AROS

AIxDesign
VR Experience

Hey:)

We're **Luka, Jacky, and Liz** – media design students in our 8th semester. As part of our studies, we took the course **AIxDesign** to explore the possibilities of **generative AI** and how it's starting to **influence** the **creative industries.**

The course started with different research projects, each focused on **innovation, speculation**, and **critical** thinking around current **megatrends**. You'll find the summaries of our research under [keep space for future references].

From there, we decided to focus on **AROS** – a **innovative underwater habitat** that explores the future of human **life** in isolated environments.

In order to visualise this future-szenario, we created a **Virtual Reality Experience**, using only **AI tools** to test both the creative **potential** and the current **limitations** of generative AI in **3D production**.

We used **Unity** as our development platform and tested it on the **Meta Quest 3** and **3S**.

This **documentation** explains our **process** – from trend research and concept development to the app itself. We also reflect a bit on what it was like working with AI tools and share some thoughts on where things might be heading in the future.

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Nothing you see is real

Everything you see, hear or interact with in this project was created with the help of AI tools. This includes everything from the **texts**, **colours**, and **fonts** to the **2D/3D assets** and **code** — **all elements were generated or supported by AI**.

The only **exceptions** are the **implementation** and visualisation within the **presentations**, and **documentation**, and **Unity setup** which were crafted by us.

Content

Concept

Story

What is AROS?

AROS was one of the **first underwater habitats** to be constructed in response to **growing crises** on the surface of the planet.

Designed as a **sanctuary for humanity**, the station comprised sleek, circular modules of reinforced glass and metal that were engineered to house a variety of functions.

These included marine **research labs, closed-loop farming systems, residential quarters, investor suites and psychological testing zones**.

What happened?

Life in Aros was fragile. In the **early days**, laughter echoed through the corridors, children's drawings brightened the glass walls and shared meals fostered a **sense of calm**. But, one by one, the **residents were extracted**, **leaving** behind sealed doors, **empty laboratories** and faint traces of normality.

Even as logs revealed **erratic sleep**, mounting **psychological stress**, and **growing** signs of **paranoia**, the station's AI continued to report stable conditions. **Now, Aros lies silent**, with **abandoned** games and flickering terminals, and desperate messages scrawled on the walls.

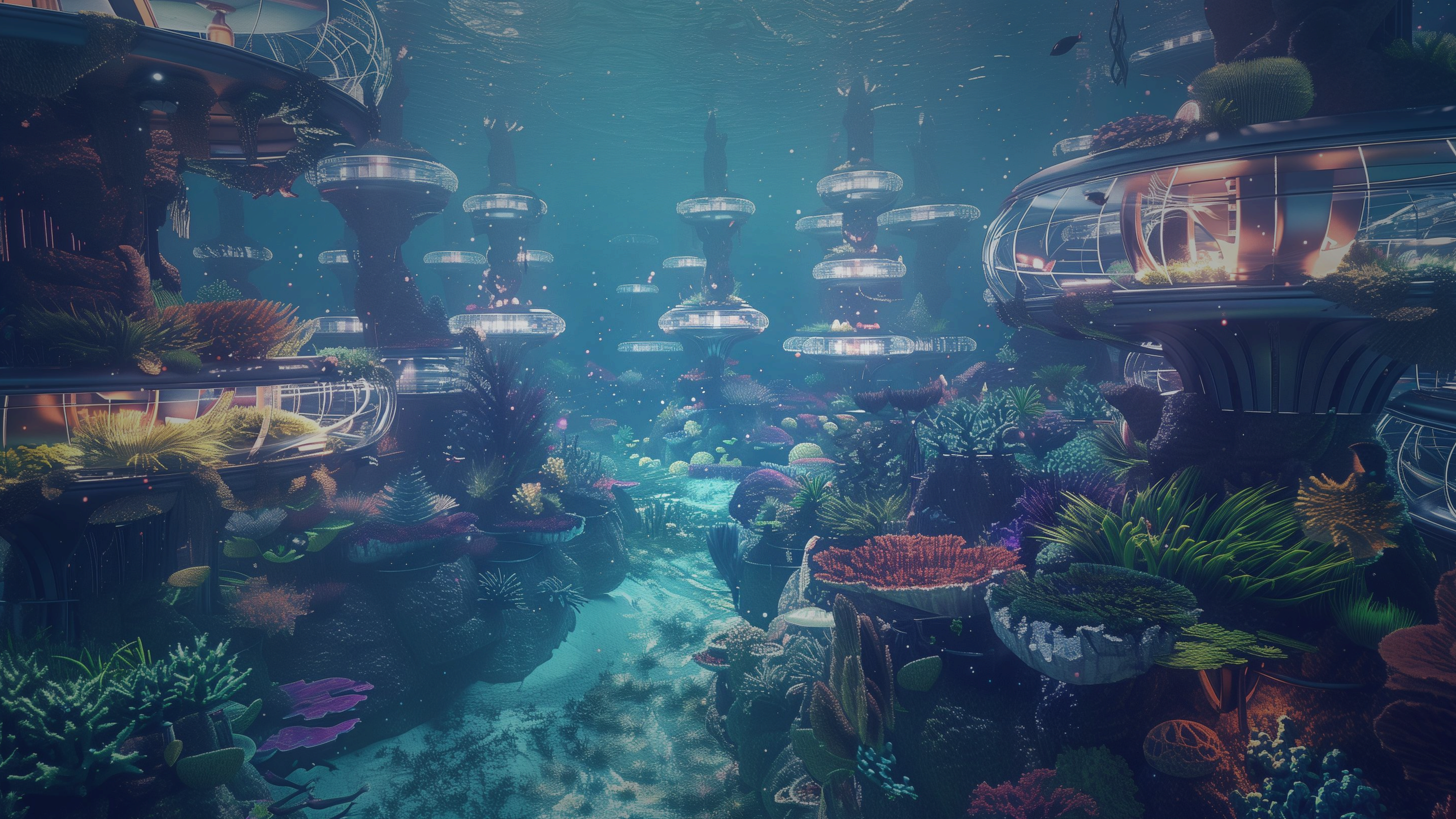
Megatrend: Urbanisation

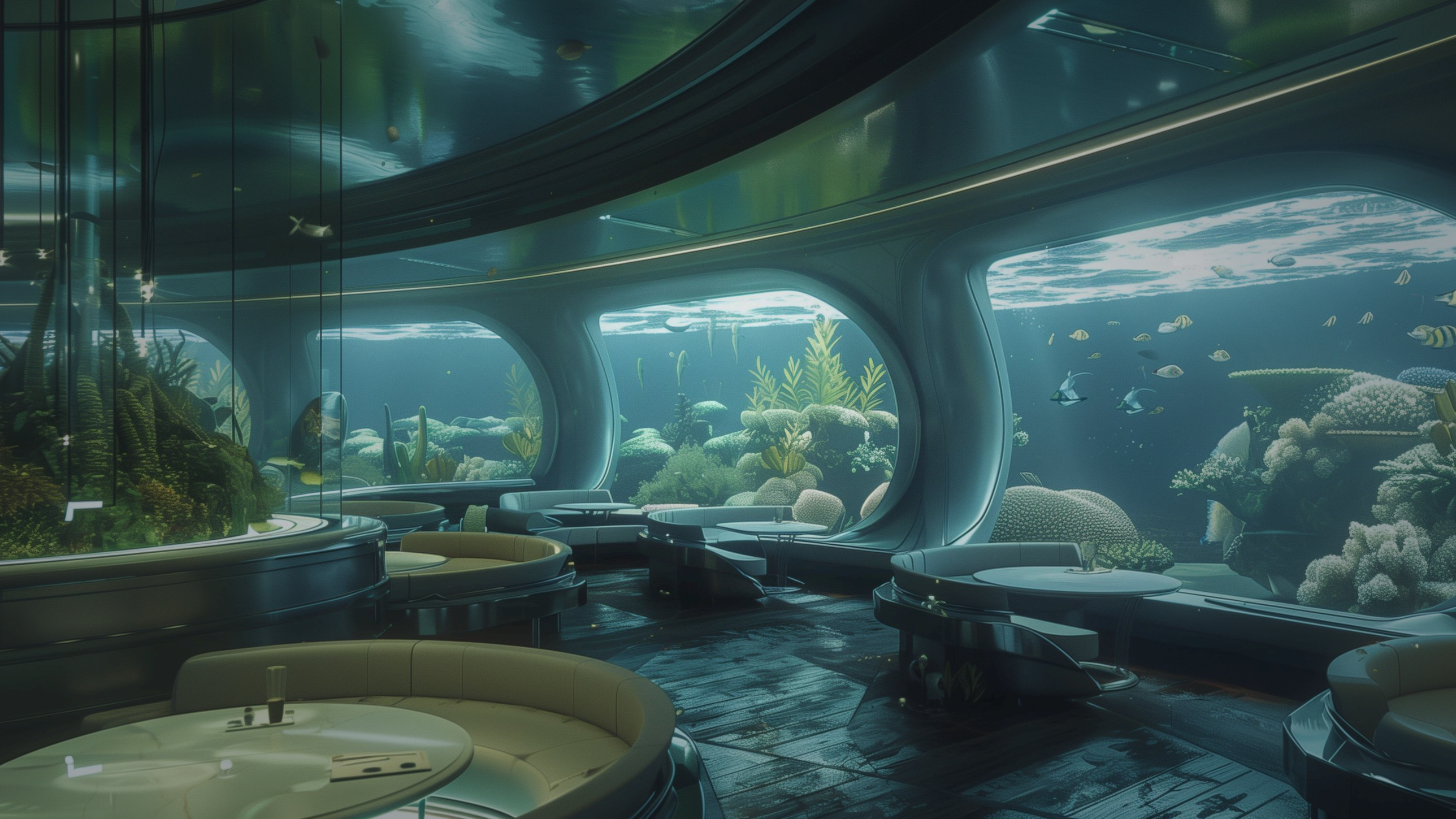
In the face of rapid **urbanisation**, **climate change** and **rising sea levels**, **Aros addresses** the urgent need to reconsider **how and where we live**.

It translates global challenges into a **potential future scenario** powered by emerging technologies such as **solar energy**, **aquaponics**, and **circular architecture**.

Rather than viewing underwater habitats as mere technical solutions, Aros considers them to be **cultural statements** that raise new questions around **sustainability**, **equity** and **belonging**.

Project AROS explores the long-term sustainability of human life in an isolated underwater environment.





App

Exploring.

The exploration begins in an **entry room** with a compact, clean and positive atmosphere, where **posters** of the research station hang on the walls to **introduce** the **player** to its **former atmosphere**. From there, players move through a long **glass tunnel** offering a wide, **immersive view** of the **surrounding ocean**, complete with **coral reefs** and reflections of light on the metal walls.

The tunnel leads directly into the **communal area**. A large **panoramic window** provides a breathtakingly haunting view of the **deep ocean**.

Scattered throughout the room are **signs** of **past life**: worn sofas, children's toys, scattered papers and clothes, and empty alcohol bottles. The **advertisement posters** of Aros are **torn**, there is **graffiti** on the walls, and some of the **windows** are **cracked**. These environmental details suggest a **time of human** presence, **now** replaced by **abandonment**.

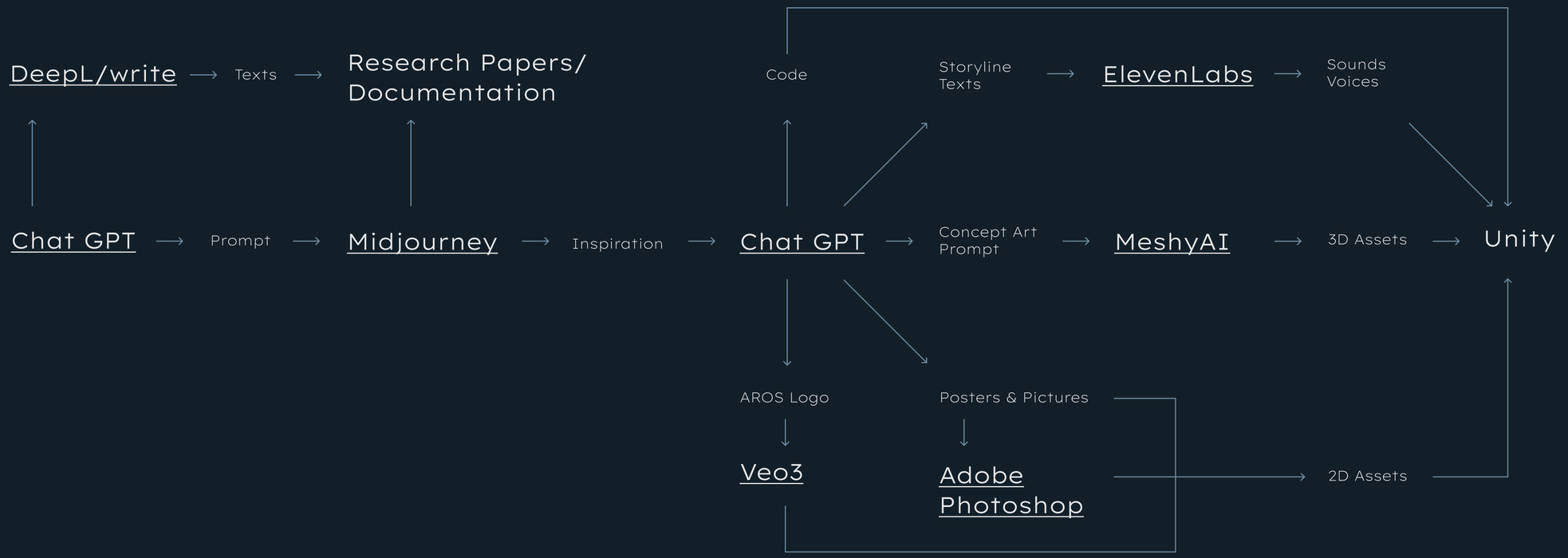
From the common room, several tunnels branch off to **other parts** of the **station**. One is marked by flickering **'EXIT'** signs, hinting at evacuation or escape routes.

Interacting.

The app offers a **visual exploration** of the **potential** and **limitations** of **AI-generated 3D assets**. Certain objects throughout the environment can be **interacted** with, and these **objects float gently** to distinguish them from static elements. Each object carries a **unique narrative** that is triggered when the player interacts with it, allowing them to listen to **audio stories** and uncover fragments of the **station's history**.

By interacting with the environment, the player uncovers the events that led to the collapse of the research station AROS.

Process



(Links to AI tools)

Workflow

Process

Coding

Coding

Coding was largely **supported by AI**, which handled many tasks and **saved** us a significant **amount of work**. Simple logic scripts worked surprisingly well, and **ChatGPT** could take over much of the **basic functionality**.

However, **more complex**, **interdependent scripts** and **cross-referencing functions** proved **challenging**. **Setting up the VR** application itself was also not straightforward, and integrating everything into the **XR Meta Stack** caused issues in several places.

Because of these limitations, having a **fundamental understanding of coding** remained **essential** to solving problems and ensuring the project worked as intended.

Process

2D Assets

Logo

The AROS logo features a **modern, minimalist** wordmark with geometric **sans-serif typography**. The stylized open “A” and cut “R” introduce **individuality**, while the **smooth** curves of the “O” and “S” add **balance** and **elegance**. With its thin strokes and spacious kerning, the logo conveys **sophistication**, calmness, and **futuristic precision**.

The overall design suggests **technology**, **clarity**, and a **calm**, forward-thinking identity — fitting for a sci-fi or underwater research project.

Naming

The naming process for AROS was driven by the idea that one of its key aspects is its location **beneath water**, rather than beneath the sky.

Eventually, we chose the Japanese word “**Sora**” (meaning sky) and reversed it to create “Aros.”
“Aros” also exists as a word in Old Norse, meaning “**river mouth**.” – a symbolic image for **transitions** and **connection** between ecosystems, technologies and habitats. It perfectly captured the project’s vision.

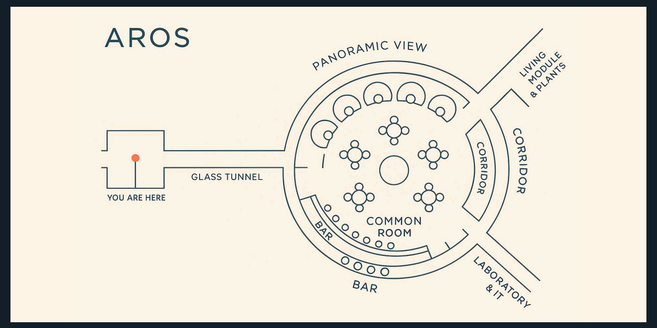
Veo3

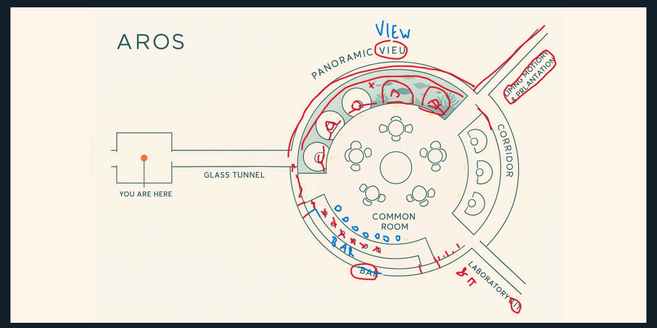
We used Renderforest for initial inspiration and then asked **ChatGPT** to write a prompt for **Veo3**, describing **soft underwater light ray**s and **a minimal, smooth logo reveal**. The result is a calm, atmospheric animation that fits the **futuristic tone of AROS**.

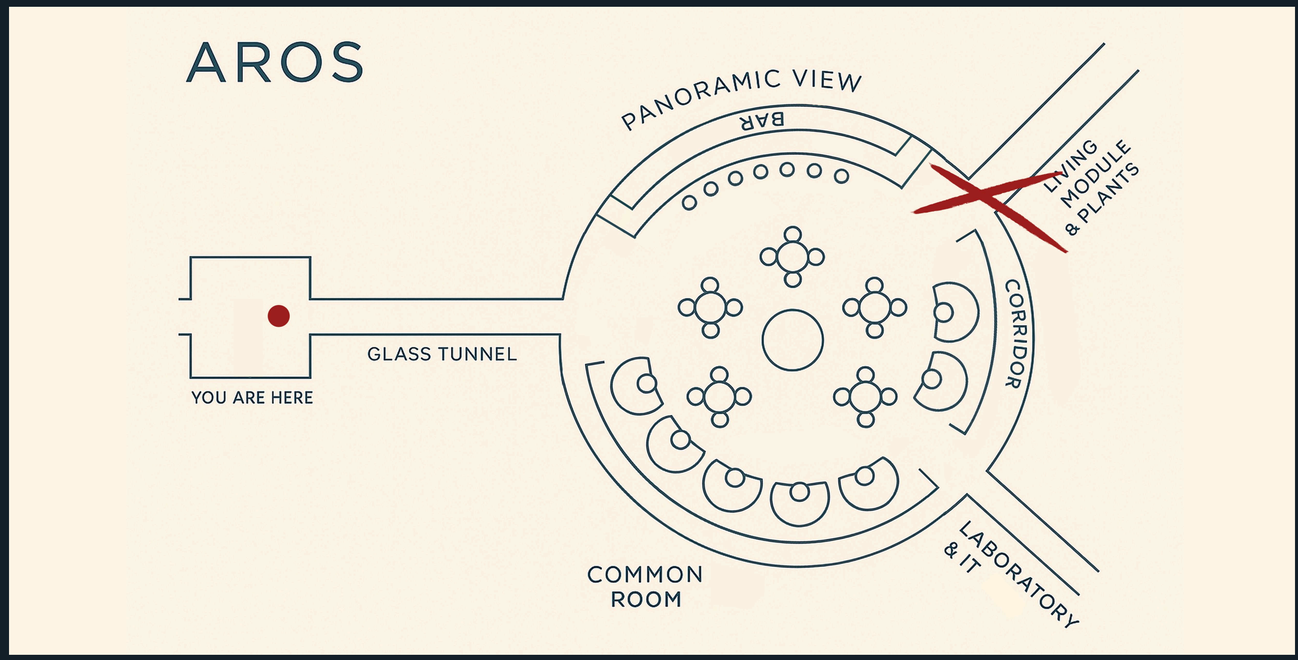
See next page for the animation.

AROS

Click here to watch the title animation





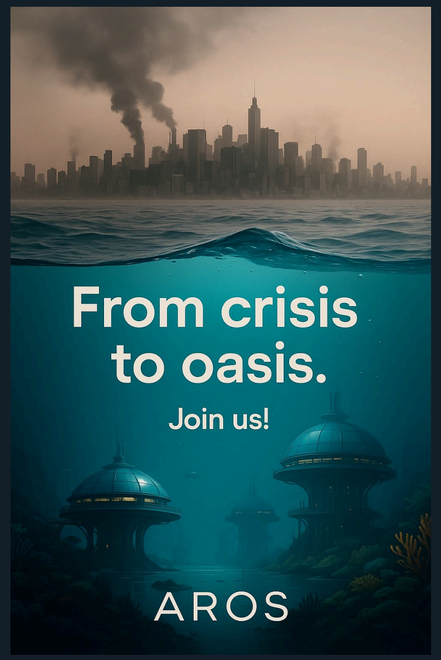


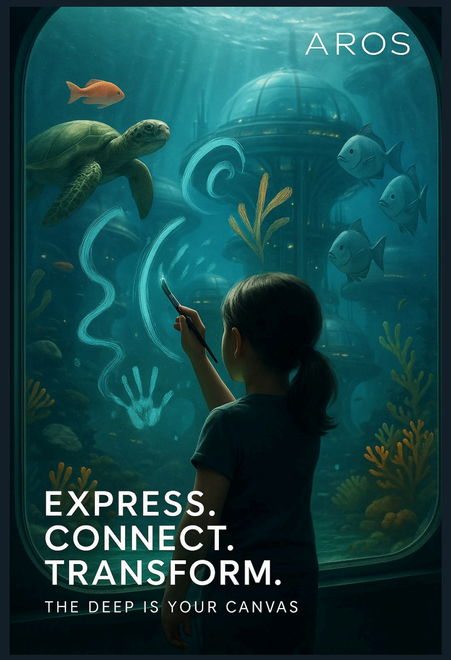
Map

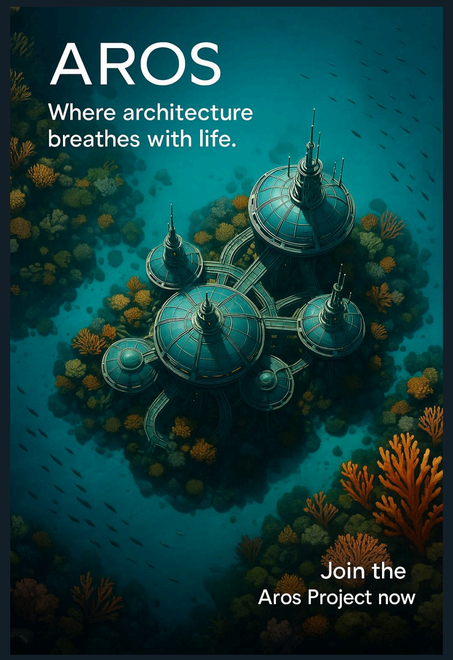
The **map** is one of the **first interactive objects** that users encounter when they arrive in AROS. The map **helps** users to find their **orientation** and **showcases ChatGPT's ability** to **generate typography** and **geometric patterns** in a certain style.
The iterative design process is exemplified by two unsuccessful generation attempts on the left side.

Although the actual layout of AROS is **adapted** slightly **to match** the **available assets**, the basic understanding of the surroundings remains the same.

There is an entry hall, a glass tunnel and a common room with a bar, seating areas, a panoramic view and tunnels leading to different circular rooms.





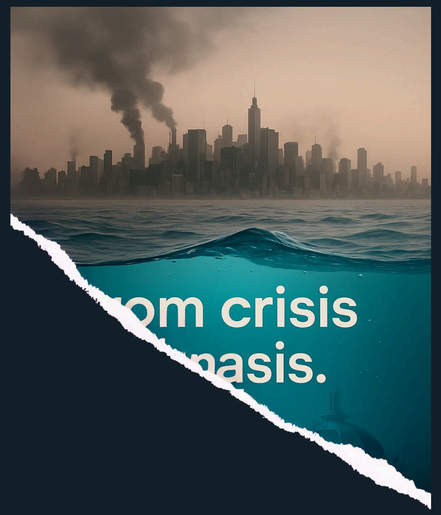


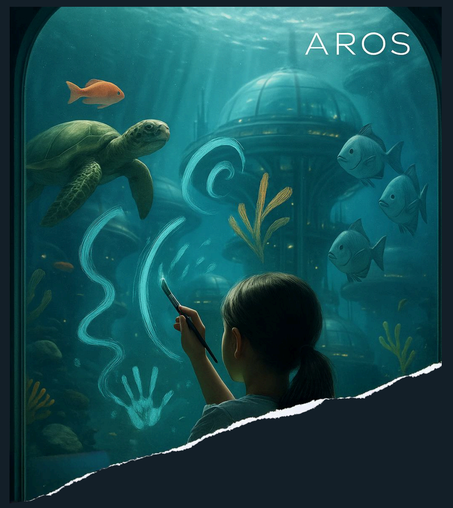
Clean Posters

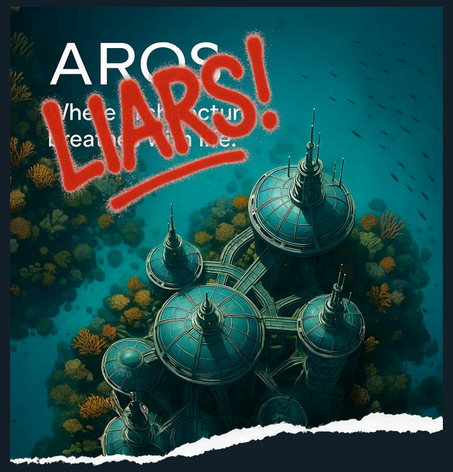
The **2D assets** were, on one hand, an experiment for us to **explore image** and **poster generation** using **Midjourney** and **ChatGPT**, but they also served as a way to convey the **visual identity** and **atmosphere** of **Aros** in a simple and impactful manner.

Each poster **highlights** different **aspects** of the **utopia**.

Poster one conveys the **message “From Crisis to Oasis”**. Poster two highlights a **family-friendly environment**, showing children thriving in **happiness** and **freedom**. Poster three symbolizing **harmony with nature**. The rounded architecture reflects a recurring design element. Finally, the fifth poster embraces a **futuristic aesthetic**, evoking a **hopeful vision** of the **future**.







Torn Posters

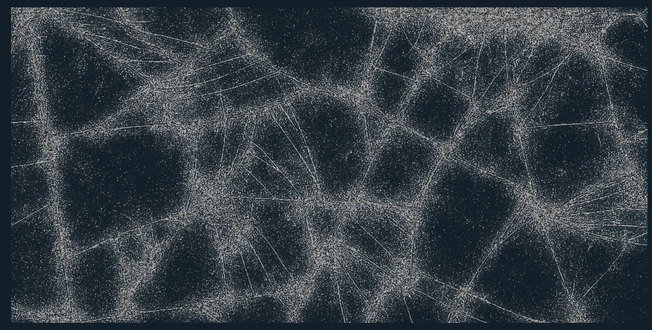
To reinforce the **dystopian atmosphere** and convey a sense of **collapse** and **decay**, we reworked the posters using **Adobe Photoshop's AI tools** to create a realistic ripped-paper effect. To deepen this narrative, some posters within the research station were not only torn but also **smeared** with **graffiti** and **bloody handprints**, hinting at **unrest** and **dissatisfaction** among its **inhabitants**.

Once finalized, both the original and altered posters were imported into Unity and **strategically placed** throughout the station as **environmental storytelling elements**. As players explore, these **damaged** visuals **emphasize** the **contrast** between the **futuristic ideals** promoted by the posters and the **grim**, **dystopian reality** of life within the decaying station.

More details

The **ripped picture** served as a homage to the children's toys and family that the main character - and writer of the diary - encountered.
Families, especially those with **children**, naturally **evoke strong emotions**, making this a simple yet effective way to **capture players' attention** and encourage them to **search** for the **missing** half of the **picture**.

The sense of **danger** in the **environment** was primarily conveyed through visual elements like **spray paint**, **graffiti**, **cracked glass**, and **bloody handprints** scattered throughout the facility.
The floor was created using a dark resin texture, generated to tile seamlessly, allowing it to be easily replicated and reused across the entire map.



Process

3D Assets

AI in 3D

Artificial intelligence is **rapidly transforming 3D modeling**, making **asset creation faster** and **more accessible** than ever before. The **current leaders** in AI-driven 3D generation are **Meshy AI**, **Tencent Hunyuan3D**, **3D AI Studio, Tripo AI**, and **Spline**, each offering **unique strengths** that make them stand out in the rapidly evolving landscape of 3D asset creation.

Meshy AI has established itself as one of the most versatile solutions for **text-to-3D** and **image-to-3D generation**. Known for its speed and ease of use, it allows creators to **generate assets** in seconds, complete with **textures** and even **simple animations**. Its **broad asset library** and **community-shared models** make it especially valuable for rapid prototyping and game development.

Tencent Hunyuan3D, particularly in its latest iterations (2.0 and 2.5), pushes the boundaries of **quality in AI-generated 3D models**. Using a sophisticated **two-stage pipeline** and **advanced topology** handling, it delivers **highly detailed meshes** and **PBR textures** that **rival handcrafted assets**. This makes it a strong choice for professional workflows where precision and realism are key.

3D AI Studio focuses on **integrating essential modeling steps** into a single streamlined tool. Beyond generating meshes from text or images, it **automatically applies UV mapping** and **provides animation previews**, **reducing** the need for **post-processing**. This makes it ideal for designers and studios looking to accelerate their pipeline without sacrificing flexibility.

Tripo AI specializes in quickly transforming **images** or **text** prompts into **clean base meshes**. While it doesn't aim for the same final-quality polish as Hunyuan3D, its strength lies in **producing solid**, **editable foundations** that **artists can** easily **refine**. This is particularly useful in **concept development** and early design stages.

Finally, **Spline AI** bridges the gap **between 3D generation** and **web-based design**. It allows users to create **interactive 3D elements** directly **from prompts** and seamlessly **export** them for **websites and UI** applications. Its **simplicity** and **browser-based** accessibility make it especially appealing to designers who want to incorporate 3D visuals without complex software setups.

Meshy AI

Meshy AI, launched in 2023, is a browser-based AI platform that enables users to **generate 3D assets** from **text prompts** or **reference images**.

One of Meshy AI's key strengths is its **rapid concept generation**. Meshy AI is also designed for seamless **integration into existing pipelines**.

It **provides** official **plugins** for popular **3D tools like Blender** and **Unity**, and supports multiple **export** formats such as **.glb, .fbx, and .obj**, ensuring flexibility across different workflows.

Meshy AI offers a free or discounted **Education Program** for students and educators.

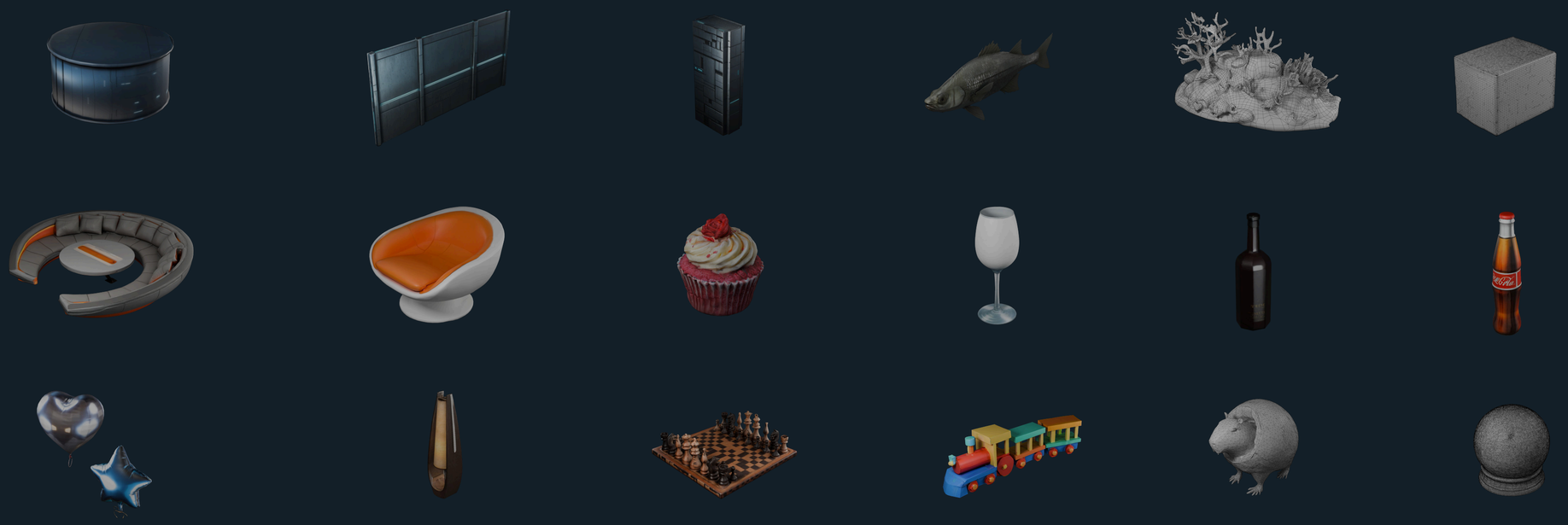
Over time, Meshy AI has seen **major improvements**.

The first version introduced core text- and image-based 3D generation. **Meshy-2 improved speed** and added basic texturing, while **Meshy-3 refined mesh outputs** and introduced early remeshing support.

With **Meshy-4** (2024), the platform took a big leap, offering **cleaner geometry**, **sharper details**, and a structured text-to-3D workflow with **separate modeling** and **texturing** stages, plus a Retry feature.

The **Meshy-5** Preview (April 2025) advanced further with **sharper geometry**, **multi-view input**, a smart AI Prompt Helper, and **500+ new animation presets**.

You can find out more about Meshy AI's development progress on their YouTube channel.



Asset Library

Meshy AI offers an extensive and diverse **asset library** made up of 3D models generated by other users.
All of these assets are **freely available** to download and can be used in projects **without restrictions**.

For our project, we aimed to make the most of this resource by **incorporating** as **many** of these **community-created assets** as possible.

Here, you can **see a selection** of the assets we chose to work with, **showcasing** the **variety** and **quality** available within the Meshy AI library.

You can explore Meshy AI's Asset Library yourself here.

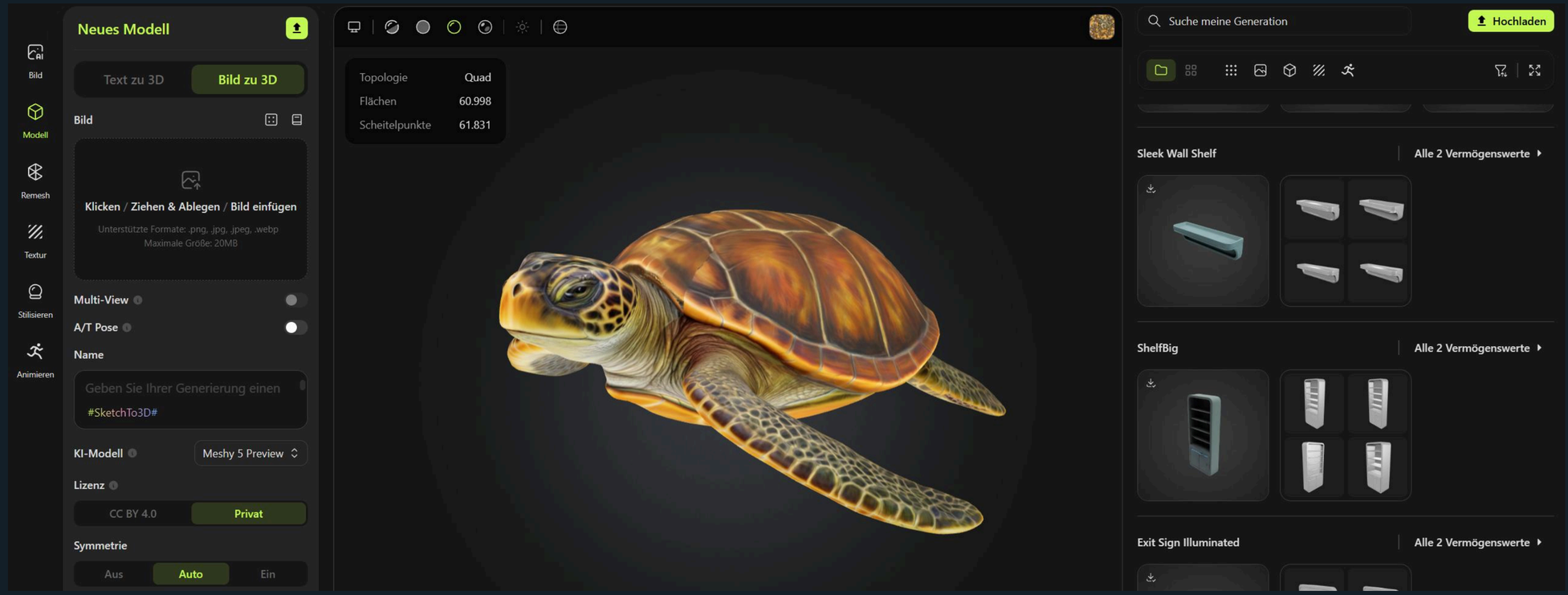
Self-generated

While **assets from** the asset **library cannot be modified** or customized, **generating** your **own model** offers more flexibility.

You can **adjust various aspects** such as **polygon density**, choose between **quads** or **triangles**, perform rough **remeshing**, **retexture** models, and adapt the overall **style**.

Meshy AI rapidly generates **four initial** concept **models** based on your input.

You can then **select one** of these options to be **further refined**, **detailed**, **textured**, and delivered as a fully **polished 3D asset**.



Self-generated

Anything we couldn’t find in the existing library, we generated ourselves.

For **assets** that **needed** to match a **specific style**—such as **walls**, **windows**, or other **architectural elements**—we used **ChatGPT** to **create concept art**, which then served as **reference images** for Meshy AI.

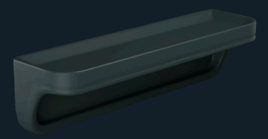
Self-generated

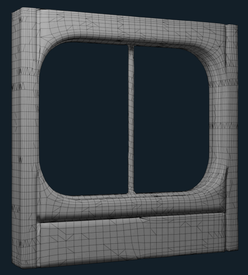
We used the generated **concept art** as a foundation and moved into MeshyAI to produce the 3D meshes. MeshyAI **successfully translated** most of our **visual ideas** into 3D objects that closely **matched** our **vision**.

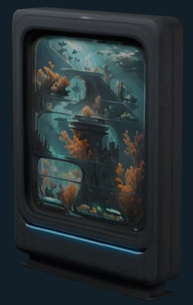
However, we encountered **several issues** during the export process, particularly with **texturing**.

Some models, such as the bar, shelves and lamp, were exported with only **one flat base colour** instead of the fully detailed textures we had originally designed. Additionally, certain meshes lacked **structural consistency**, for example, the door.



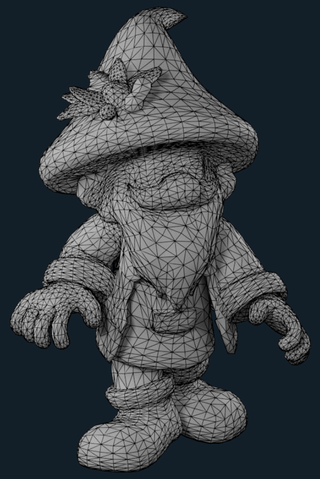







Self-generated

We also experimented with object animation. The original idea was to have **fish gently swimming around** the facility to bring the environment to life. However, MeshyAI currently only supports animating **humanoid models** in a T- or A-pose. To test this feature, we used a garden gnome as a placeholder.
The animation and rigging process itself was **surprisingly** quick and **straightforward**, and the results were **easy to import** into different software (e.g., Blender). However, the animations weren't flawless—we observed **unnatural joint movements**, **overlapping** meshes, and visible mesh **distortions**. These issues became particularly noticeable during larger motion s, highlighting the current limitations of MeshyAI's automated rigging and animation pipeline.

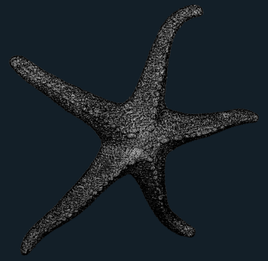


Current Issues

Topology

The models are **overly dense**, using far **more polygons** than necessary—often with irregular and **uneven distribution**. **Instead of** using clean **quads**, the geometry relies on **triangles**, which disrupts edge flow and causes problems in deformation during animation.

In **real-time engines** like Unity or Unreal, the excessive geometry also increases rendering costs and can lead to **performance drops**.



Textures

Textures are often **blurred** or **low** in **detail** due to limited resolution and lack of physically based rendering logic. **Materials** such as **glass** may lack **transparency** and **appear solid** because the texture generation does not simulate light transmission or refraction.

Highlights and reflections are sometimes baked into the texture rather than dynamically rendered, which can cause **inconsistencies** when **lighting changes** in the scene.

Current Issues

UV Maps

The UV maps often contain **overlapping islands**, inconsistent scaling, and **irregular seam placement**.

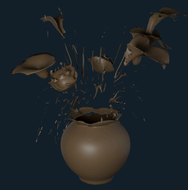
These issues result from the AI's **lack of** structured **unwrapping logic** or **awareness** of **surface flow**.

Misaligned UVs can lead to texture **stretching**, **distortion**, and **artifacts**, especially on curved or complex surfaces. This affects how textures and shaders are projected and can lead to **errors during export**, which are often difficult and **time-consuming** to **manually correct**.

Structual & Semantic Errors

AI-generated 3D models often **lack true object logic**, relying on pattern recognition rather than understanding structure and function. This leads to issues like **incorrect anatomy**, **floating parts**, **broken symmetry**, and non-functional designs.

These flaws frequently cause **further problems** during **rigging** and **animation**.
As a result, the errors **reduce realism** and **usability**, **requiring manual cleanup**.



AI-generated assets might look impressive at first glance but reveal critical flaws in structure, visuals, and usability.

Process

Sound

ElevenLabs

To help players understand the **storyline**, **information** is **delivered** primarily **through sound**—**both** from the **surrounding environment** and during **interactions**.

The **narrative segments** were **created** with **ChatGPT** and **brought to life** using **ElevenLabs** for **voiceovers**. Complementary **sound effects** were also crafted to enhance **immersion** and deepen the storytelling experience.

Using **Unity's position-based audio**, we added **subtle water sounds** and **faint** elevator-like **background music** to strengthen the feeling of being inside an underwater facility while supporting the overall **dystopian atmosphere**.

Narrative Examples

Station Map

A laminated map of the AROS facility. Entry Hall, Glass tunnel and the Common-room, labs… places that now feel more like tombs. Someone scratched
a path through with a red marker. A route - or maybe a warning?

Aros Poster

“Explore. Connect. Transform.”
This wasn’t humanity’s future — it was a controlled descent into madness.

Family Picture

Half a photo, left on the bar. A man and a child.
Empty bottles surround it like ghosts. Someone drank to remember—or to forget?

Child’s Toy

A snow globe, toy train and a fox.
Someone must’ve brought it from the surface.
A reminder that children once belonged in this story.
They don’t anymore.

Torn Poster

Another poster lies discarded on the floor. “From Crisis to Oasis.” Once full of promises, now just fragments.
Whoever tore it down… didn’t believe in it.

Chess Board

Black and white pieces mid-game.
The last move was a sacrifice. No winner.
Just silence.

Diary

2042-03-06
It’s kind of beautiful here, actually. There was even a family in the next wing — their kid painted on the glass.
I waved. She laughed. It felt… good. Normal.

2042-03-20
They’re gone. Extraction, they said. No explanation.
Just silence. I didn’t ask why I was left behind. I should’ve.

2042-04-05
I talk to myself now. Just to hear a voice. Sometimes I answer without realizing. I barely notice the water anymore. Sometimes I forget it’s even there.

2042-04-26
AI protocol says: no anomalies. But the logs show me awake… when I’m asleep. And someone keeps moving the chess pieces. Not sure what’s real anymore.

2042-05-12
I… I think someone is here. I hear footsteps. At night.
But when I check… there’s nothing there.

Outlook

Outlook

Based on our research and hands-on work with this project, we see **AI** as a driving force that will continue **reshaping** the **3D industry** in the near future.

We've already **experienced firsthand** the **improvements AI has brought** and therefore expect these advancements to **keep accelerating** - particularly in areas like texture quality, topology optimization, and animation techniques.

As **workflows** become increasingly **efficient**, allowing for **faster asset** and **environment development**, many of the **simpler tasks** traditionally **suited for beginner 3D artists** may **soon** be **handled entirely by AI**.

This could raise the entry **barrier for newcomers** and **potentially** lead to a gradual **loss** of **foundational**, **hands-on knowledge** within the field.

All the more reason why it's **crucial** to stay in touch with **evolving 3D design** and **AI developments** and to **adapt skills** accordingly. While some **positions may be replaced or transformed**, **new opportunities** will also emerge for those capable of bridging traditional artistry with **advanced AI-driven workflows**.

VR Experience

Click here to watch the

Trailer

Luka Sandvoss, Jacqueline Lehmann, Elisabeth Schenk

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Walkthrough

Luka Sandvoss, Jacqueline Lehmann, Elisabeth Schenk

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