

Rebirth

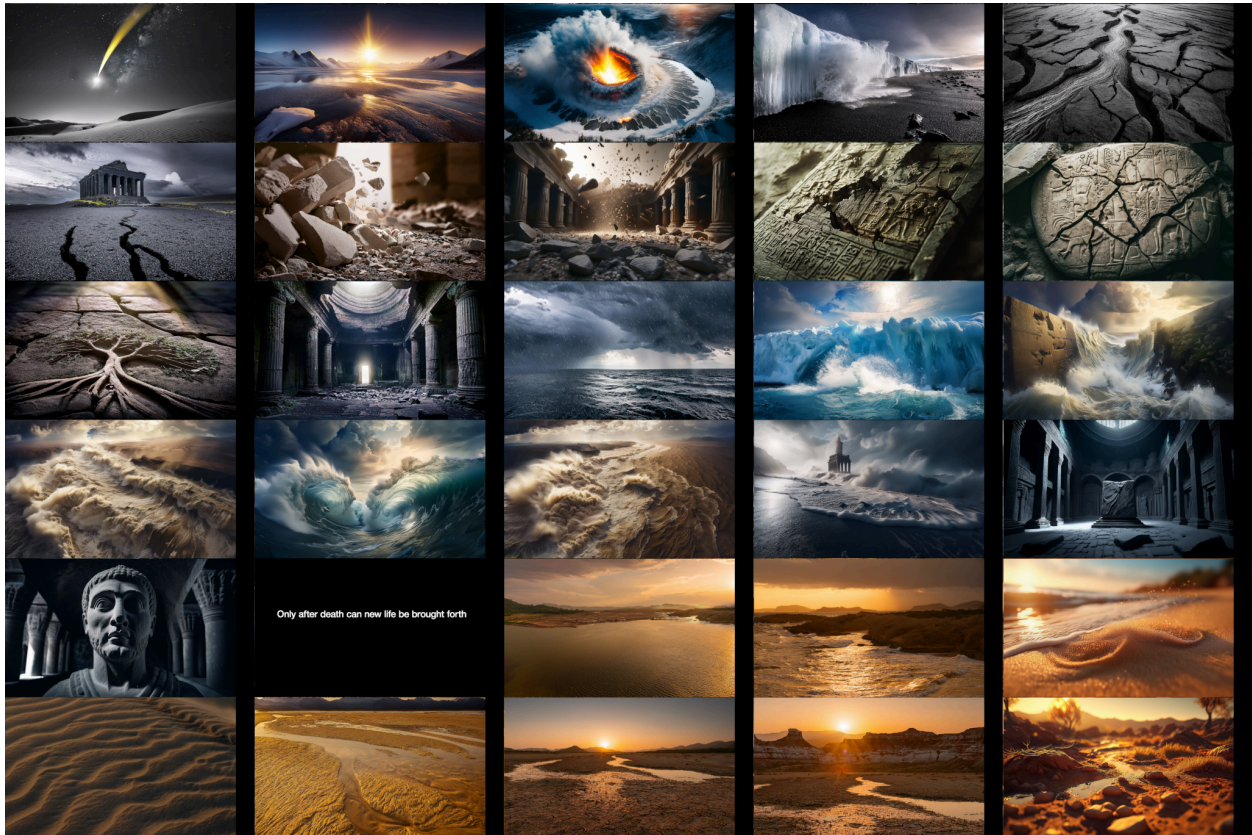
School of Visual Arts MFA Computer Arts Capstone Project

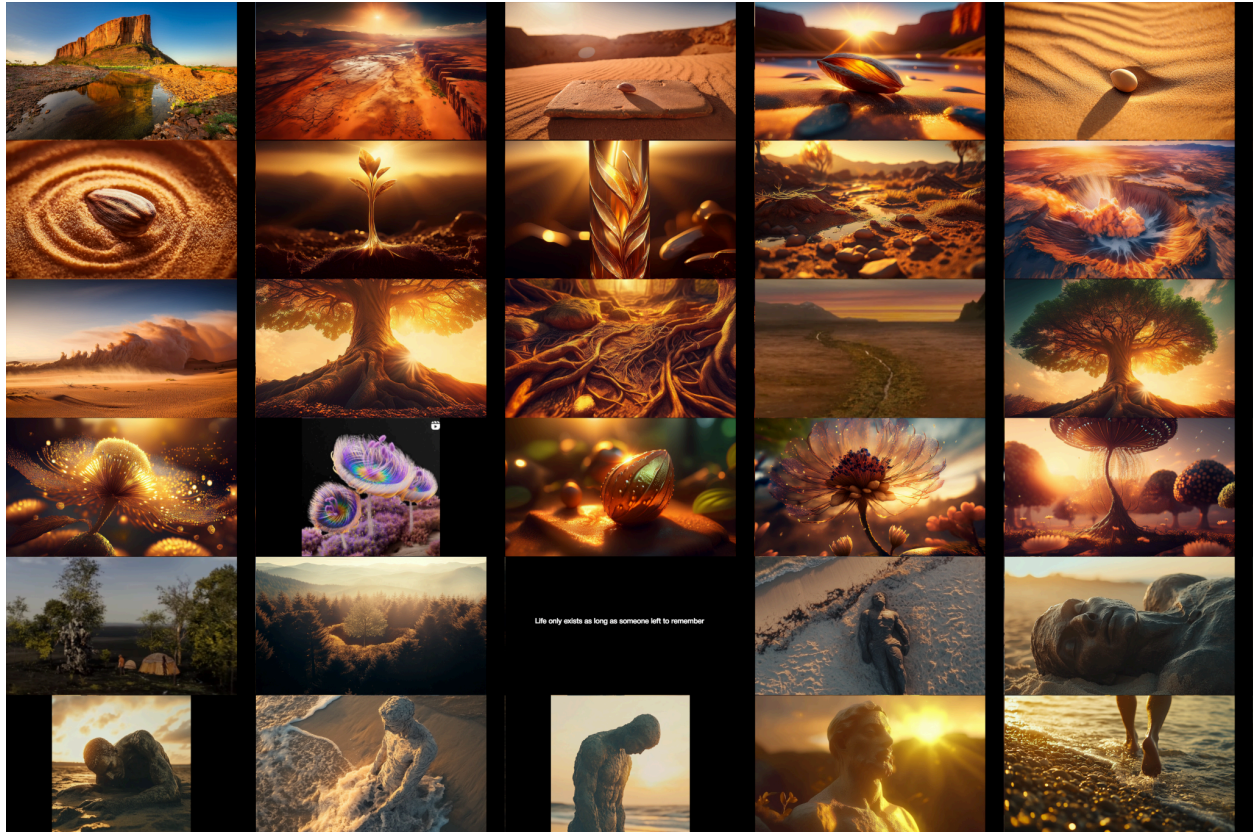
Our capstone project is driven by the research on the relationship between natural disasters, environmental change, and the rise of human civilization. We aim to explore a historical epic that echoes themes of chaos, destruction, revival, and rebirth, drawing upon the flood myth and its connection to the rise of human civilization. Our film begins in a barren world with the ruins of a lost civilization, where a stone tablet foretells destruction and renewal. The monument, situated in a desert with a massive ice wall on the horizon, serves as a pivotal symbol. A solar flare from the sun strikes the ice wall, shattering it and causing a catastrophic flood, mirroring flood myths like Noah's Ark, Mahabharata and Epic of Gilgamesh. As the floodwaters recede, a transformed landscape emerges, embodying the resurgence of life. A seed, released from the tablet, grows into a tree that symbolizes the renewal of nature, and the landscape slowly turns from desert to vibrant forest. The film concludes with a statue coming to life, revealing it to be a survivor who carries the knowledge of his civilization to restore new lands, embodying the hope of future rebirth.

On the technical side of production, this capstone project presents an opportunity to integrate various emerging technologies into the filmmaking process. Starting with the animatic, we utilized generative AI tools such as Adobe Firefly, MidJourney, and Runway to assist in shot visualization and lighting during the early stages. For production, we are currently developing the environment using SideFX Houdini, leveraging procedural tools for content generation and world-building. This software serves as the driving force for everything from fine details like seedlings to large-scale visual effects, including the flooding sequence. In addition to procedural techniques, we are incorporating 3D camera projection and matte painting to enhance large-scale environments and extend scenes on top of the 3D render. With the advancements in generative fill tools like Adobe Photoshop, 2D painting has become more efficient, making this workflow more accessible for multiple iterations. Beyond environment work, we collaborated closely with motion capture technology to extract accurate character animations, which will be essential for storytelling and simulations in the film.

Techniques: 3D Digital Landscape, Visual Effects, Environment Design, procedural content generation, generative arts.

Storyboard/Animatic with Generative AI





Descriptive Story Writing

A Vast dune sprawls with black sand across the horizon. Freezing wind from huge arctic cliffs subtly howls during the night, carrying dust particles along as it travels throughout the endless land. Bright moonlight escapes from heavy clouds, shining down on the sea of sand and sparkling the waves. A silhouette of the last remnants of a civilization slowly emerges as the moonlight shines.

An ancient chamber stands from the dust and reveals itself. The silence of a dead world echoes through the halls of the structure, as gusts of sand blow across the floor. A two story tall stone wall stands firmly in the center of the ancient chamber. This is all that is left, as the result of the inevitable apocalypse from the outer world, predicted by stone carvings across the walls in the chamber.

The Stone carvings depict a series of catastrophic events. A streak of hellfire, thunderstorm, and heavy rains. The world that was known to be abundant and flourished, but now, has been abandoned and flushed. On the top of the stone wall, a depiction of a single tree exists. Beneath the tree, a seed remains encased in the structure wall.

As a story unfolds on the structure's wall, a dark shadow of a figure appears, sitting on the floor. The figure seems to be a solid husk of a man, sitting at the center, preserved in ash. The final relic of the lost civilization, serving as a commemoration of what happened.

The sculpture stares through the chamber's window, his eyes gazing upon a vast wall of sharp, frozen cliffs, standing tall at the edge of the desert. In contrast to the sprawling sand dunes, this wall of ice stands firm, with its jagged cliffs and glacial points. On top of the cliffs, wind kicks up bits of snow as we see what little light that penetrates the thick layer of darkness that covers the sky, bouncing and shimmering off the surface, as water moves underneath, trapped like a shark in a bowl.

Beyond the sky, the sun glows from afar, surrounded by stark flares emitting from its surface. Basking in its own glory, bright sunspots charge intense magnetic fields, bursting out immense solar flares in different directions. With unimaginable speed, a flare shoots out from the sun's surface. It streaks across space, leaving behind a bright yellow trail of light, as it heads toward its destination, Earth. The flare does not take long to visit the Earth's atmosphere. It flies across the sky and grows brighter the closer it gets to the sand dune. The light trail glistens and breaks up the darkness that engulfs the night sky. The solar flare passes over the icy cliffs and disappears over the glacial mountains on the horizon, shining like a flicker of hope in a world of despair.

The impact of the flare silences the howling winds. The light shimmers ever so slightly, as if time stands still. A deafening shockwave blasts across the icy surface, ripping apart the surrounding glaciers and kicking up snow and frost particles. It uproots the cliff surface and starts a massive flood. The apocalypse begins.

The collision generates enormous earthquakes that cause cracks along the ground, which rage toward the ancient monument. Stone debris falls and dissolves on the ground during the collapse of the chamber. The cracks spread on the roof, the floor, and the wall. They run from the ground up, piercing through each chapter of disaster predicted on the stone carving. The crack then reaches the end of the wall, right on the last chapter showing the mysterious tree.

As an ungodly rainstorm descends from the heavens upon the Earth, the wall begins to shatter and collapse, releasing millions of tonnes of water that rip through the landscape with an unfathomable force, unlike anything this world has ever seen. As the flood collides with the ground, it uproots the sand and soil beneath as it tears through everything in sight. Not so long after, the waves reach the monument. The flood is almost upon the stone figure, as if he has been waiting for this moment to come. Massive waves rise beyond the monument's height, blocking the light and darken the chamber. The last rays of light shine on the stone figure's face signaling the moment of the great cleansing.

Days after, the storm settles and the water recedes. The darkness begins to disperse and the sun shines again. A rocky canyon emerges from the collapsed ice wall with a small pool. The water body branches outwards as smaller streams and puddles, spreading in a wide area amongst the clumpy sand. Newly landscape terraforms, filled with eroded and uprooted soil. Rocks and sediment spread out, scattered amongst broken down material from the settlement. Across the

horizon, rippled sand continues to be hit with peaceful, rolling waves as they wash up on the shore, sifting the sand as they break apart.

Near the canyon, a piece of the structure lies on the damp sand, at its center it holds the preserved seed. As the sunlight hits the piece, it crumbles apart, leaving the seed resting on top of the soil. The sand begins to ever so slightly shift around, swallowing up the seed in the process. As the sand envelops the seed, nature commands the growth and calls forth abundance and prosperity once again, As the voice dies out, the seed sprouts and a stem grows up towards the sky, pointing toward the direction of the sun. The seedling breaks the surface and reaches for the sun.

Refractions from the glassy stem shines bright as the sunlight turns harsh. The ground begins to rumble as a shockwave ripples through the uprooted landscape. The seedling erupts into a gargantuan tree and becomes fully grown as depicted earlier in the carvings. The roots grow deep and strong underneath the Earth's surface. The tree erupts out of the ground with a force that dispels the streams of water and sprays mist, dust clouds and sand particles all over. As the revival of Planet Earth begins, the tree's roots spread through the landscape, nourishing and enriching the soil it touches.

The tree blossoms to life, producing surrealistic flowers and fruit. The fruit appears soft and supple, yet shines with the intensity of a diamond. The fruit then falls to the ground and gets swallowed up by the soil, growing into a new tree. Pollen from the flowers is carried by the wind and spread across the land. From generation to generation, The greenery returns to the land. Flora sprouts from the ground, surreal, spider-like fauna break off from the tree branches and terraform the plantlife, causing further changes and evolution to the landscape. The landscape is

now filled with high rising flora and greenery as the sounds of evolved fauna fill the air and breathe back life into the world, with the First Tree standing over the forest.

At the edge of this mystical forest, the stone body of the figure from the monument appears washed up on the shore. The stone husk starts to fall off at the tips of his fingers. New flesh begins to appear on his lifeless body. He starts to breathe again as he comes to life. The man is marked as the survivor of the apocalypse and the last witness of the old world. Later on, he clutches a new seed from the first tree, as he sails away from the edge of the forest. Heading towards the horizon, he looks forward to restoring the lands beyond and bringing forth a new civilization.