

# HY · PER · RE · AC · TIVE

## A REAL-TIME AUDIOVISUAL EXPERIENCE REDEFINING SOUND, VISION, AND IMMERSION

More than two years in the making, hy·per·re·ac·tive is a living, breathing entity—an ever-evolving fusion of sound, vision, and emotion. This real-time, responsive artwork seamlessly adapts to its environment, forging a deep connection between live music, immersive 3D visuals, and the audience.

It redefines how we see and experience sound—transforming frequencies into fluid, sculptural forms that unfold in a multi-layered orchestral spectacle. Here, music is no longer just heard but seen, felt, and lived.

Designed to awaken awe and wonder, hy·per·re·ac·tive expands the limits of perception, drawing viewers into a realm where reality bends, imagination ignites, and art becomes an all-encompassing experience.

Every element, from the subtlest vibration to the most breathtaking panorama, has been meticulously crafted to heighten awareness and engage the senses. This is more than an artwork—it is an exploration, a transformation, a journey into the extraordinary.

Step into hy·per·re·ac·tive—where art, music, and technology converge in perfect harmony.

What is hy·per·re·ac·tive?

hy·per·re·ac·tive is an interactive, real-time audiovisual artwork that transforms sound into dynamic, evolving visuals. It's an immersive experience where live music drives 3D visual compositions, making sound visible in a way that feels organic and alive.

Imagine a space where every beat, note, and frequency sculpts vibrant, fluid, and constantly shifting digital forms. These visuals react in real-time, mirroring the energy, emotion, and structure of the music. The result is a hypnotic, multi-sensory performance that blurs the lines between sound, sight, and presence.

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System Specification Technical Diagram

Venue





hy·per·re·ac·tive scape |

Audio Reactive Module | Sky | Time of Day



hy·per·re·ac·tive scape |

Audio Reactive Module | Sky | Colors in the Clouds



hy·per·re·ac·tive scape example

The Art | SoundScape | Desert

Audio reactive module | Liquids sculptures





Live recording of a real-time audio reactive BEACH scape



# BEACH

HYPER-REACTIVE

BEACH: A serene, sound-driven shoreline where sunlight dances on the water, and the horizon stretches infinitely, evoking a serene and timeless beauty. Along this idyllic landscape are archaeological sculptures—fragmented echoes of a forgotten Ancient Advanced Civilization. These relics, partially buried in the sands and weathered by the tides, prompt reflection on the impermanence of human achievements.

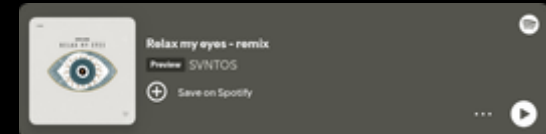
The scene invites profound contemplation: What will remain of us in the distant future? Millions of years from now, might future archaeologists—perhaps of otherworldly origins—struggle to uncover evidence of our existence?

In this serene yet thought-provoking scape, nature's enduring rhythm meets humanity's fleeting legacy, offering a poignant meditation on time, memory, and the traces we leave behind.



Live recording of a real-time audio reactive BEACH scape

Music Track:





# DEEP

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DEEP: Where the real meets the fantastical, this glowing underwater dreamscape immerses audiences in a world teeming with bioluminescent wonders and vibrant coral forests. Schools of sound-responsive fish move in perfect harmony with live music, creating fluid, rhythmic patterns that dance through the illuminated waters.

Majestic whales glide serenely, while playful dolphins weave energetically between shimmering rays of light. Sharks patrol with elegant grace, their sleek forms cutting through the glowing currents, while sea turtles drift tranquility in the ethereal glow.

Divers explore hidden caves and intricate coral formations, their beams of light revealing the intricate beauty of this surreal realm. Jellyfish pulse with hypnotic colors and bioluminescent squids paint shimmering trails in their wake.

Dynamic sound-reactive elements bring every corner of this scape to life—coral reefs and marine life respond to each beat, creating an interplay of sound, light, and motion. This mesmerizing underwater odyssey is a harmonious fusion of nature's beauty and the fantastical.



Live recording of a real-time audio reactive DEEP scape

Music Track:





# CAVE

HYPER-REACTIVE

CAVE: A mysterious, awe-inspiring cavern where the natural world meets the mystical in a symphony of light, sound, and energy. At the heart of this enigmatic space stands a towering, sound-reactive Buddha sculpture, its shimmering crystalline surface radiating pulses of light that flow and shift perfectly harmoniously with the music. The sculpture's glow creates an ethereal presence, infusing the cavern with a hypnotic interplay of colors and shadows.

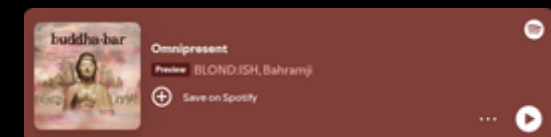
The walls of the cavern, adorned with intricate formations, act as a canvas, refracting and amplifying the Buddha's luminous aura. Waves of light ripple across the cavern in tandem with the music, turning the space into a living, breathing spectacle. Subtle, animated details—like the echoes of dripping water and swirling ambient dust—create a multisensory atmosphere, immersing visitors in a serene yet electrifying environment.

Every element of the CAVE is meticulously designed to transport audiences into an otherworldly realm, where the interplay of sound, light, and spiritual symbolism elevates the experience. It's not merely a space to observe but a sanctuary to feel, connect, and lose oneself in the transcendence of this harmonious fusion.



Live recording of a real-time audio reactive CAVE scape

Music Track:





# FALLS

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FALLS: Cascading waterfalls merge light, streams, and motion into a hypnotic display of grace and power. Towering cliffs and rugged rocks form a dramatic backdrop, their surfaces illuminated by sound-responsive lighting that syncs seamlessly with the rhythm of the music.

AI holographic ravers, scattered across the rocky terrain, move in perfect harmony with the beat, their presence blending seamlessly into the mesmerizing environment. At the heart of this captivating scape stand two extraordinary sculptures: a glowing, sound-reactive 3D scribbled Sacred Geometry form and a floating ethereal 3D scribbled angel. All AI dancers face these radiant sculptures in reverence as if partaking in a celestial rave where God is the DJ.

FALLS is an awe-inspiring fusion of nature, art, and music. It is a living sanctuary of motion, light, and sound that immerses its audience in a transcendent, otherworldly experience.



Live recording of a real-time audio reactive FALLS scape

Music Track:



The background image is a lush, dark jungle scene. In the foreground, there are large, dark green leaves and several glowing mushrooms in various colors like blue, purple, and orange. The ground is covered in a dense layer of foliage and more glowing plants. In the background, tall trees with thick canopies are visible, with sunlight filtering through the leaves, creating a dappled light effect. The overall atmosphere is magical and mysterious.

# JUNGLE

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JUNGLE: A vibrant, living ecosystem that is lush, pulsating, and brimming with life and light. The JUNGLE is alive with bioluminescent fungi radiating electric hues and intricate patterns. These glowing organisms illuminate the dense forest floor, casting dynamic, otherworldly light that changes as the fungi's colors shift in response to live music, creating a mesmerizing interplay of light and rhythm.

AI-driven autonomous animals roam this world with distinct behaviors—some move around through the foliage, others pausing to interact with their surroundings. Their lifelike movements bring an unpredictable energy, infusing the JUNGLE with a sense of realism that feels familiar and fantastical.

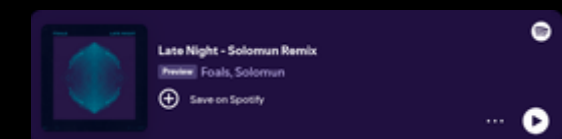
Sound-reactive sculptures, seamlessly woven into the environment, pulse and glow in harmony with the music, their forms morphing and shifting in real-time to reflect the beat. These intricate creations act as visual anchors within the scene, drawing the audience deeper into the immersive experience. Ornate floral ornaments, blooming with vivid colors, create a surreal atmosphere of perpetual rhythmic dance, further connecting the environment to the music.

The JUNGLE transcends the visual—it's a continuously evolving world where technology and nature harmonize. It invites exploration and wonder, drawing audiences into a fantastical realm alive with light, sound, and movement, offering an experience that feels deeply immersive and utterly transformative.



Live recording of a real-time audio reactive JUNGLE scape

Music Track:





# BLOOM

HYPER-REACTIVE

BLOOM: A sound-reactive, vibrant field of flowers bursts into a kaleidoscope of colors, radiating festival vibes and serving as a playful yet thought-provoking celebration of contemporary digital culture.

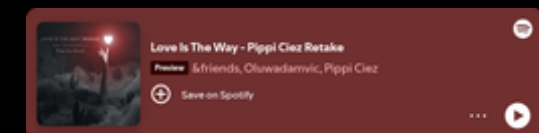
The landscape is scattered with memes, pop-culture icons, and signs adorned with meaningful messages, blending whimsy with depth. Unique 3D AI-generated characters, created through custom prompts, inhabit the scene, adding layers of intrigue and narrative—sculptural objects scattered throughout the space, creating moments of surprise and reflection, illuminated by dynamic lighting.

AI-driven animals further animate the escape, making it pulse with life and offering an immersive exploration of creativity and modern cultural expression.



Live recording of a real-time audio reactive BLOOM scape

Music Track:



# OASIS

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OASIS: A serene sanctuary set in the heart of the desert, where shimmering water contrasts vividly with golden sands. Towering palm trees create a haven for AI-driven animals, which gather to drink and rest from the desert heat, adding a lifelike dynamic to the scene.

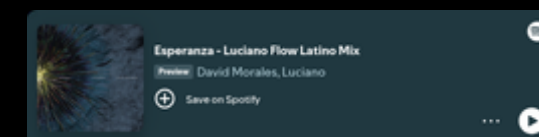
Liquid audio-reactive sculptures form mesmerizing displays, with splashes and flowing trails responding to the rhythms of live music. The immersive atmosphere is enhanced by a dynamic sky that shifts through the time of day and weather changes, all synchronized to sound.

Acoustic particles ripple through the environment, creating a symphony of motion and energy that elevates this tranquil oasis into a living, evolving hyper-re-active scape.



Live recording of a real-time audio reactive OASIS scape

Music Track:





# SPACE

.HY·PER·RE·AC·TIVE

SPACE: Embark on a cosmic journey that begins on Earth, traverses the moon, and ventures far beyond the sun, exploring the boundless wonders of the universe. This celestial scape immerses audiences in a harmonious interplay of sound and visuals, where sound-reactive nebulae pulse with radiant hues and luminous stars shimmer in synchronization with live music. The hypnotic glow of cosmic objects, from vast star clusters to distant galaxies, unfolds in breathtaking detail, creating a mesmerizing environment that bridges the vastness of the cosmos with the rhythm of sound.

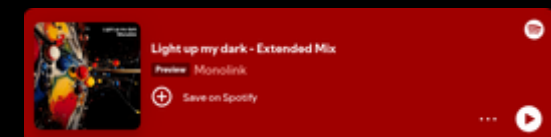
Dynamic visual transitions guide the audience through celestial phenomena, including solar flares, orbiting planets, and swirling galactic arms. Each element responds organically to the beats and frequencies of music, making every moment a unique, real-time experience. Atmospheric effects such as interstellar clouds, stardust trails, and glowing comets enhance the immersive realism, drawing viewers into the infinite mysteries of space.

This otherworldly scape captures the awe and wonder of the universe, offering an extraordinary perspective on humanity's place in the cosmos. Whether gazing at the radiant beauty of a nebula or feeling the rhythmic pulse of stars, \*SPACE\* invites audiences to lose themselves in a captivating fusion of sound, light, and the infinite possibilities of the universe.



Live recording of a real-time audio reactive SPACE scape

Music Track:



by per re ac five scapes:

A Realtime Audiovisual Experiential Artwork Redefining Sound, Vision, and Immersion

For over two years, I have poured my passion and expertise into creating by per re ac five scapes, a groundbreaking immersive project commissioned by the renowned Club Chinois in Bâle. Club Chinois is a haven for international talent, featuring celebrated resident DJs and superstar performers, all coming together to create a truly immersive sensory journey. This iconic venue is the perfect stage for an artwork that transcends traditional boundaries of art, music, and technology.

by per re ac five scapes represent more than an art installation—it is a living entity. This real-time responsive artwork adapts seamlessly to its environment, creating an ever-evolving connection between live music, real-time 3D visuals, and the audience. Created to evoke awe, wonder, and deep emotional resonance, it invites viewers into extraordinary realms where the boundaries of perception are expanded and imagination thrives.

Every element of by per re ac five scapes—from the smallest detail to the grandest vista—has been meticulously crafted to awaken the senses. It is a sensory journey that redefines artistic expression and offers a unique and profound escape into extraordinary dimensions.

A Vision of Heightened Awareness

At its core, by per re ac five scapes explores the concept of heightened awareness—a state in which the ordinary transforms into the extraordinary. The project comprises eight immersive environments, or "scapes," each inspired by the fusion of nature and the fantastical. These seductive spaces blur the line between reality and imagination, pushing the boundaries of human perception:

- **BEACH:** This is a sound-driven, serene shoreline where sunlight dances on the water and the horizon stretches infinitely. Scattered archaeological sculptures echo a forgotten Ancient Advanced Civilization, sparking reflections on humanity's fleeting legacy and the traces future archaeologists might uncover millions of years from now.

- **DEEP:** Where the real meets the fantastical, this glowing underwater dreamscape comes alive with bioluminescent creatures, vibrant coral forests, and sound-responsive schools of fish moving harmoniously with live music. Majestic whales, playful dolphins, elegant sharks, and drifting sea turtles create a mesmerizing interplay of light and motion, immersing audiences in the mysteries of the ocean's depths.

- **CAVE:** A mystical cavern where nature and spirituality converge, this cavern features a colossal, sound-reactive Buddha sculpture radiating crystalline light in perfect harmony with the music, amplifying the Buddha's luminous aura. The music creates a mesmerizing play of colors and shadows while swirling ambient dust enhances this serene yet electrifying sanctuary of light, sound, and spiritual energy.

- **FALLS:** Cascading waterfalls merge light, motion, and sound-responsive energy into a hypnotic spectacle. Towering cliffs and rugged rocks frame the scene, illuminated by vibrant, beat-synched lighting. AI holographic rivers move in harmony with the rhythm, centered around glowing sculptures of Sacred Geometry and a floating 3D scribbled angel, creating a celestial rave where God is the DJ. FALLS is a beautiful fusion of nature, music, and art, offering an immersive, transcendent experience.

- **JUNGLE:** This vibrant, pulsing ecosystem teems with bioluminescent fungi, AI-driven autonomous animals, and intricately crafted sound-reactive sculptures interwoven with exquisite floral ornaments. This immersive blend of nature and technology invites audiences into a fantastical, ever-evolving realm.

- **BLOOM:** A vibrant field of colorful flowers radiating festival vibes, scattered with memes, signs, pop-culture icons, and AI-generated 3D characters. Sculptural objects and dynamic lighting bring playful surprises, while AI animals add life, creating an immersive, sound-reactive celebration of contemporary digital culture.

- **OASIS:** A tranquil desert sanctuary where shimmering water and golden sands meet. Towering palms shelter AI-driven animals, while liquid audio-reactive sculptures and flowing trails move to live music. A dynamic sky shifts with sound-driven time and weather changes as acoustic particles animate this evolving by per re ac five scape.

- **SPACE:** A cosmic journey from Earth to the moon and beyond to the sun, traversing celestial wonders. Sound-reactive nebulae and luminous stars dynamically respond to music, creating a hypnotic glow and a mesmerizing interplay of sound and visuals. This immersive odyssey invites audiences to explore the infinite mysteries of the universe.

These scapes are not static; they evolve organically in real time, responding dynamically to live music, sensory inputs, and cutting-edge technology. Integrating sound-responsive 3D visuals, AI-driven autonomous systems, and innovative tech ensures that each audience experience is unique, fostering a deep connection between the artwork and its viewers.

Crafting Eight Worlds Over Two Years

The creation of by per re ac five scapes has been a labor of love, requiring over two years of meticulous artistic work and technical development. Each of the eight scapes represents a distinct artistic vision achieved through technical precision and creative exploration.

**BEACH:** This serene coastal haven captures the interplay of nature and time. Using advanced 3D simulations and fluid dynamics, I recreated shimmering sand, rhythmic waves, and dynamic tides. Scattered along the shore, 3D-scanned archaeological sculptures—remnants of an Ancient Advanced Civilization—invite reflection on humanity's impermanence.

**DEEP:** Diving into the ocean's depths, I focused on the bioluminescent glow of deep-sea creatures and the intricate formations of coral reefs. By simulating the play of light in underwater environments, I captured the mysterious beauty of the ocean's abyss.

**CAVE:** Inspired by archaeological sites with monumental Buddha sculptures illuminated by light in deep caves, I created a sound-reactive Buddha featuring a shimmering crystalline surface that radiates harmoniously with the music. The surrounding cave formations enhance its glow, resulting in a fusion of spiritual symbolism, natural beauty, and technological artistry—a serene yet electrifying sanctuary deep beneath the earth.

**FALLS:** To depict cascading waterfalls, I studied the physics of flowing water and captured the interplay of light within it. Utilizing complex 3D liquid simulations, authentically represents the power and grace of falling water.

**JUNGLE:** For this environment, I immersed myself in the dense foliage of tropical rainforests, seeking to capture the lushness and vibrant energy of a thriving ecosystem. To bring this vision to life, I embedded intricately crafted sound-reactive sculptures that pulse and glow in harmony with the rhythm, bioluminescent fungi, and AI-driven autonomous animals interwoven with exquisite floral ornaments, seamlessly blending technology with the natural vitality of the jungle.

**BLOOM:** I designed BLOOM as a vibrant, festival-inspired scape, blending nature and digital culture. A field of colorful flowers is scattered with memes, pop-culture icons, and 3D AI-generated characters, brought to life by sound-reactive lighting. While AI animals add life, creating an immersive, sound-reactive celebration of contemporary digital culture.

**OASIS:** Drawing inspiration from desert landscapes, I crafted scenes of tranquil water bodies surrounded by golden sands. Towering palm trees create a haven for AI-driven animals, which gather to drink and rest from the desert heat, adding a lifelike dynamic to the scene. The contrast between the harsh desert and the life-giving oasis highlights themes of survival and hope.

**SPACE:** Venturing into the cosmos, I designed star fields, nebulae, and distant galaxies, utilizing astrophysical data to inform the accuracy of these celestial scenes. The aim was to evoke the vastness and mystery of the universe.

These worlds are powered by Unreal Engine, a platform that allowed me to achieve real-time rendering with unparalleled realism. Combined with sound-driven physics simulations, these environments respond organically to musical inputs, making the entire experience fluid, immersive, and engaging.



## The Innovation of Real-Time Audio Reactivity

At the heart of *by per re ac five scapes* is an advanced audio-reactive system developed in Unreal Engine 5. This technology allows live music to drive 3D visual motion, light, and energy simulations in real-time, creating an ever-evolving, fully immersive experience that ensures each experience is unique.

Key features include:

- **Amplitude Analysis:** Visual elements grow and shift dynamically based on sound intensity.
- **Detection of beats and rhythms** using frequency spectrum analysis (FFT).
- **Frequency Spectrum Isolation:** Low and high frequencies drive distinct visual effects, from subtle glows to rhythmic particle flows.
- **Beat and BPM Tracking:** The rhythm and tempo of the music dictate the pace and motion of visual transitions.
- **Color Mapping:** Sound intensity influences an evolving spectrum of colors, reflecting the music's energy and emotion.

This seamless synchronization of music and visuals ensures that every moment within *by per re ac five scapes* is alive and responsive. The artwork bridges the auditory and the visual, creating a multisensory journey that deeply resonates with its audience.

## Revolutionizing Visual Music

*by per re ac five scapes* redefines the concept of visual music, breaking away from rapid, erratic, disjointed transitions in favor of organic evolutions. This harmony mirrors the patterns of music itself, creating a meditative experience where sound and vision flow as one.

Imagine standing in a space where the walls transform with the rhythm: a dense jungle gradually gives way to a serene beach, or cascading waterfalls dissolve into a glowing nebula as music crescendos. These transitions are not just visual spectacles—they are emotional journeys and experiences that elevate the connection between sound, visuals, and the human spirit.

## The Concept and Inspiration

This project draws deeply from the transformative energy of 1980s and 90s rave culture, where DJs aligned their music with the natural cycles of day and night, pulsing beats at night, mysterious tones at twilight, and uplifting melodies at dawn. I wanted to channel this sense of synchronicity into an artwork that blends sound, light, and environment into a cohesive, immersive experience. This harmony between sound and environment became the foundation for these worlds, where each scape evolves organically to reflect the music's energy and emotion.

*by per re ac five scapes* invites audiences to rediscover their connection to the world—both real and imagined—through a shared journey of perception and wonder.

## A Personal Reflection

For me, *by per re ac five scapes* represent a profound evolution in my artistic journey. It marks a leap from pre-rendered and fabricated artworks into the realm of dynamic, real-time, reactive art. This evolution has only now been made possible with the emergence of groundbreaking advancements in computer processing power and NVIDIA GPUs. These technologies provide the speed and graphical fidelity needed to process complex data streams without latency, enabling real-time integration of live inputs from the world around us—sound, movement, lighting, and sensory data.

This level of responsiveness ensures that the artwork becomes a living entity, evolving harmoniously with its environment. It creates a fluid and immersive experience previously unattainable, pushing the boundaries of what art can achieve. It is a new frontier where technology, creativity, and human perception intersect, unlocking endless possibilities for interactive and adaptive artistic expression.

## Art Beyond the Senses

This is not simply an artwork—it's an experience. It is a transformative, multisensory experience that transcends traditional boundaries. It invites audiences to enter a realm where sound, light, and motion converge, creating a space for discovery, transformation, and immersion.

This is not a passive encounter but an active journey into a harmonious convergence of music, vision, and technology. Something truly profound emerges—a new way of experiencing the world where beauty reignites the human spirit and unlocks dimensions of perception that exist both within and beyond ourselves. It's a celebration of sound, vision, and technology working together to unlock new dimensions of human perception.

After more than two years in the making, *Hyper-Scapes* is finally here, and I couldn't be prouder to invite audiences to step inside this world and see, hear, and feel what I've envisioned. Welcome to "*by per re ac five scapes*": a journey into the extraordinary.

## Eyal Gever – Artist

With over 30 years of experience at the intersection of art, technology, and science, Eyal Gever is a visionary artist redefining the boundaries of creativity in the current extreme present. Born in 1970 in Tel Aviv, Israel, Gever studied at the renowned Bezalel Academy of Art and Design in Jerusalem, where he embarked on his lifelong pursuit of fusing advanced technologies with artistic expression. He has pioneered 3D technology development for over three decades, seamlessly blending art and innovation.

Gever's work is distinguished by its use of cutting-edge systems such as real-time 3D simulations, robotics, AI, projection mapping, and advanced fabrication techniques. His process transforms code into life-like digital simulations of moments in time—often dramatic, catastrophic, or sublime—culminating in 3D-printed sculptures and immersive experiential installations. By challenging the conventions of traditional art, Gever expands the dialogue surrounding contemporary creativity, venturing into uncharted artistic terrain.

Recurring themes in Gever's projects explore the interplay between nature, technology, and the human spirit. His creations serve as lenses to examine ecological concerns, the acceleration of technological progress, and humanity's enduring quest for meaning. For Gever, art transcends expression; it is a way of life, a tool for navigating the complexities of an ever-evolving world, and an invitation to reflect on the profound connections between innovation and human emotion.

Gever's portfolio includes collaborations with globally acclaimed institutions such as NASA, where he created the first piece of art fabricated in space, ZKM | Center for Art and Media, and the Rijksmuseum. His art inspires wonder and introspection, transforming physical and digital spaces into transcendent experiences that challenge and expand our perceptions of time, space, and the human condition.



## Konstantin Dekhtarev – Technical Artist and Projection Maestro

With over two decades of experience, Konstantin Dekhtarev has been at the forefront of developing and programming real-time content for immersive installations, shows, and experiences. His work seamlessly blends music and visuals, pushing the boundaries of audience engagement and enhancing the connection between art and technology.

Dekhtarev's expertise in audio-reactive systems and real-time programming was instrumental in bringing *by per re ac five scapes* to life. His work pushes the boundaries of audience engagement, creating visually stunning and emotionally resonant experiences.

