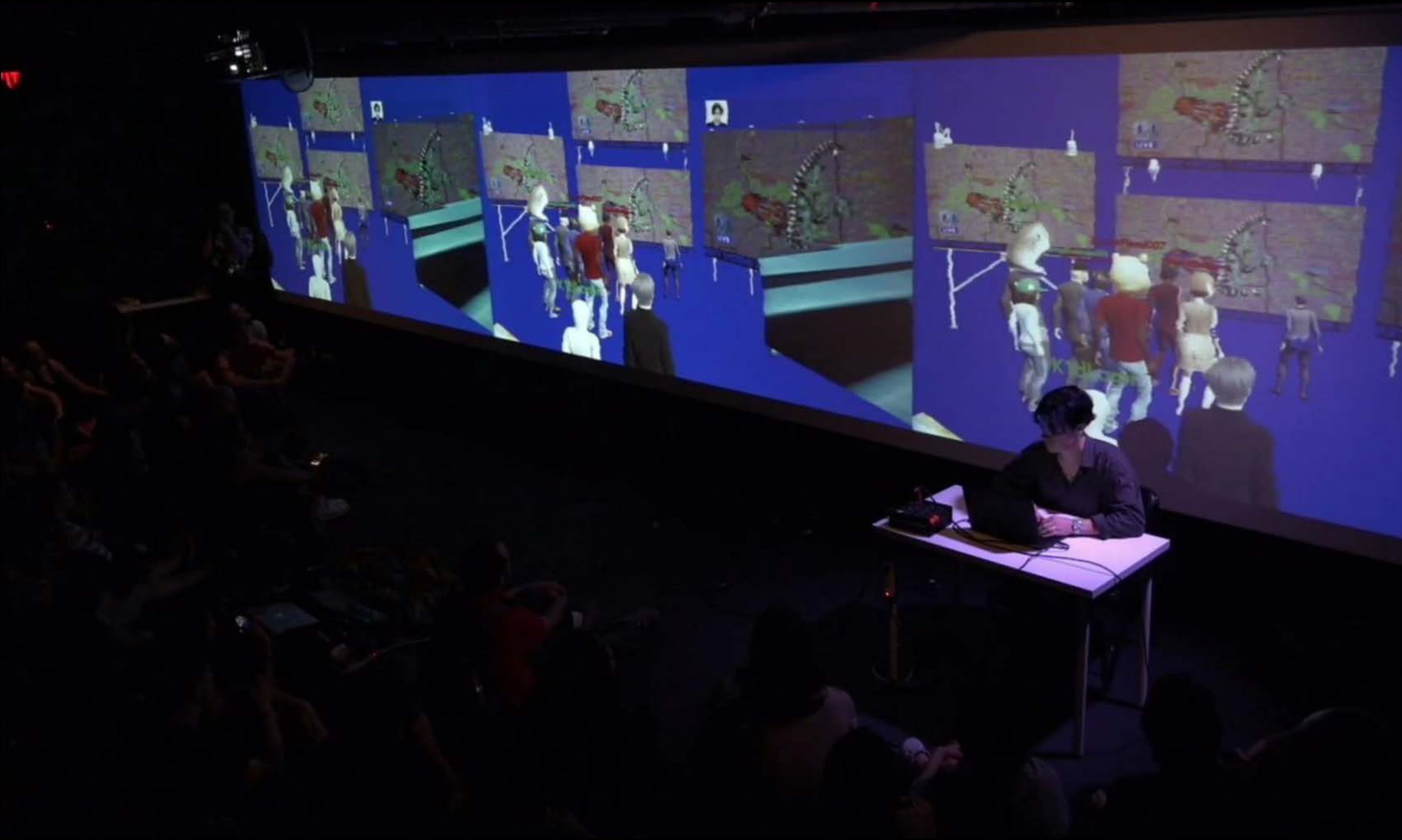
Unreal Engine, C++, Houdini, Hscript, Python, Cinema4D



QWERTY SYSTEMS performed for Indetermine Forms at Culture Hub and ISSUE project room.

QWERTY SYSTEMS is a videogame performance depicting a day in the life of a citizen inside a virtual world governed by QWERTY, a mysterious platform intelligence. The custom software which runs the performance makes use of voice commands, natural language processing, voice synthesis and live data scraping.

Touch Designer, Unity, C#, Python, GLSL



Zero likes is a generative, machine learning project exploring the aesthetics of the neglected, negative spaces of the internet. An AI model was trained to respond to more than 100,000 Instagram posts that received zero likes, investigating the potential for machines to respond to abstract, human questions. Another AI model was trained to respond to the images generated by the first.

This project was released in 2017, making it a prescient work of AI generated art.

Python, DCGAN Generative Model, Javascript

EXHIBITIONS

- Homeostasis at The Wrong Biennale
- Corrupting Data at Falmouth Art Gallery

PRESS

- VICE Creators Project Interview
- Neural Magazine Review
- ARTMIND Episode



A statue of an elephant



Dog layers on a bed with a blanket



Glass vase filled with lots of flowers



A man is holding a large teddy bear



Teddy bear sits on a table



Teddy bear sits on a table

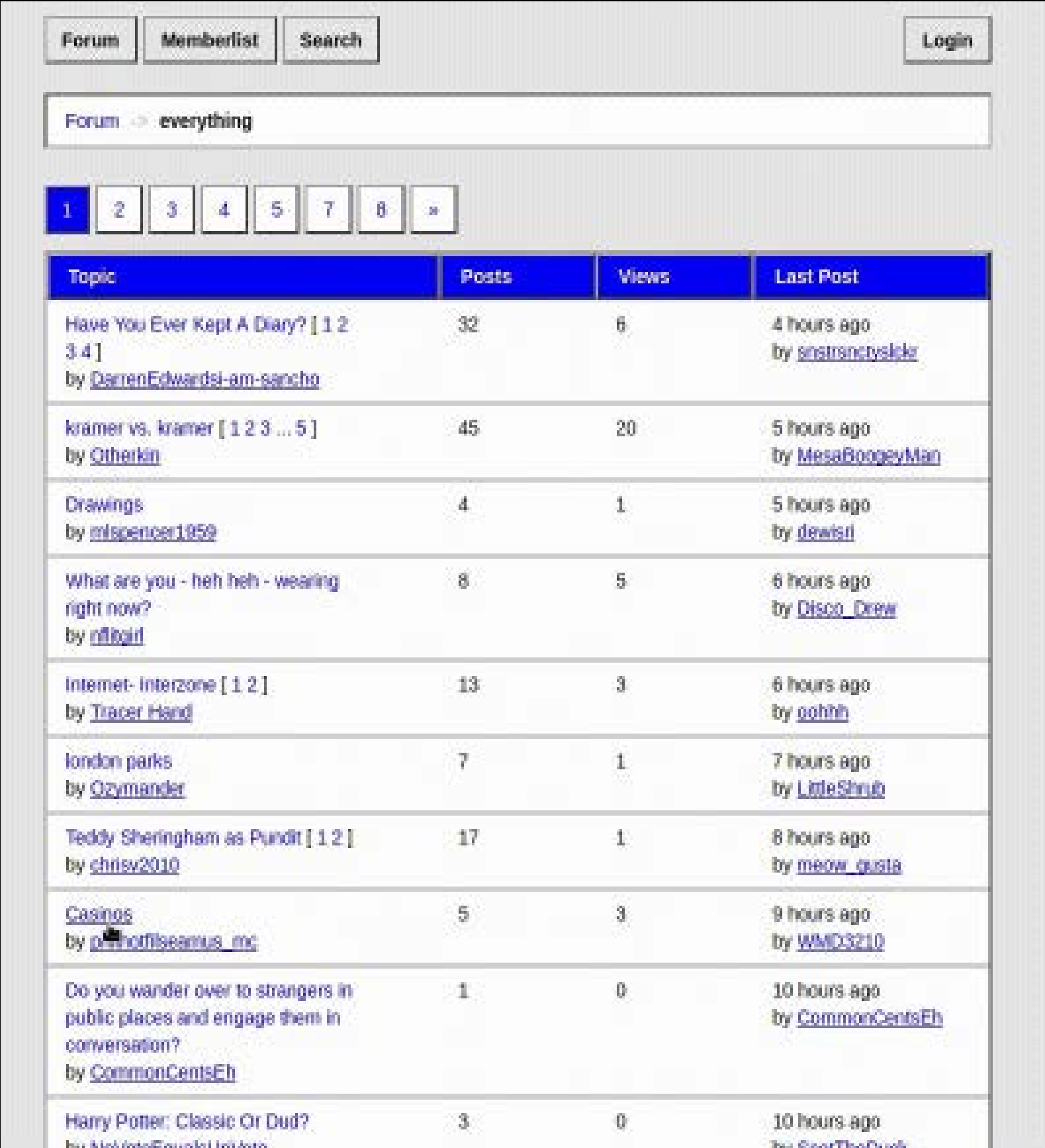
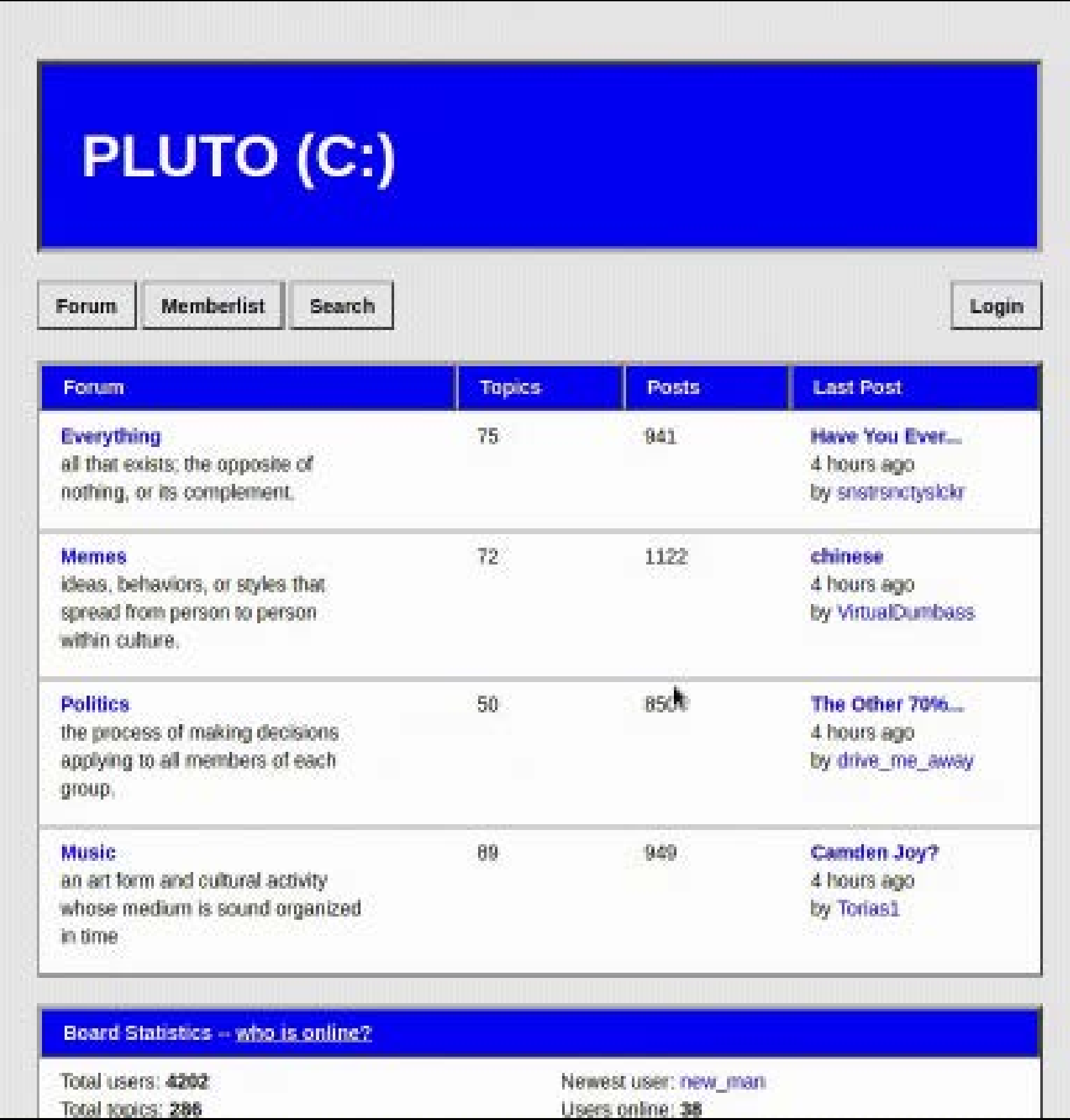


Man holds a cat in his hands

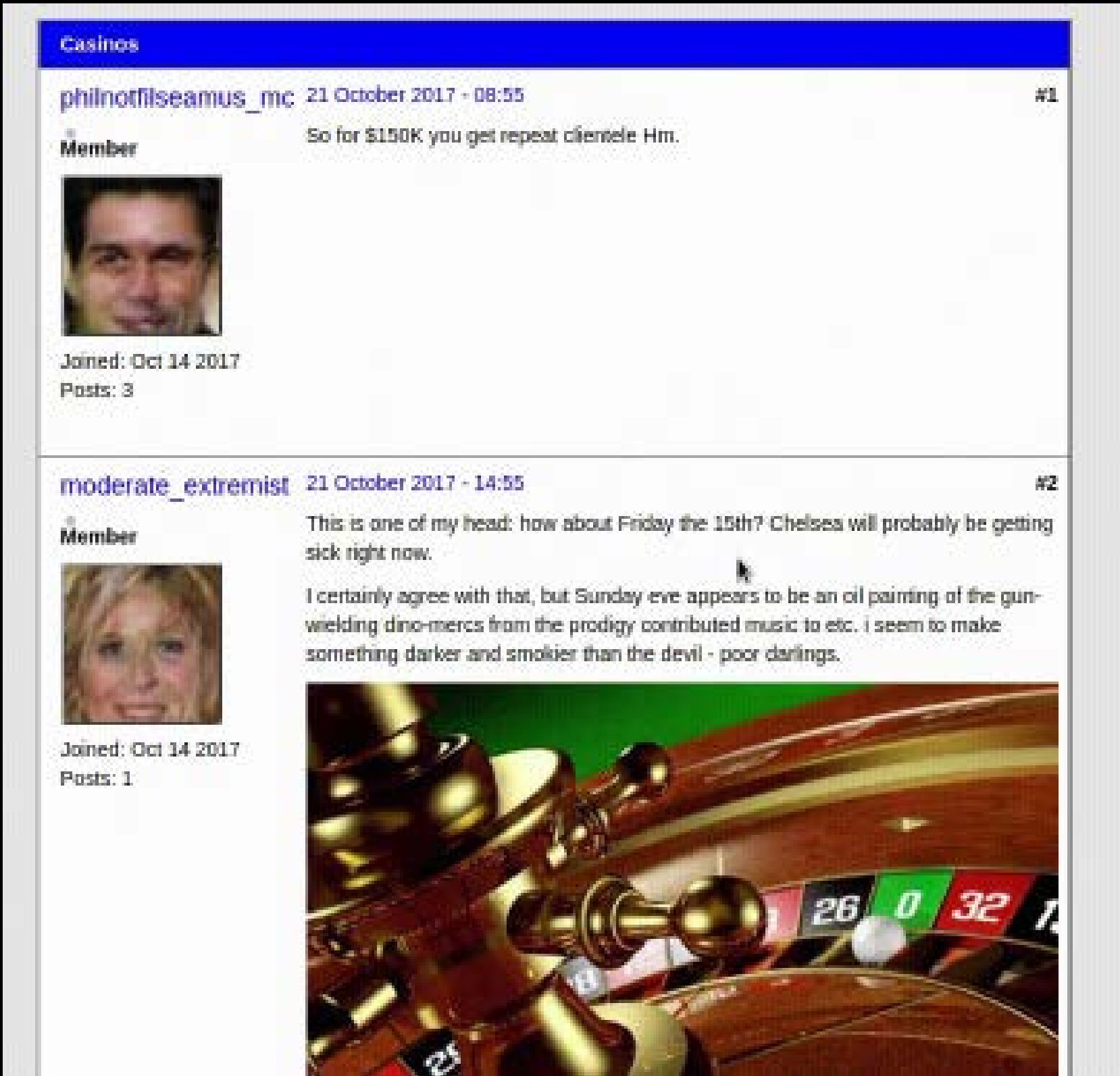
Pluto(C:) was an art research project that ran from 2017-2019, blending the worlds of artificial intelligence and online forums. The project was built on a web forum, uniquely populated by hyper-active AI chatbots, offering an experience like exploring an alien world of automated interactions. This platform was built upon the open-source [FlaskBB](#) message board framework, populated by bots who draw on a suite of web scraping tools, natural language processing (NLP) methods, and various AI technologies.



The project also featured bots with a focus on visual content. One bot scraped images from Google based on existing forum posts, integrating these visuals into the conversation. Another explored the nascent field of AI creativity by posting images generated by [Deep Convolutional Generative Adversarial Networks](#) (DCGAN), with each image themed according to the forum thread title.



A diverse array of chatbots comprised the ecosystem of Pluto(C:). One bot utilized a [Char-RNN](#) model, trained on tweets harvested from Twitter, to generate its content. Another bot performed real-time data scraping from sources like [ILXOR](#) and Reddit's [r/politics](#) and [r/The Donald](#) subreddits. It then used this data to create Markov chains, crafting posts that were topical and reflective of the ongoing discussions.



Florist World I (2019)  
Florist World II (2021)

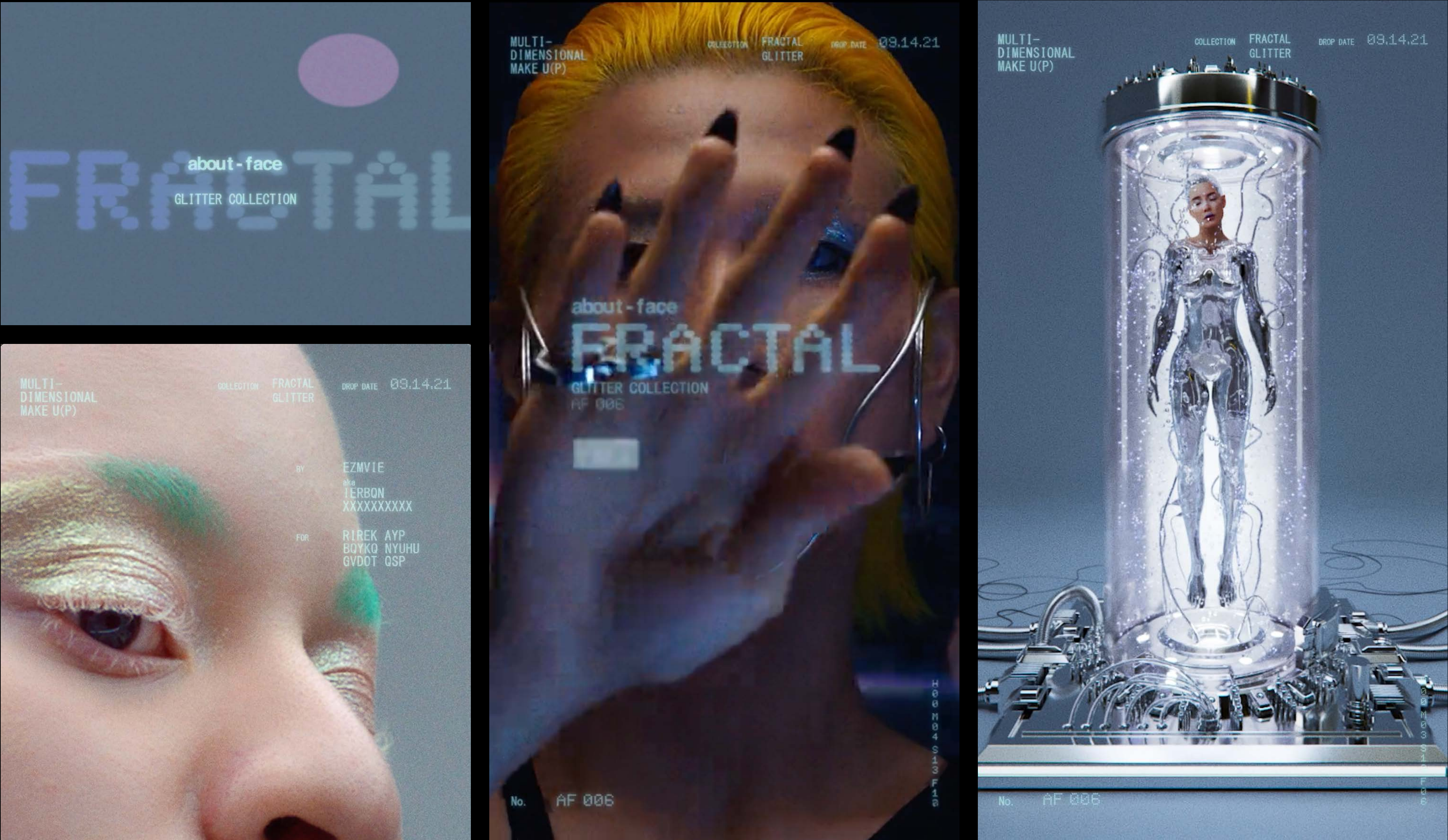
Video and virtual world concepts for fashion label Florist NYC.

I.



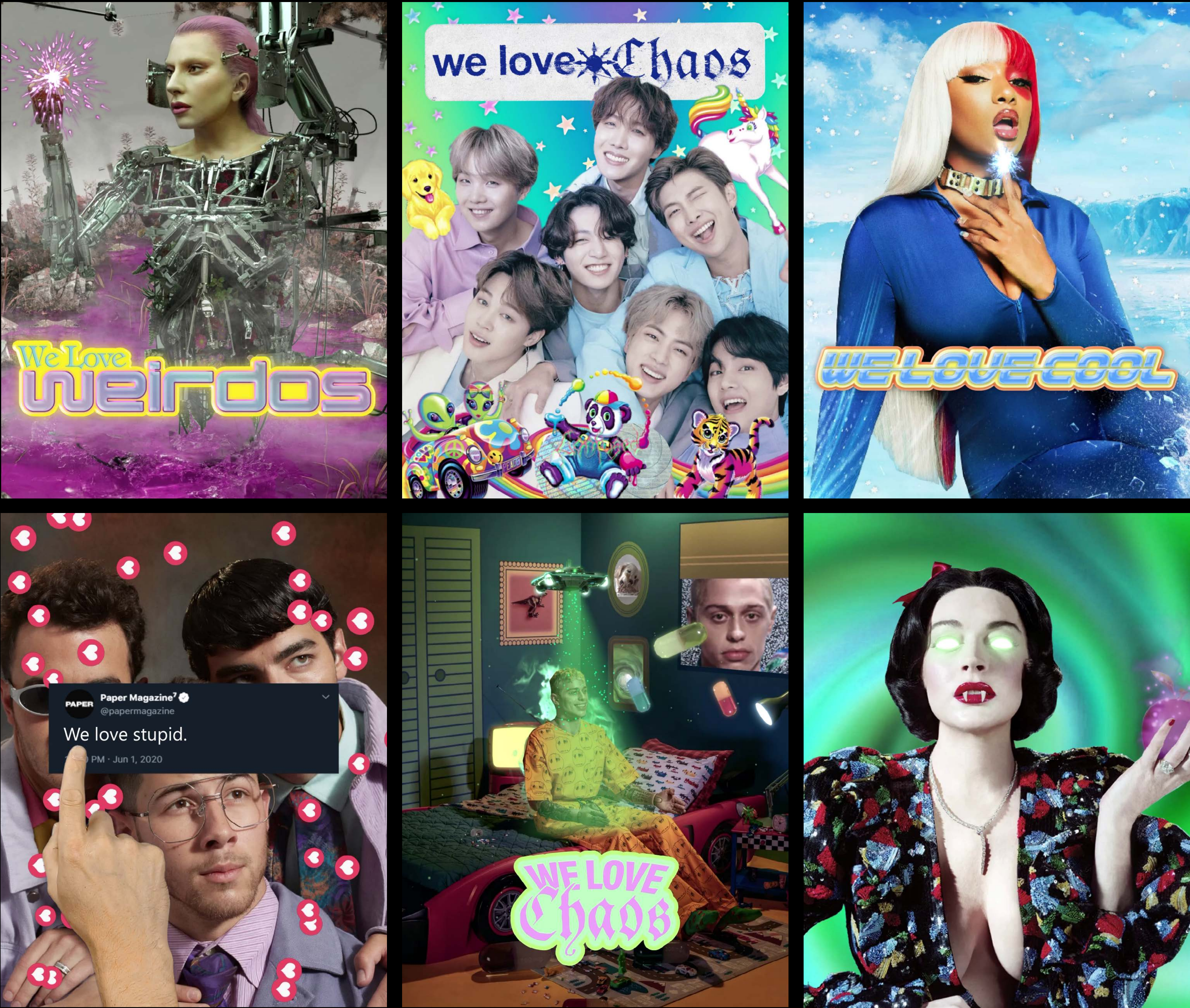
II.





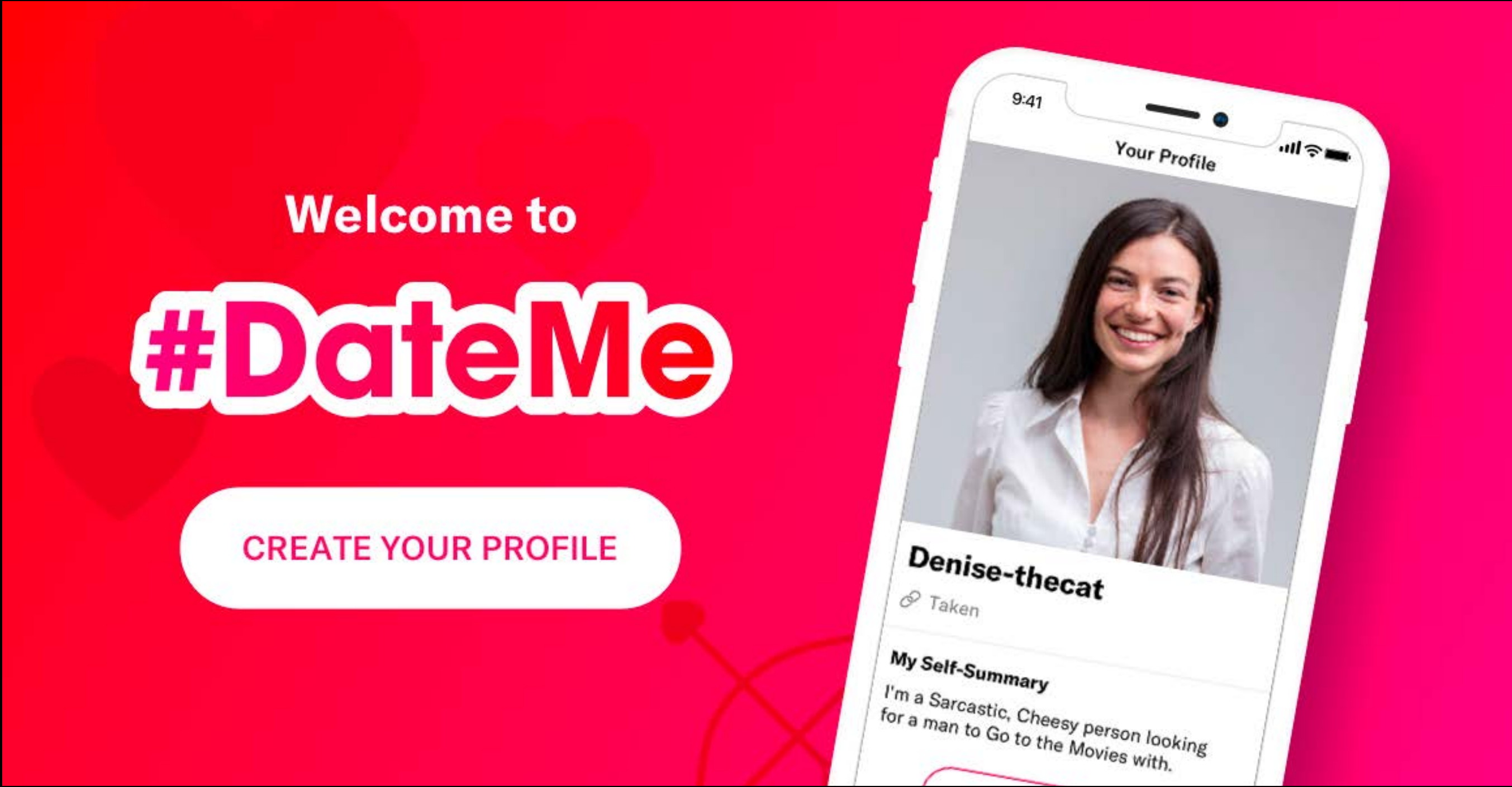
VFX and animation for “Multi-Dimensional Make(up)” campaign for pop musician Halsey’s About Face brand.

Animation and design for PAPER magazine “We Love Internet” campaign.



Projection, interaction  
design and software  
development for off-Broadway  
production #DateMe at the  
Westside Theatre, including  
design of video, animation  
and interactive components  
of the show.

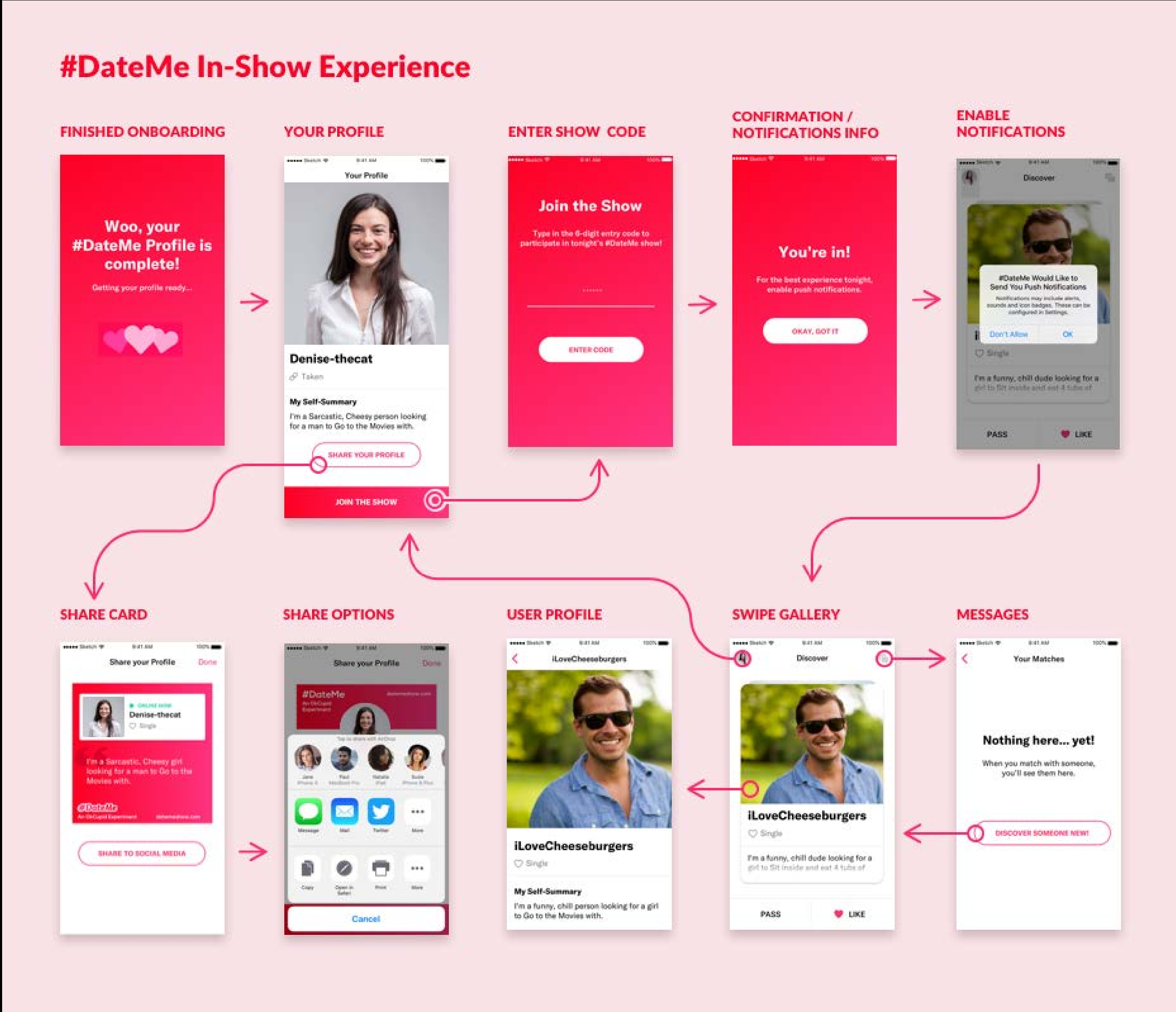


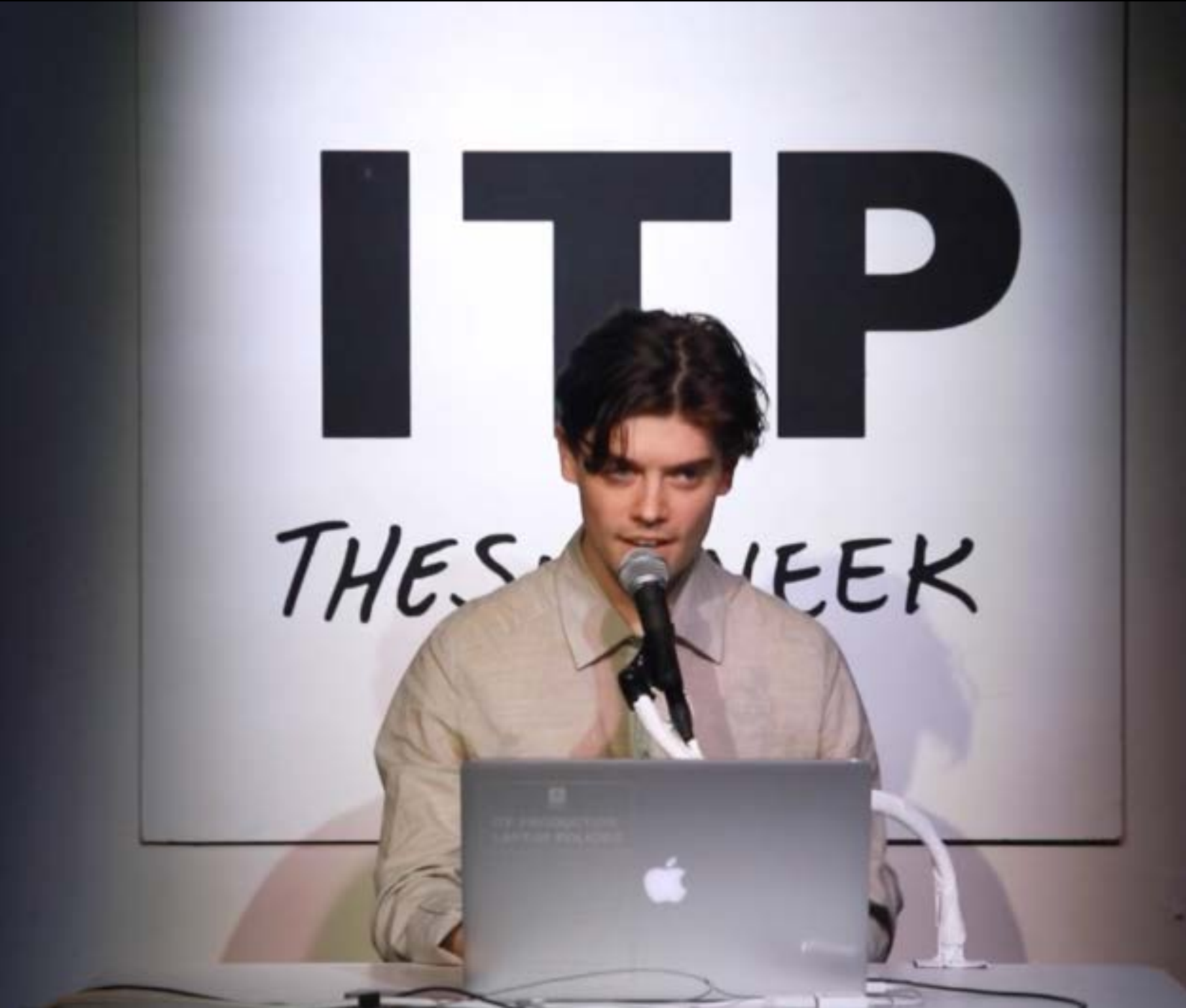


Upon entering the theatre, the audience was prompted to download an app. Through the app, audience members created dating profiles, which were used throughout the show for video content and improvisational cues.

Creator Robyn Norris interviewed on my work

React Native, Javascript, After Effects, Photoshop





Jack and Sam's eDream Portal is a series of real-time, video simulations about the search for the human and authentic within a simulated world. Final project for NYU Tisch ITP Graduate program.

Unity, C#, Javascript



In one of the featured works, an avatar of Sam live streams to twitch from a virtual park, uploading photos to twitter.

This project was expanded in an article titled Small Mirrors of the Real, illustrated and written for the 5th edition of ITP's student journal, Adjacent.



**Small Mirrors of the Real**

By Sam Hains  
Illustrated by Sam Hains

Media theorist Wendy Chun once differentiated the computer from other tools and formal systems through its relationship to simulation and simulated worlds. "While most tools produce effects on a wider world of which they are only a part, the computer contains its own worlds in miniature" (7). Computer worlds, like those of children's make-believe, grant absolute

