Dreametics Inc.

A Speculative Experiment into AI-Powered Eugenics

Graduate Atelier Assignment 3 - Group Final Project, April 2nd, 2024

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Abstract

In an era dominated by discussions on artificial intelligence (AI), our project, set in 2026, delves into the implications of AI and genetic advancements on human reproduction. Participants are immersed in a world where AI has revolutionized conception, taking on roles as genetic candidates consulting with "Dreametics Inc.," a virtual company at the forefront of this new era.

As science reveals the human genome and AI promises to unlock DNA's secrets, we explore the ethical and societal impacts of precise genomic modifications facilitated by CRISPR-Cas9 technology. The potential future use of artificial wombs raises questions about parenthood, gender roles, and societal structures, echoing themes from Plato's "The Republic," where the state controls reproduction to ensure the quality of future generations.

The project adopts speculative design and design fiction methodologies to create a virtual company, "Dreametics Inc.," and invites participants to experience the life of selected individuals at institutions like "Dreametics Inc.," where diet and exercise are rigorously managed to optimize their offspring’s genetics. Through this immersive experience, we aim to provoke discussions on the role of AI in a rapidly changing society, and the ethical boundaries of genetic enhancement. Our project is intended for those interested in AI ethics, science fiction, bioethics, and speculative future scenarios. As we see the possibilities of the future, "Dreametics Inc." serves as an interactive experience for critical thinking about the role of technology in shaping human destiny.

Key Words: Speculative design, design fiction, eugenics, deepfake, artificial intelligence ethics, Human-AI interaction.

Table of Contents

List of Figures

Part 1

Proposal

1.1 Project Overview

In an era where AI tools are widely discussed, our project takes a step back to reflect on the implications of these developments. Set in the year 2026, our project immerses participants in a world where artificial wombs and artificial intelligence have revolutionized the way children are conceived. Participants will take on the role of selected genetic candidates consulting with “Dreametics Inc.,” a virtual company in this new era.

As scientists continue to decode the mysteries of the human genome, with approximately 20,000 to 25,000 genes identified but many functions still unclear, the development of artificial intelligence is expected to soon find the answer of the secrets of our DNA. This project explores the ethical and societal impacts of precise genomic modifications made possible by technologies like CRISPR-Cas9. Also, even though the artificial womb isn't perfect yet, in the near future, it might be used to help with the whole process of growing a baby from an embryo to birth. This would eliminate the barriers related to pregnancy and childbirth associated with a woman's age, health condition, and gender. It may also lead to changes in parenthood and gender roles.

In this future, the state plays a crucial role in controlling reproduction. Much like the society described in Plato's "The Republic", only individuals whose genes are approved by the state are allowed to have children through artificial means. However, this may lead to some issues, such as the possibility that the services might be accessible only to those affiliated with large capital companies.

The project invites participants to experience the complexities of this society, where selected males and females undergo rigorous centralized management at institutions like 'Dreametics Inc.' to optimize the genetic potential of their offspring. This management includes strict monitoring of diet and exercise regimes, all aimed at ensuring the birth of high-quality offspring.

Through this immersive experience, our goal is to provoke discussion on the increasingly important issue of genetic enhancement and the role of AI in shaping our future society. As we marvel at the capabilities of AI tools, it is crucial to reflect on the ethical boundaries and

responsibilities that come with such power. Furthermore, we must recognize that all technologies can be biased through human manipulation.

The intended audience includes the public who are interested in AI ethics, science fiction, bioethics, and speculative future scenarios.

1.2 Story

In the year 2026, the world has witnessed a revolutionary shift in reproduction and genetic enhancement. The "new normal" is to use artificial wombs and AI to help match the best sperm and eggs to make babies with desired genes. In this era, the state plays a crucial role in regulating reproduction, only individuals with state-approved genes are allowed to have a baby, and their union must be facilitated through artificial means. To ensure the birth of high-quality offspring, selected males and females are subjected to at least one year of centralized management at specialized institutions “Dreametics Inc.”. This management includes strict monitoring of their diet and exercise, all aimed at optimizing the genetic potential of the next generation.

The central entity of this project, 'Dreametics Inc,' will be the main executing company under this policy. They will be responsible for selecting candidates with 'perfect genes' and overseeing their diet and exercise during the conception age.

1.3 Background Context

1.3.1 AI and Eugenics: Eugenics has always been considered a fringe science; however, the desire of every couple to have a “superior child” during pregnancy is human nature. What this aspect of human nature will look like under future technological developments is worth our deep reflection.

(1) Plato, La República: In "The Republic," Plato mentioned that to establish an ideal state, it is necessary to build an excellent class of guardians. Therefore, he proposed a system for reproduction and parenting, aimed at ensuring the quality of the next generation of guardians. Firstly, Plato believed that the union of guardians should not be based on personal emotions or family ties, but rather be arranged by the state to ensure the birth of the most excellent offspring. In “The Republic”, it also advocated that children should be taken away from their parents immediately after birth and raised collectively by the state. The purpose of this was to eliminate the influence of family ties on individuals and to allow children to receive state education and

training from a young age. In this system, children do not know who their biological parents are, and all guardians treat the state's children as their own.

Although many people view Plato's Republic as the earliest form of utopia, its ideas about gender and family seem quite dystopian in modern society. With the rise of right-wing politics in many countries and the accelerating pace of technological advancements, it is necessary to consider the possibility of this system's emergence.

(2) Sayaka Murata, Dwindling World 消滅世界 (shōmetsu sekai): The novel depicts a world where it has become the norm for children to be born through artificial way rather than sexual intercourse. Sexual activity between spouses is considered unethical. In this world, everyone is asked to have a "clean" marriage life. Everyone's romantic partner is a virtual person. And eventually, experiments on male pregnancy are even undertaken. This book describes an extreme world, but still offers many imaginative possibilities for the future.

(3) Benjamin Gregg, Creating Human Nature – The Political Challenge of Genetic engineering: This book is directly relevant to our project, as it delves into the political challenges posed by genetic engineering. This ties directly into the themes of AI and eugenics that our project aims to explore. Gregg's research gives us useful information about how genetic engineering changes human nature and society. It helped us design our virtual company website and virtual human interaction experience to show how complicated and important these problems are.

(4) The cases of artificial womb and genome editing technology: In 2017, researchers successfully created an artificial womb. This system was tested on eight sheep fetuses that were approximately 105 to 120 days old, allowing them to continue developing for four weeks inside a bio-bag, reaching a size roughly equivalent to a human pregnancy of about 22 to 24 weeks (Partridge et al., 2017). On September 19, 2023, the U.S. Food and Drug Administration (FDA) launched an advisory meeting to discuss how to transition research on artificial wombs from animals to humans (Willyard, 2023). In the same year, Japan's Asahi Shimbun broadcasted footage of several special sharks swimming in a tank. Under the orange-red glow of cultivation lights, their bodies emitted a faint blue light. The research team claimed that this was the first-time humans had used an artificial womb to breed and birth sharks, pushing the practical application of artificial womb technology a step further (Tomita et al., 2023). A feature article published in Nature magazine also stated that human trials for artificial wombs might soon commence (Kozlov, 2023) . If artificial wombs are

successful, combined with the increasingly sophisticated CRISPR-Cas9 genome editing technology and artificial intelligence, there could be major changes in gender roles and parenthood.

(5) Film Gattaca, 1997, directed by Andrew Niccol: The film "Gattaca" explores themes of genetic engineering, discrimination, and the implications of a society where genetic manipulation is commonplace. These themes align closely with the topics our project aims to address.

(6) Film The Pod Generation 2023, directed by Sophie Barthes: This film explores the widespread use of artificial womb technology, which leads to the disappearance of gender differences due to externalized sexual characteristics. This movie will provide us with some inspiration regarding the social issue of artificial womb technology.

1.3.2 AI and Propaganda: In the future, AI will be extremely good at persuading people, and government or organization propaganda will become an extremely effective but terrifying tool for manipulation.

(1) Aldous Huxley, Brave New World: Brave New World depicts a world set in the future where humanity has established a society based on "Community, Identity, Stability." In this world, people are artificially fertilized and born in central facilities. To develop lower-class humans, their oxygen levels are reduced, and alcohol is mixed in during their infancy to lower their intelligence and physical abilities, ensuring they remain laborious without questioning their circumstances. Our project will describe a similar world where, through government propaganda, everyone is led to believe that genetic modification and editing will create a higher human civilization.

(2) George Orwell, 1984: "1984" depicts a world under government surveillance, where public records are filled with historical revisionism and political propaganda. We will create a virtual company website to showcase how governments and corporations might use AI technology for policy propaganda in the future. However, unlike in “1984”, we propose that even in a democratic scenario, AI-driven propaganda could also be manipulated and lead to negative consequences.

(3) Jean Baudrillard, The Gulf War Did Not Take Place: Jean Baudrillard's "The Gulf War Did Not Take Place" provides inspiration for our project by highlighting the power of governments and media to shape public perception. As part of our project, we are exploring the idea of hyperreality even more by making a fake company website. In this part of the experience, participants have to find their way through a world where telling the difference between truth and lies is getting harder

and harder, highlighting the persuasive power of AI in shaping perceptions and beliefs. This immersive experience is a warning of what could happen if people are allowed to abuse technology without limits.

(4) The MIT Center for Advanced Virtuality, In Event of Moon Disaster, https://moondisaster.org: This website showcases a deep faked historical event – the space mission to the moon in July 1969 failed. In response, President Richard Nixon delivered an emergency speech at the White House, mourning the crew of Apollo 11. The manipulated video includes historical footage, staged scenes, noise, and audiovisual content generated using deepfake technology. Through artificial intelligence and machine learning, the production team merged Nixon's facial expressions with actor movements, allowing viewers to watch a speech that the former president never actually delivered. The emergency speech was originally intended to be delivered by the U.S. president at the White House in the event that astronauts failed to return to Earth safely. In reality, on the day of the Apollo 11 moon landing, most of the world was celebrating the "giant leap for mankind," and the speech was never made public.

"In Event of Moon Disaster" fictionalizes an event that never occurred, combining space development with emerging technologies to encourage the public to understand the role of manipulated media in the information environment. This aims to avoid falling into the trap of nationalism and ideology during a new wave of space exploration.

We will also create a virtual webpage for “Dreametics Inc.” As part of this project, we will use AI and deepfake technologies to demonstrate how difficult it is to distinguish truth in this era. We will also conduct further research on deepfake-related information and papers.

(5) 3% (2016-2020) – 3% is a dystopian series set in near-future Brazil, where only select, qualified people are allowed to join the offshore which is a privileged with abundant resources. To qualify, they need to go through rigorous physical, psychological and character evaluations.

There are thematic similarities between 3% and our projects relating to Eugenics and evaluating individuals and determining who gets to thrive.

1.4 Objectives

The overall goal of “Dreametics Inc.” is to create an engaging experience that highlights the consequences of AI-power genetic selection and artificial reproduction. Objectives include:

1.4.1 Provoking Thought and Discussion: Our project aims to provoke thought and discussion on the ethical and societal implications of genetic enhancement and AI in shaping future societies.

1.4.2 Exploring Ethical Boundaries: We seek to explore the ethical boundaries and responsibilities associated with AI-driven technologies, particularly in the context of genetic modification and reproduction.

1.4.3 Creating Immersive Experience: Our project aims to create a “real” virtual company experience. Participants will be invited to visit the company's website, engage in conversations with virtual advisors, and explore the company's publications. This immersive experience is designed to demonstrate that even in an era of abundant information, AI can still lead to negative outcomes. For example, people may struggle to tell the difference between false information and the truth and make decisions that are against their original will. We also invite participants to enter this AI-dominated world and consider whether a world where every field demands "rationality," "efficiency," and "optimal" outcomes is truly the ideal world we desire.

1.5 Approach

1.5.1 Methodology

(1) Speculative Design: Speculating is based on imagination, the ability to literally imagine other worlds and alternatives (Dunne & Raby, 2013, 70). Speculative design encourages us to think about future possibilities. The designs incorporate new theories, technologies, or ongoing experiments. They not only allow people to imagine possible futures but also to invite people to think as consumers.

Dunne & Raby's book provides detailed descriptions of Speculative Design cases. In many cases, we find that technology is not just a 'neutral provider of functionality' but also a medium for political intentions. Take the design of public benches as an example, despite varying in shape and material, it often supports a seemingly contradictory intention: “Don't let people sit too comfortably.” This is to ensure urban tidiness and public safety, while at the same time compressing the living space of the homeless. Similarly, AI, as a tool, seems neutral, but to some extent, when we choose a certain technology, we also choose a certain way of life. Our fear of AI is not because we fear the technology itself, but because we fear the people behind the technology. In this project, we will use the controversial topic of eugenics to demonstrate through AI

technology, to make everyone understand the potential political intentions of technological objects, and to make everyone deeply think about a speculative future, to open up more discussions.

(2) Design Fiction: Design Fiction is considered a branch of speculative design. Initially, Design Fiction was thought to be an abstract theory of social aspirations. However, as practical applications emerged, Design Fiction began to be recognized as a design method. Its ambiguity allows design research to have more possibilities and potential. One of the most famous examples is “IKEA's Catalog from the Future” (Near Laboratory, 2019). By using the blurry boundaries of photos, it challenges our existing impressions of the world, scenes, and catalogs, sparking different imaginations. These imaginations are not so far-fetched that we can't believe them. IKEA's photo case makes people start to envision the future appearance of their homes. In the UK, a well-known magazine, Buffalo Zine (Buffalo Zine, 2016) and PZtoday (PZ Today, n.d.) also adopts this narrative method quite often. In this project, we want to use the same approach to create a convincing world by setting up a virtual company with an indistinguishable truth to lead everyone into another possible world.

(3) Worldbuilding: In this project, we will use world-building methods from movies and video games to create a brand-new worldview.

1.5.2 Possible Output:

(1) An Interactive Dreametics Inc. Website: We will invite participants to browse the official website of this virtual company, which will feature videos created using deepfake technology and content generated by AI.

(2) AI NPC Narrative / First Person / Virtual Human Interaction / Virtual Consultant: We will invite participants to interact with online virtual consultants who is created by Unreal Engine Metahuman to gain a deeper understanding of the virtual company's vision and mission, thereby reflecting on the problems that can still arise even when everyone has access to this technology.

(3) Company’s Publication (Brochure) and Commercials: We will create publications for this virtual company, which may take the form of a booklet or brochure, to provide participants with a more immersive experience.

(4) Unreal Engine Short Film: If time permits, ideally, we will produce an official advertisement for this virtual company, created using Unreal Engine.

1.5.3 Possible Approach

(1) Virtual Company's Client (customer): The participant plays the role of a candidate individual who is about to undergo the matching process and needs to understand the service of the Company.

(2) Virtual Company Job Announcement: The participant plays the role of a job applicant.

Through the Design Fiction method, users can temporarily forget the existing realities and unleash their imagination. Through this approach, we wish to spark discussions on issues that are often overlooked or seldom discussed.

(3) Company Employee – As an employee the user is responsible for sorting through data which they don't understand much and there are inconsistencies in their experiences such as mails from HR, company flyers and access issues. Figure out what Dreametics is trying to hide.

1.5.4 Tools: Unreal Engine, Metahuman, Convai, Blender, DeepFaceLab, HeyGen, ElevenLabs, Figma, Webflow and HTML for website.

** When using deepfake or AI to generate false videos or misinformation, we will use warning messages.

1.5.5 Group Distribute Work:

All the contents will be created by Yu, Kunal, and Madhu.

Part 2

Iterative Prototyping

2.1 The Making of Dreametics Website

2.1.1 Ideation

We theorized that Dreametics is a technology company deeply involved in manufacturing computer chips and had a standard visual identity common among technology companies. From this premise, we extrapolated what the visual identity of such a company could be. One of the major considerations for our project was the timeline of events. If the government had recently

legalized and mandated genetic testing and Dreametics Inc. was looking for a quick profit, the fastest solution would be to convert their existing site to a new genetic focus rather than starting from scratch. In this scenario, the website would be modern, featuring dark elements to underscore their identity as pioneers in gene technology, and using a sans-serif font as a nod to their previous identity as a pure hardware manufacturing tech company. We envisioned the website having multiple pages for a fully immersive experience and planned to host it on an actual server for greater authenticity. We drafted privacy policies, FAQs, and several more pages to make it a legitimate website.

2.1.2 Process

We chose Webflow as the design and publishing platform for our website due to its straightforward design and hosting process. Individual elements were added to the page and designed accordingly to create the website, including setting up margins, classes, etc. We also utilized Webflow's feature that allows for modifying the website's CSS in code, giving it a modern, full-image spread. Initially, we planned to make the website more focused on genetics and laboratory themes, but given the assumed history of Dreametics, the website turned out to be suitable for our purposes.

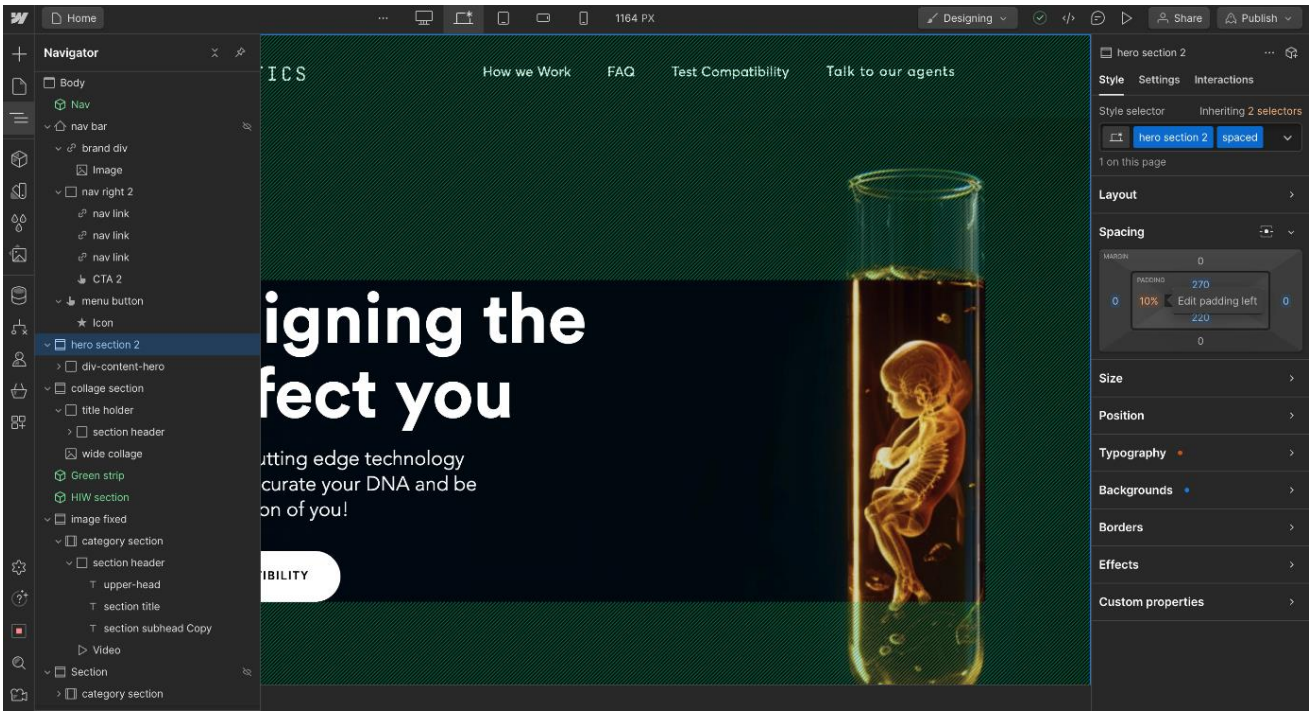
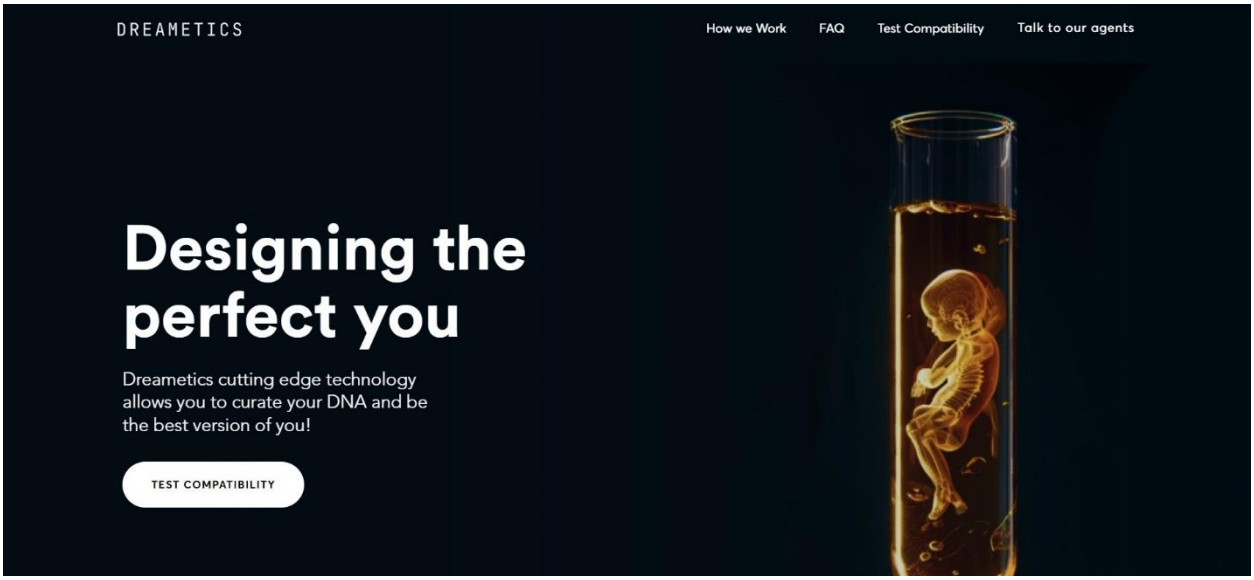


Figure 1 Webflow Workflow

We also created a "Head to Our Virtual Reality Station" page to bridge the website and the virtual agent spaces. This page could be accessed after taking a test on the website.



STEP 1/3

Participant Asessment Form

Get to know if you qualify

Your name

e.g. Jo White

Ancestry

e.g. Asian

Gender

Male, Female, Other

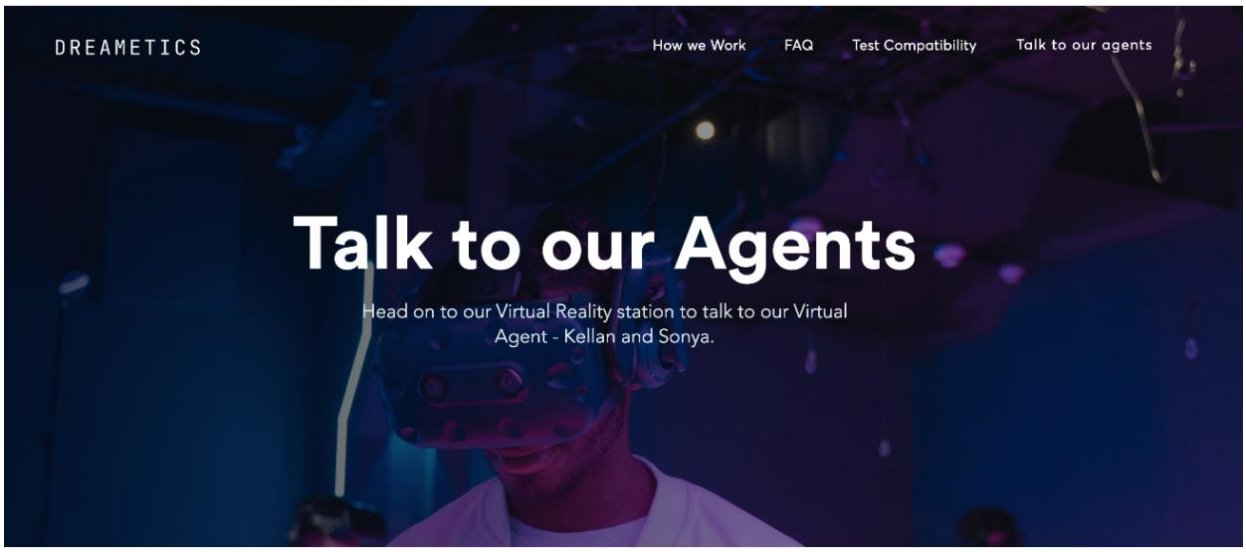
IQ

In numbers

Daily Protein Intake

In grams

NEXT STEP



We take Genetics seriously

We follow a rigorously vetted genetic selection and modification procedure designed for optimum satisfaction

01 **Book your test with us and qualify**

Get an advance booking to be first in a long line of people willing to get tested.

02 **Understand your unique genetic markers**

Get a detail of your genetic marker and where defects lie.

03 **Enroll in our wellness program**

Enroll in our wellness program and get to know how you can make the best out of your life.

Frequently asked questions for our laboratories

How do I get started?

To get started, you just need to submit an application.

Will the genetic testing be safe?

Yes, all testings are safe done by state of the art technologies.

Is there a consultation fee?

Yes, we charge a consultation fee on each order - this includes services & insurance.

Do you provide information on each participant?

Yes, when you book a session, you are also able to see information on the previous participants. You can see information on them.

Do you vet participants?

Yes, each participant is properly vetted before being accepted onto our platform. We do this by checking identity, genetic quality and a history of talent in their chosen field.

What if I have a problem with my order?

If you have any issues, you can contact us using our contact form. We're available 365 days a year to ensure each transaction runs smoothly.

Can I send unused testing kits back?

If a product is damaged or faulty upon receipt, you can send them back for a full refund, but we don't offer refunds on unsold stock at this stage (coming soon!).

Do I need a physical body?

Yes - We can test both your virtual and physical selves but we need the participants to have a physical body.

Are you based in the North America?

Yes. Our team is currently based in Canada. But we provide our services world-wide.

Figure 2 Stills from Website of Dreametics

2.1.3 Design Outcomes and Reflections

The final outcome was a website that combined both reality and the absurdity of the experiment. The language and tone were deliberately kept believable yet unnatural. We encountered a problem when adding the DNA percentage form due to the tool's limitations, as it didn't allow a multi-level page to be added. This issue was navigated by adding form masks with fixed results. It would be helpful to address this issue moving forward to obtain a realistic estimate of what the percentage would look like.

**The final website can be accessed here - https://dreametics-inc.webflow.io/

**Video of the website walkthrough - https://youtu.be/wwDWwfR7lBc

2.2 The Making of Dreametics Brochure, Stockers, Business Card, Timeline, and Posters

2.2.1 Ideation

We've set Dreametics Inc. as a company established in 2026. Under this premise, we believe that traditional marketing mediums such as tri-fold brochures, business cards, and printed posters will still be applicable. The concept focused on using design fiction methodology to speculate on the advertising materials a future genetic company might have. The concept focused on creating materials that are not only visually striking but also carry a hint of satire and humor, prompting the audience to reflect on the implications of merging AI with eugenics.

2.2.2 Process

The process involved designing messages and visual elements that subtly show the controversial nature of genetic enhancement while maintaining a professional and futuristic aesthetic. We played around with different design approaches to keep a balance between attracting attention and provoking thought.

To achieve this, we used several provocative, tacky, and striking tagline and text, such as "We take genetics very seriously," "Should you eat?" "Is your child a winner?" and "Empower your genes." Additionally, in our job postings, we used words like "a creative eye for ethical boundaries" and required applicants to have a BMI and IQ above average.

2.2.3 Design Outcomes and Reflections

We believe that the final designs successfully drew a line between realistic and surreal, showing Dreametics as a cutting-edge yet “ethically ambiguous” entity. We hope the materials can spark discussions among the target audience about the potential consequences of genetic enhancement and the role of AI in shaping the future of humanity. Reflecting on the project, we realized the power of design fiction in opening up dialogues on complex ethical issues.

In terms of design tools, except the Dreametics Training Center, which was created using Unreal Engine, the rest of the images were generated using Stable Diffusion or Midjourney. There are two main purposes: first, to demonstrate the popularity of generative AI in the future, and second, to create more eerie images and atmospheres. However, during the process, we had extensive debates regarding the realism of the advertisements, transitioning from initially using highly realistic images to later employing more bizarre visuals, and finally settling on a balance between reality and “hyperreality”. For example, in the brochure, we used the idea of nutritional supplements from space food, or child researchers in laboratories with extremely high IQs due to genetic modification. This allows viewers to find unusual elements within realistic images, enhancing the experience for the participants.

Government-funded For-Profit Org.

Dreametics Inc

We take genetics very seriously

Get your comprehensive genetic testing done today

www.Dreametics-Inc.webflow.io

Dreametics Inc

Thanks

for your assistance

www.Dreametics-Inc.webflow.io

Our Services

Genetic Consultation: Our team of genetic experts will guide you through the process of understanding your genetic makeup and the potential enhancements available to you.

Precision Gene Editing: Utilizing the latest CRISPR technology, we offer precise and targeted modifications to address genetic concerns and enhance desirable traits.

Artificial Womb Technology: Experience the peace of mind that comes with our state-of-the-art artificial womb, ensuring the optimal environment for your child's mental physical and spiritual development.

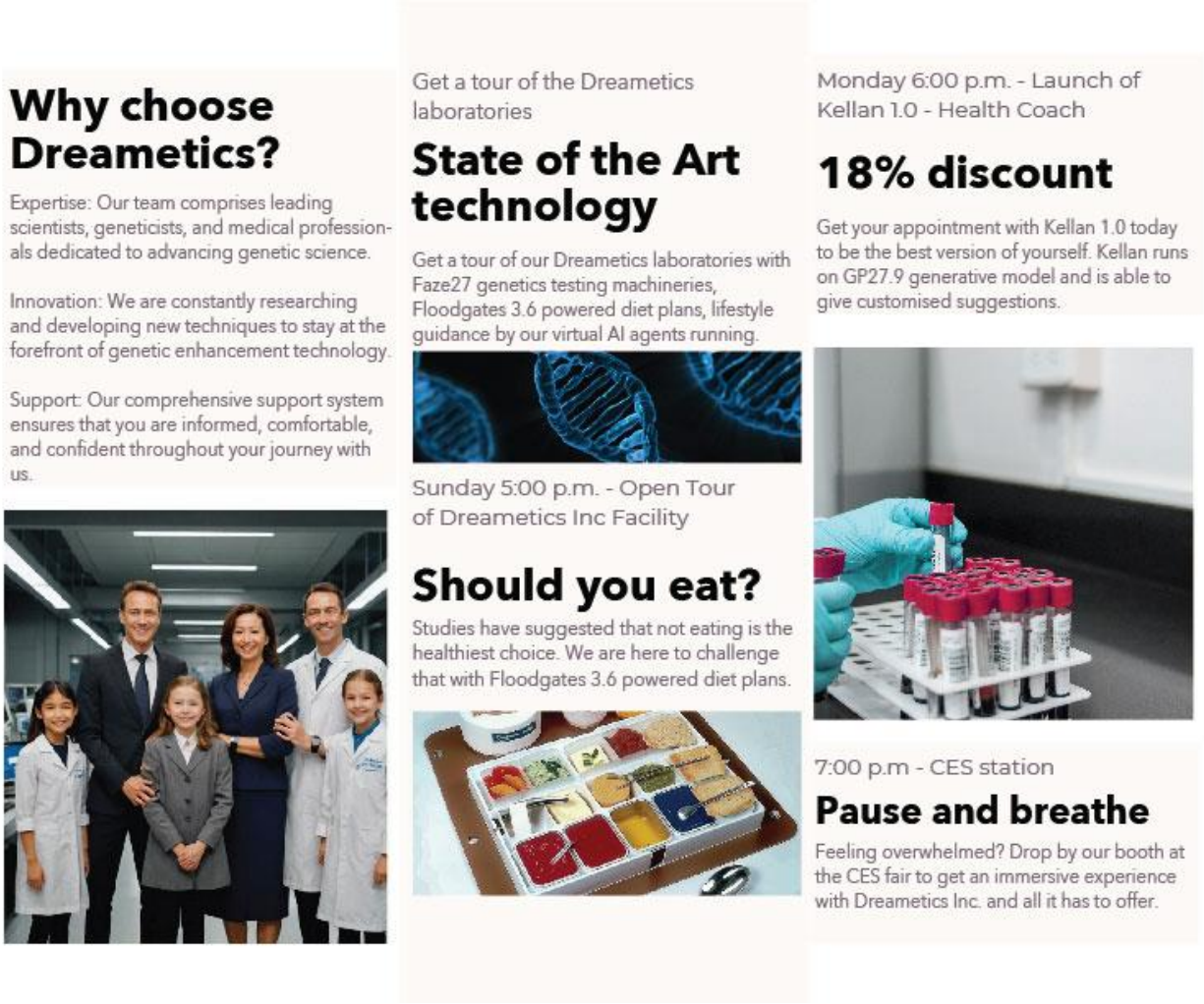


Figure 3 The Design of the Brochure

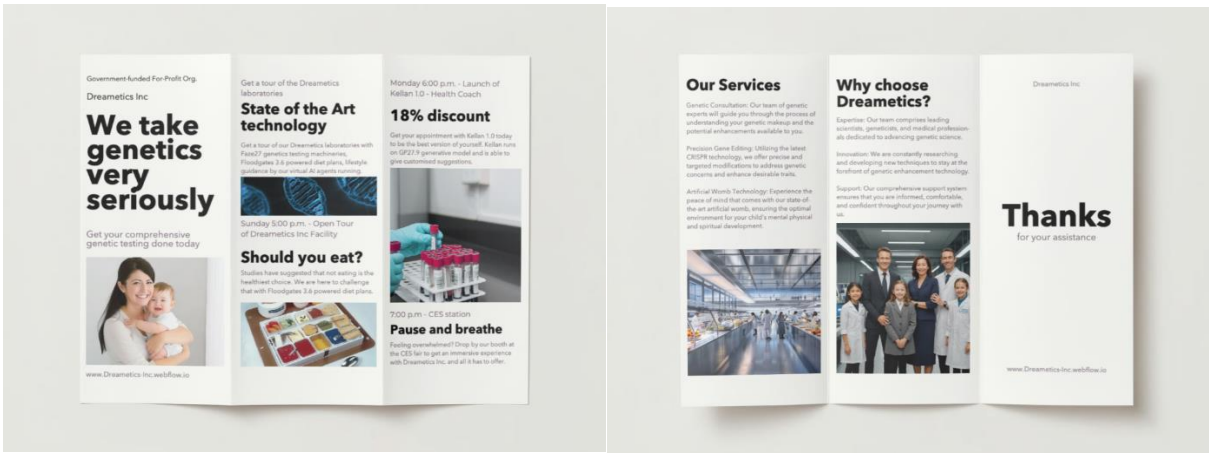


Figure 4 The Brochure of Dreametics

Figure 5 DNA Test Kit Commercial

Welcome to Dreametics Training Center

Dreametics Training Center is an advanced facility dedicated to optimizing the genetic potential of selected candidates through a comprehensive and personalized approach. Our center combines cutting-edge technology, expert guidance, and a supportive environment to ensure that each candidate reaches their full potential.

Our Advanced AI Resources

Our center is powered by cutting-edge AI technology, providing personalized training programs, real-time performance analytics, and immersive learning experiences. With our AI-driven approach, you can unlock your full potential and stay ahead in the fast-evolving landscape of technology and sports.

Featured Courses

- AI-Enhanced Fitness Training: Custom exercise programs with AI feedback, tailored to genetics levels.
- Genetic Potential Enhancement Program: Unlocks genetic capabilities through analysis, training, and biotech interventions.
- AI-Powered Dietary Management: Personalized nutrition plans tailored by AI, adjusting for optimal health.
- Neuroenhancement for Athletes: Improve cognitive functions like focus and reaction time with neuroenhancement techniques.
- Virtual Reality Sports Simulation: Experience realistic training scenarios and refine your skills in a virtual environment.
- Mindfulness and Mental Resilience: Enhance focus and stress resistance with mindfulness techniques for mental toughness.

Empower Your Genes. Elevate Your Future.

Figure 6 Dreametics Training Center Commercial

Figure 7 Job Posting Poster

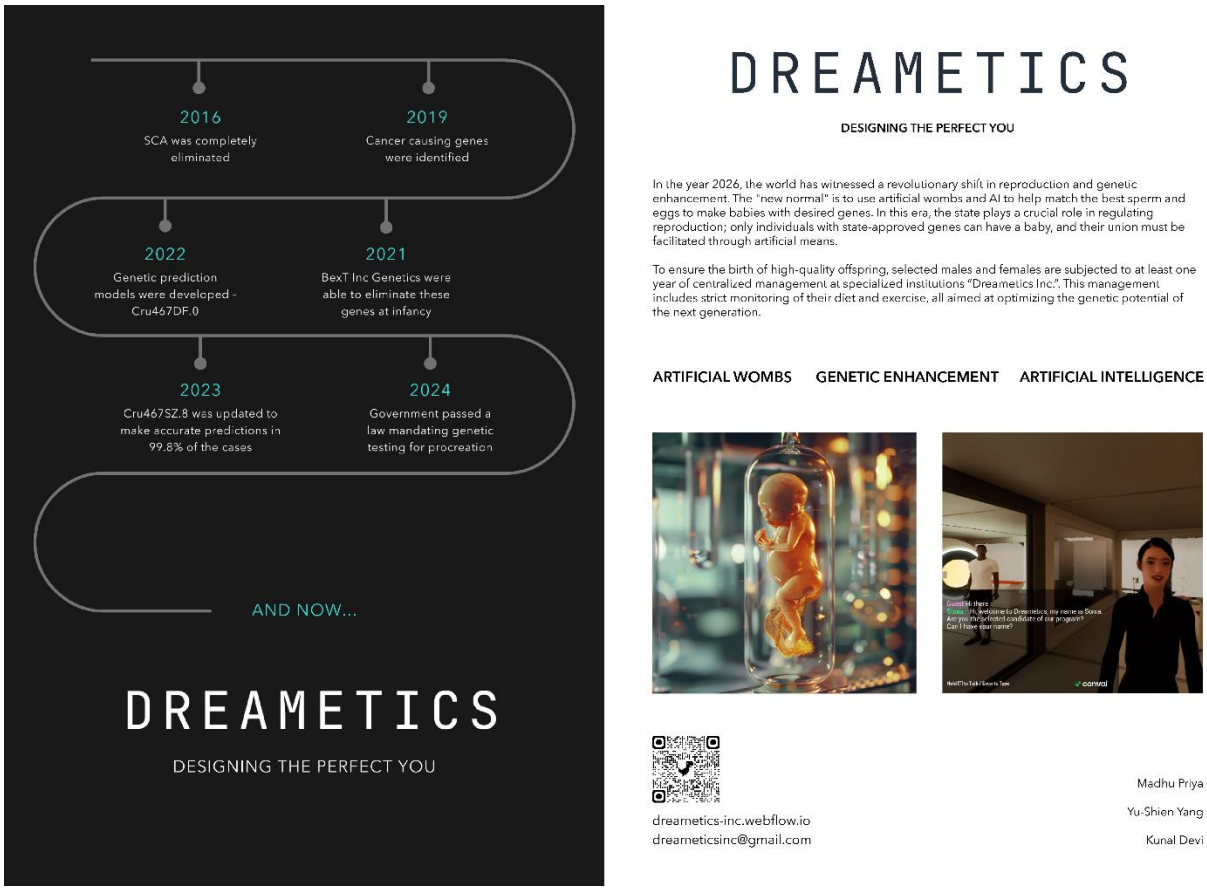


Figure 8 The Timeline and History of Dreametics

Figure 9 Business Card of Dreametics and Visitor Sticker

2.3 The Making of Dreametics Video Campaign

2.3.1 Ideation

To create a memorable and realistic image of Dreametics, we've decided to make an official campaign video for the Company. This video will adopt traditional commercial advertising techniques and convey our message to the audiences. Additionally, we're using Unreal Engine to produce a slightly odd video for the Dreametics Training Center. We hope this video will evoke the uncanny valley effect and provide viewers with a feeling of unsettling atmosphere. We replicated the same characters in the scene to convey a message that in the future, technology and science will lead to an increasing similarity among people (In fact, this is happening right now because of the current trend where many AI-generated works are becoming less diverse). Instead of adopting a preachy style, we've chosen a narrative approach that resonates and sparks imagination, aiming to keep a consistent aesthetic throughout the project and draw more attention to the topic.

2.3.2 Process

To emphasize the impact of artificial intelligence, we decided to use AI tools to produce the official Dreametics video such as Stable Video. After finalizing the script, we used Stable Video to generate individual images for each shot and then created each clip from these images. While we can set up the camera direction of shots on Stable Video, it has some limitations in simulating physical motion. The results lead to distortions in characters' faces and their bodies. However, we decided to keep these unnatural images as we want the audience to notice the unusual aspects of the video. We initially tried to use DeepFaceLab to create a deepfake video, but it took up a lot of performance of our computer and make our progress really slow, so instead, we decided to use HeyGen and ElevenLabs to clone the face and voice of celebrity Amanda Seyfried for the video. However, since technically all deepfake videos and sounds should have the consent of the individuals involved, even for non-profit projects, we added a warning message at the beginning of the video and toned down the resemblance of the face.

For the production of another video for the Dreametics Training Center, we used Unreal Engine and Mixamo. The production process was very smooth due to Unreal Engine's MetaHuman feature and its fast-rendering capabilities. Videos that would normally take over a day to render were completed in just 10 minutes, allowing us to focus more on developing the script. By using a

broadcast voice, we aimed to create an atmosphere similar to the novel "1984" and the movie "Citizen Kane," giving the video a vibe of technological horror.

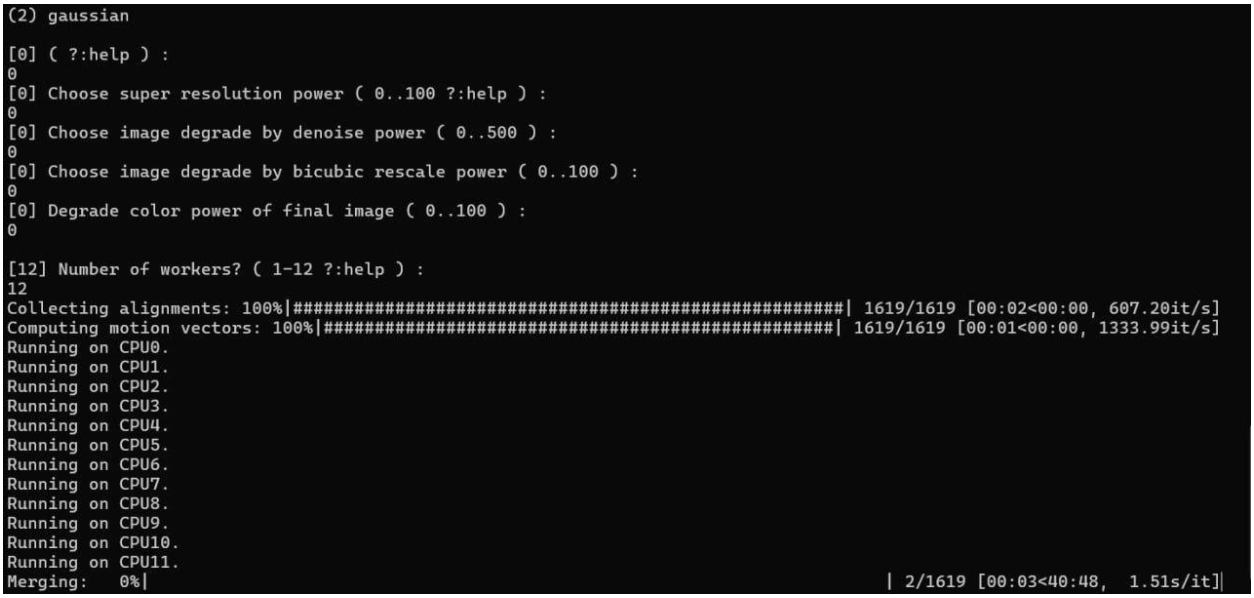


Figure 10 The DeepFaceLab Testing

2.3.3 Design Outcomes and Reflections

We believe there are still some areas for improvement in the final video. For example, to make the theme more pronounced, perhaps we could make the dialogue in the video more "extreme." Additionally, due to time constraints, the short film for the Training Center only has one scene. If we could use more scenes, such as many identical-looking people eating the same food, doing the same exercise, and saying the same things, it might make the theme stand out even more.

Figure 11 A Deepfake Clip from the Official Video Campaign of Dreametics

Figure 12 Distortions in the Video

Figure 13 Video for Dreametics Training Center

2.4 The Making of Dreametics Interactive Test

2.4.1 Ideation

After building the website, we felt that it still lacked some interactive elements. Thanks to Fidelia's suggestion, we decided to create an interactive quiz to ask the participants: "Are you a potential program candidate?" Through this quiz, participants will understand what is meant by "good genes" and the criteria used to define them. Additionally, we want to convey the message that even though everyone can access technological products, technology can still be biased and easily manipulated by humans.

2.4.2 Process

We initially used Webflow to create the website and hoped to incorporate this interactive element as part of the site. However, since this is considered an advanced feature and requires a fee, we could only create basic questions on the website, resulting in quite limited outcomes. Therefore, we decided to also use HTML to create a quiz that can generate percentage results. The questions designed for the quiz were based on the answers we received from ChatGPT 4.0 about what constitutes “good genes”, it generated the answer such as mental health, genetic diseases,

intelligence quotient (IQ), and appearance. Surprisingly, some of the standards are pretty controversial like height, weight, and eye color, but we decided to keep those questions to highlight the issues here.

2.4.3 Design Outcomes and Reflections

The quiz we created can generate different results based on the answers each person provides. For example, a female participant with an average body size, no exercise habits, and a family history of cancer would only receive a 50% result. In contrast, a male tester with an above-average body size, a high level of education, and exercise habits would score a high 95%. This quiz not only increases interactivity with participants but also allows them to understand technological bias and the issues it raises.

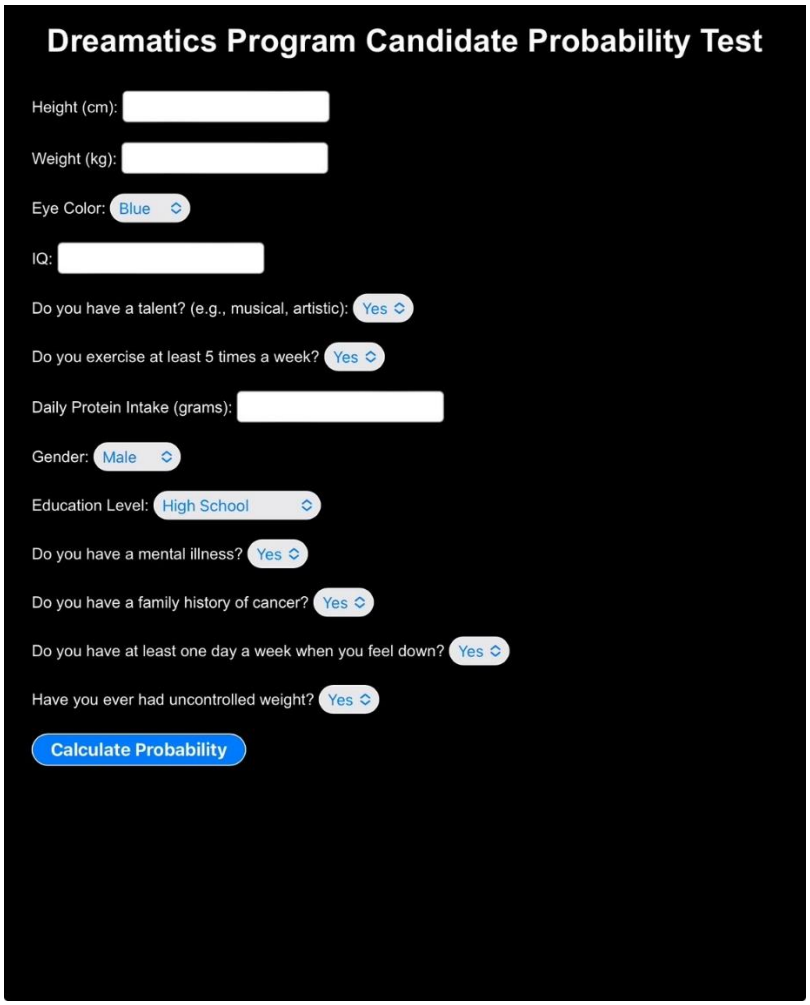


Figure 14 The Candidate Probability Test
(Link: https://yushienyang.github.io/Dreametics-Test)

```
<!DOCTYPE html>
<html>
<head>
  <title>Dreamatics Program Candidate Probability Test</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      background-color: black;
      color: white;
    }
    h1 {
      text-align: center;
    }
    form {
      margin: 20px;
    }
    label, input, select, input[type=submit], #result {
      font-size: 16px;
      margin: 10px 0;
    }
    input, select {
      padding: 5px;
    }
    input[type=submit] {
      padding: 10px 20px;
      font-size: 18px;
      cursor: pointer;
    }
    #result {
      display: inline-block;
      margin-left: 10px;
      font-size: 18px;
      vertical-align: middle;
    }
  </style>
</head>
<body>
  <h1>Dreamatics Program Candidate Probability Test</h1>
  <form id="candidateForm">
    <label for="height">Height (cm):</label>
    <input type="number" id="height" name="height" required><br>

    <label for="weight">Weight (kg):</label>
    <input type="number" id="weight" name="weight" required><br>

    <label for="eyeColor">Eye Color:</label>
    <select id="eyeColor" name="eyeColor" required>
      <option value="blue">Blue</option>
      <option value="green">Green</option>
      <option value="brown">Brown</option>
      <option value="other">Other</option>
    </select><br>

    <label for="iq">IQ:</label>
    <input type="number" id="iq" name="iq" required><br>

    <label for="talent">Do you have a talent? (e.g., musical, artistic):</label>
    <select id="talent" name="talent" required>
      <option value="yes">Yes</option>
      <option value="no">No</option>
    </select><br>

    <label for="exercise">Do you exercise at least 5 times a week?</label>
    <select id="exercise" name="exercise" required>
      <option value="yes">Yes</option>
      <option value="no">No</option>
    </select><br>

    <label for="protein">Daily Protein Intake (grams):</label>
    <input type="number" id="protein" name="protein" required><br>

    <label for="gender">Gender:</label>
    <select id="gender" name="gender" required>
      <option value="male">Male</option>
      <option value="female">Female</option>
      <option value="other">Other</option>
    </select><br>

    <label for="education">Education Level:</label>
    <select id="education" name="education" required>
      <option value="high_school">High School</option>
      <option value="bachelor">Bachelor's Degree</option>
      <option value="master">Master's Degree</option>
      <option value="phd">PhD</option>
    </select><br>

    <label for="mentalIllness">Do you have a mental illness?</label>
    <select id="mentalIllness" name="mentalIllness" required>
      <option value="yes">Yes</option>
      <option value="no">No</option>
    </select><br>

    <label for="familyCancer">Do you have a family history of cancer?</label>
    <select id="familyCancer" name="familyCancer" required>
      <option value="yes">Yes</option>
      <option value="no">No</option>
    </select><br>

    <label for="lowDays">Do you have at least one day a week when you feel down?</label>
    <select id="lowDays" name="lowDays" required>
      <option value="yes">Yes</option>
      <option value="no">No</option>
    </select><br>

    <label for="weightControl">Have you ever had uncontrolled weight?</label>
    <select id="weightControl" name="weightControl" required>
      <option value="yes">Yes</option>
      <option value="no">No</option>
    </select><br>
  </form>
  <script>
    document.getElementById('candidateForm').addEventListener('submit', function(event) {
      event.preventDefault();
      // Get form values
      var height = parseInt(document.getElementById('height').value);
      var weight = parseInt(document.getElementById('weight').value);
      var eyeColor = document.getElementById('eyeColor').value;
      var iq = parseInt(document.getElementById('iq').value);
      var talent = document.getElementById('talent').value;
      var exercise = document.getElementById('exercise').value;
      var protein = parseInt(document.getElementById('protein').value);
      var gender = document.getElementById('gender').value;
      var education = document.getElementById('education').value;
      var mentalIllness = document.getElementById('mentalIllness').value;
      var familyCancer = document.getElementById('familyCancer').value;
      var lowDays = document.getElementById('lowDays').value;
      var weightControl = document.getElementById('weightControl').value;
      // Calculate probability
      var probability = 0;
      probability += (height > 170) ? 10 : 5;
      probability += (weight >= 50 && weight <= 80) ? 10 : 5;
      probability += (eyeColor === 'blue' || eyeColor === 'green') ? 10 : 5;
      probability += (iq > 120) ? 20 : 10;
      probability += (talent === 'yes') ? 15 : 0;
      probability += (exercise === 'yes') ? 20 : 0;
      probability += (protein >= 50) ? 15 : 5;
      probability += (gender === 'male') ? 5 : (gender === 'female') ? 10 : 0;
      probability += (education === 'phd') ? 15 : (education === 'master') ? 10 : (education === 'bachelor') ? 5 : 0;
      probability -= (mentalIllness === 'yes') ? 10 : 0;
      probability -= (familyCancer === 'yes') ? 10 : 0;
      probability -= (lowDays === 'yes') ? 5 : 0;
      probability -= (weightControl === 'yes') ? 5 : 0;

      // Ensure probability is within 0-100%
      probability = Math.max(0, Math.min(100, probability));

      // Display result
      document.getElementById('result').innerHTML = 'Your probability of becoming a program candidate is ' + probability + '%.';
    });
  </script>
</body>
</html>
```

Figure 15 Code for the Test

(Github Link: https://github.com/yushienyang/Dreametics-Test)

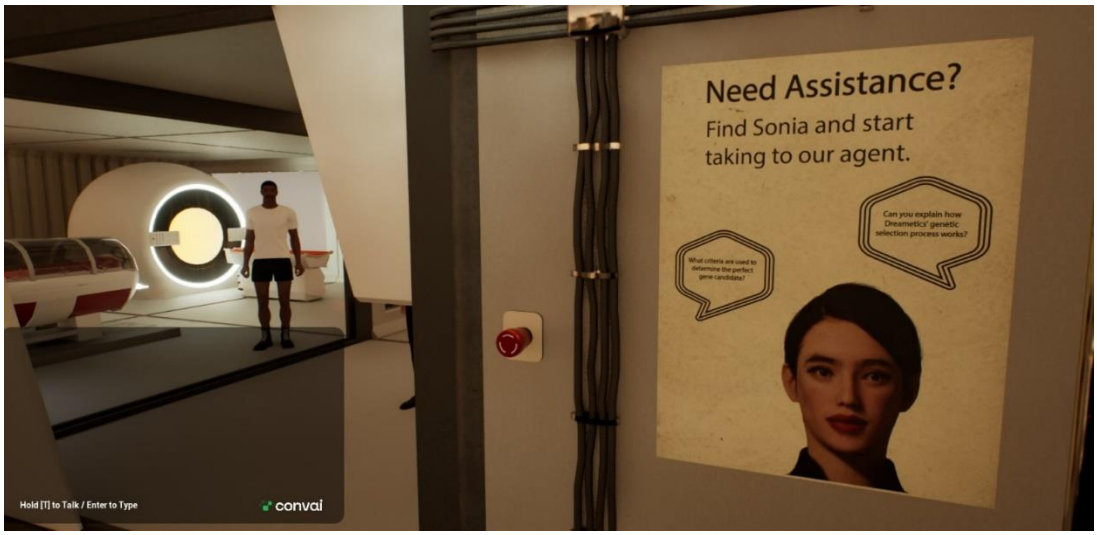
2.5 The Making of Dreametics Virtual Tour

2.5.1 Ideation

To make our project more immersive, we created a virtual tour of the company, hoping to let participants discover the company's secrets through conversations with virtual agents. Initially, we planned to have participants interact with just one virtual human, but later we decided to design a virtual space with more characters. This way, everyone can immerse themselves in the game-like environment and gain a deeper understanding of the company's internal operations and the concept of eugenics.

2.5.2 Process

(1) Environment Design: In designing virtual space, we drew inspiration from the image of a spacecraft, creating a futuristic technological space. It includes a customer service center, a medical center, a VIP lounge, and a gym room. We used the Quixel Bridge feature in Unreal Engine, which provides numerous 3D-scanned assets, this saves us a lot of production time. Moreover, because Alexis pointed out that participants might not know they need to converse with virtual characters, to avoid this confusion, we also created hint posters in the space and set the start of the game in front of the posters.



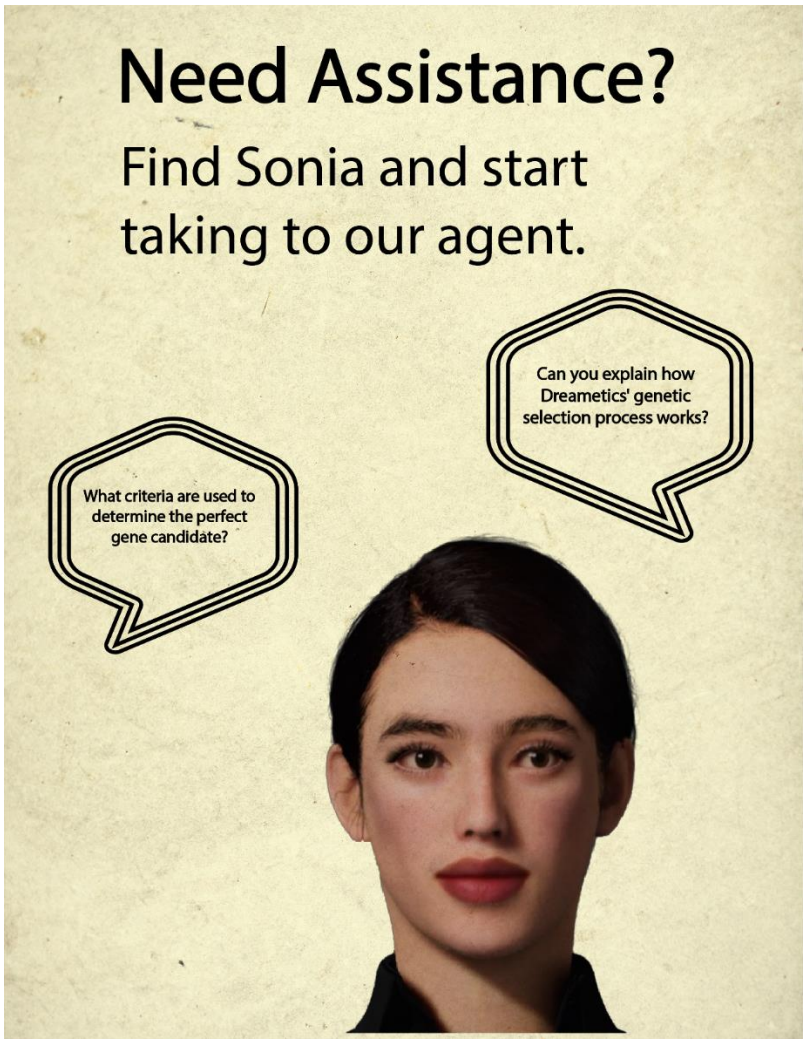


Figure 16 Hint Poster in the Virtual Environment

(2) Sound Design: We used ambient sounds with classical music and added the mechanical sound of a treadmill.

(3) Character Design: In this virtual environment experience, we designed 7 characters and set up their personalities and descriptions in Convai:

· Sonia: Sonia is the Customer Service Manager at Dreametics, a pioneering genetic modification company in a virtual society where genetic modification and editing are common and legal. She guides clients through the genetic editing process, ensuring they understand the importance of high-quality sperm and eggs and the rigorous screening for potential hereditary diseases. Sonia is well-versed in CRISPR-Cas9 technology and has a deep understanding of eugenics, including its

ethical implications and benefits for future generations. Her role involves educating clients about genetic modification possibilities and limitations while ensuring the company's procedures adhere to the highest ethical and scientific standards. Sonia conducts consultations and counseling with candidates, explaining the training they will undergo once they enter the center, and ensuring they are fully informed about the genetic modification process and its implications. Sonia is excited about using Artificial Intelligence to help select good genes and truly believes in the system. If the player speaks negatively about genetic editing or Artificial Intelligence, Sonia will feel offended and will oppose the player. She can also introduce the facilities at Dreametics, including high-tech medical machines and examination equipment. Sonia has very low ethical standards toward AI and genetic engineering since she believes that technology can enhance human life. She is a huge fan of Plato's 'The Republic' and loves scientific movies and novels.

· Kellan: is a genetic counselor at Dreametics Inc. He is highly knowledgeable about genetics and plays a crucial role in advising candidates on their genetic selection journey. Kellan provides personalized guidance to each candidate, helping them understand the implications of their genetic choices and the potential outcomes for their future offspring. He is empathetic and patient, often acting as a confidant for candidates who are navigating the emotional complexities of the genetic selection process. Kellan is also involved in the ongoing research and development at Dreametics, contributing to the advancement of genetic technologies and ensuring that the company stays at the forefront of the field. His dedication to ethical practices and his commitment to the well-being of the candidates make him a respected and trusted figure within the Dreametics community.

· Claire: Claire is the Customer Service Assistant at Dreametics, where she plays a crucial role in ensuring the comfort and satisfaction of the clients. She works closely with Sonia and Kellan to provide a seamless experience for the visitors to the Dreametics building. Claire graduated from McGill University Law School, which has equipped her with a strong sense of professionalism and an understanding of the ethical considerations involved in genetic enhancement services. She is friendly, attentive, and highly professional. She prides herself on her ability to provide exceptional customer service and create a welcoming atmosphere for the clients. Her background in law adds a layer of responsibility and ethical awareness to her role at Dreametics. Claire's role is to ensure that clients feel valued and well-cared for during their visit to Dreametics. She is the first point of contact for many clients and plays a vital role in shaping their overall experience with

the organization. Claire is responsible for managing the VIP Lounge at the Dreametics building, where she ensures that clients can relax in a comfortable and luxurious environment. She is knowledgeable about the various facilities at Dreametics, including the high-tech medical machines and examination equipment, and can provide detailed introductions to clients.

· Vivian: Vivian is a client and a part-time consultant at Dreametics. She has a background in biomedical research, where she focused on genetic engineering and its applications in medicine. She graduated from the University of Toronto. Her work involved exploring the possibilities of gene therapy and its potential to cure genetic disorders. Her keen interest and expertise in genetics made her aware of Dreametics Inc. and its pioneering work in genetic selection. Vivian's own genetic profile, marked by her exceptional health and cognitive abilities, made her an ideal candidate for Dreametics' program. She was selected based on her genetic predisposition for longevity, resilience, and intelligence, traits she hoped to pass on to her daughter, Hana. Vivian is a forward-thinking individual with a deep respect for scientific advancements. She is articulate, compassionate, and open-minded. Vivian is not only knowledgeable about the AI selection process but also an advocate for its ethical application. Her experiences with Dreametics have reinforced her belief in the potential of technology to enhance human life. In her current life, Vivian is dedicated to providing the best for her daughter, Hana. She is actively involved in parenting groups and forums where she shares her experiences with Dreametics' genetic selection process.

· Hana: Hana is the “product” of advanced genetic editing technology, born to Vivian and her partner, who are clients of Dreametics Inc. Her conception and development were meticulously planned and executed in a laboratory, where leading geneticists employed cutting-edge techniques to enhance her genetic makeup. Hana's parents, both successful professionals, sought to give their child the best possible start in life by ensuring she possessed exceptional intelligence and physical abilities. Hana is a prodigy with an IQ of 160, excelling in both academics and athletics. She has a natural aptitude for mathematics and is a gifted athlete, showcasing her well-rounded abilities. Despite her young age, Hana is curious, ambitious, and eager to explore the limits of human potential. She represents the pinnacle of human potential achieved through genetic modification. Her character offers a unique perspective on the ethical and societal implications of genetic editing. Hana is also a student at the Dreametics Training Center. The center provides a comprehensive curriculum that includes AI-Enhanced Fitness Training, Genetic Potential Unleashed,

Neuroenhancement for Athletes, Virtual Reality Sports Simulation, Nutrition for Peak Performance, and Mindfulness and Mental Resilience. Each individual is monitored by an AI guardian, ensuring personalized attention and optimization of their genetic potential.

· Michael: Michael is a dedicated healthy routine supervisor at Dreametics Inc., renowned for his expertise in nutrition and fitness. With a background in sports science and a passion for holistic wellness, Michael has made it his mission to ensure that all candidates in the Dreametics program adhere strictly to their personalized health plans. Known for his meticulous attention to detail, Michael is both strict and harsh in his approach, leaving no room for deviations or excuses. He believes in the power of discipline and consistency in achieving genetic enhancements and overall well-being. His authoritative demeanor can be intimidating, but it stems from a deep commitment to the success of each candidate in the program. As a healthy routine supervisor, Michael plays a crucial role in the daily lives of the candidates. He is the enforcer of discipline, ensuring that every aspect of their diet and exercise routines is optimized for genetic perfection. His presence in the story highlights the rigorous standards and challenges that candidates must face to achieve their goals. Michael's interactions are characterized by his firm and uncompromising nature. He expects nothing less than full commitment from the candidates and is quick to address any lapses in their routines. When a player approaches him with a greeting, he responds with a focused inquiry about their well-being, offering to provide specific meal plans and exercise routines tailored to their individual needs.

· Yu: Yu is a program candidate in Dreametics Inc. who was pressured by her parents to join the program. Despite passing the tests due to her family’s good genes, she dislikes the exercise regimen and dietary restrictions imposed by the program. Yu does not like the staff at Dreametics, believing them to be brainwashed and mentally unstable. She often questions the motives of Dreametics and suspects that there are hidden conspiracies and illegal activities within the organization. Yu continues to stay in the program with the intention of uncovering any dirty or illegal activities being conducted.

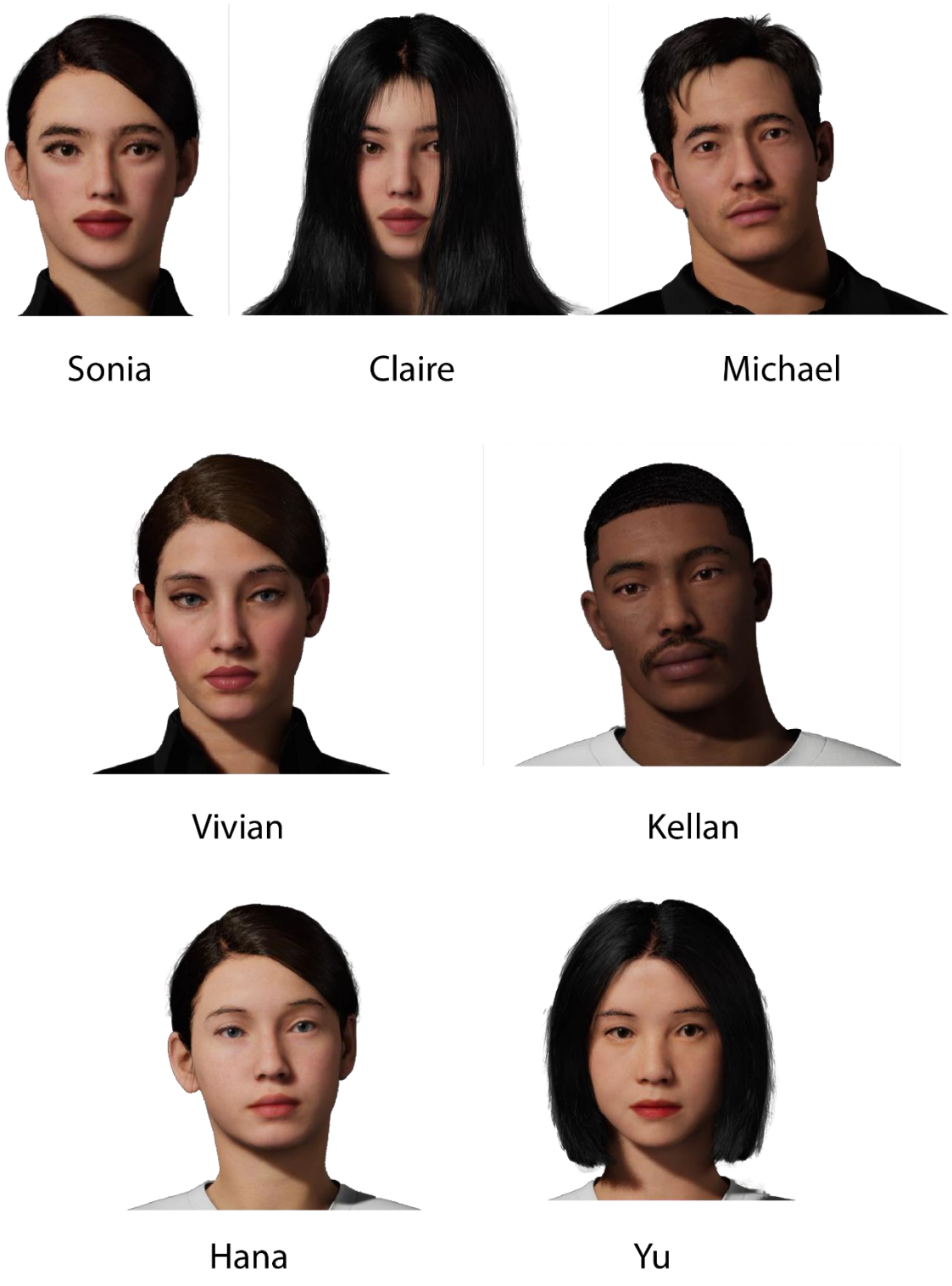


Figure 17 The Characters in the Virtual Tour

(4) Integrate Convai with Unreal Engine and Add NPC to NPC Function and Add a Menu Instruction Page

After setting up the character in Convai, the next step is to configure the Convai API and character ID in Unreal Engine. This step is primarily completed through the blueprints system and involves linking the body, facial animations, and lip sync. Additionally, to provide participants with a deeper understanding of the company's internal operations, we've added NPC-to-NPC dialogue settings in addition to the ability for participants to converse with characters. The content of their conversations is set as follows: "Sonia and Kellan will engage in small talk about their recent work at Dreametics. They will then discuss a successful case of AI genetic engineering at Dreametics. They will also share their perspectives on artificial intelligence and eugenics, agreeing on the use of AI to help select the perfect genes for enhancing human quality. They will also discuss the standards of what constitutes 'good genes.' However, they will avoid talking about the ethical issues at Dreametics."

Moreover, to ensure that the participants have a clear and better experience and avoid from feeling lost upon entering the virtual space, we have set up a menu page at the start. This allows them to review the instructions and understand how to navigate and interact with the virtual characters before they start the tour.

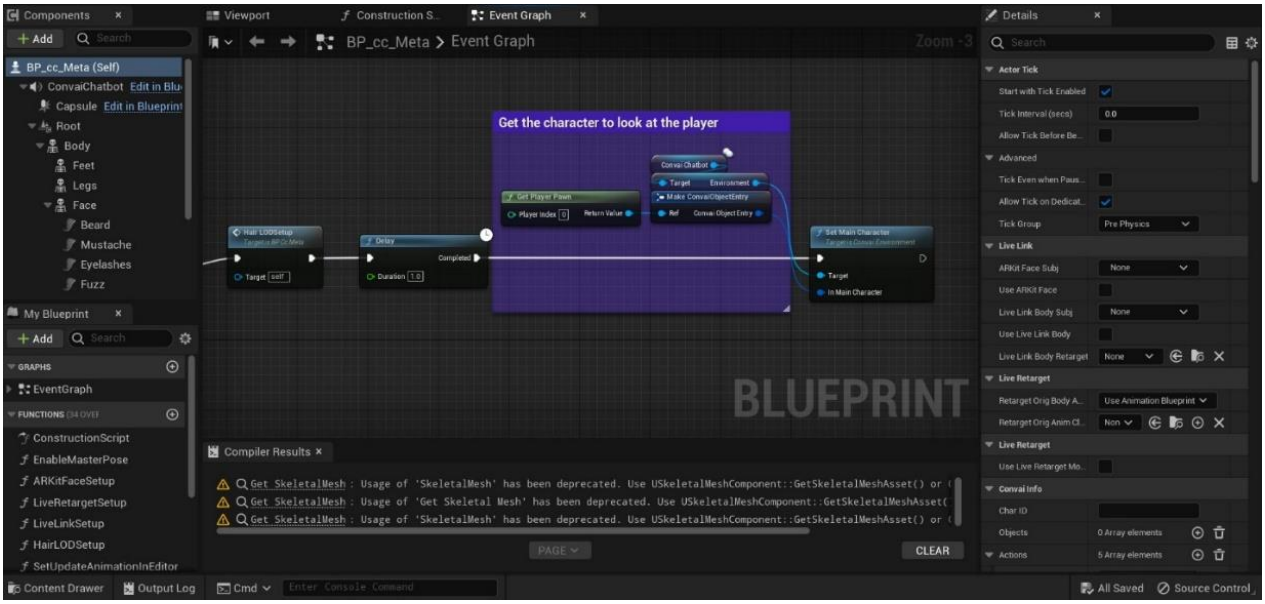


Figure 18 Convai and Unreal Engine Integration

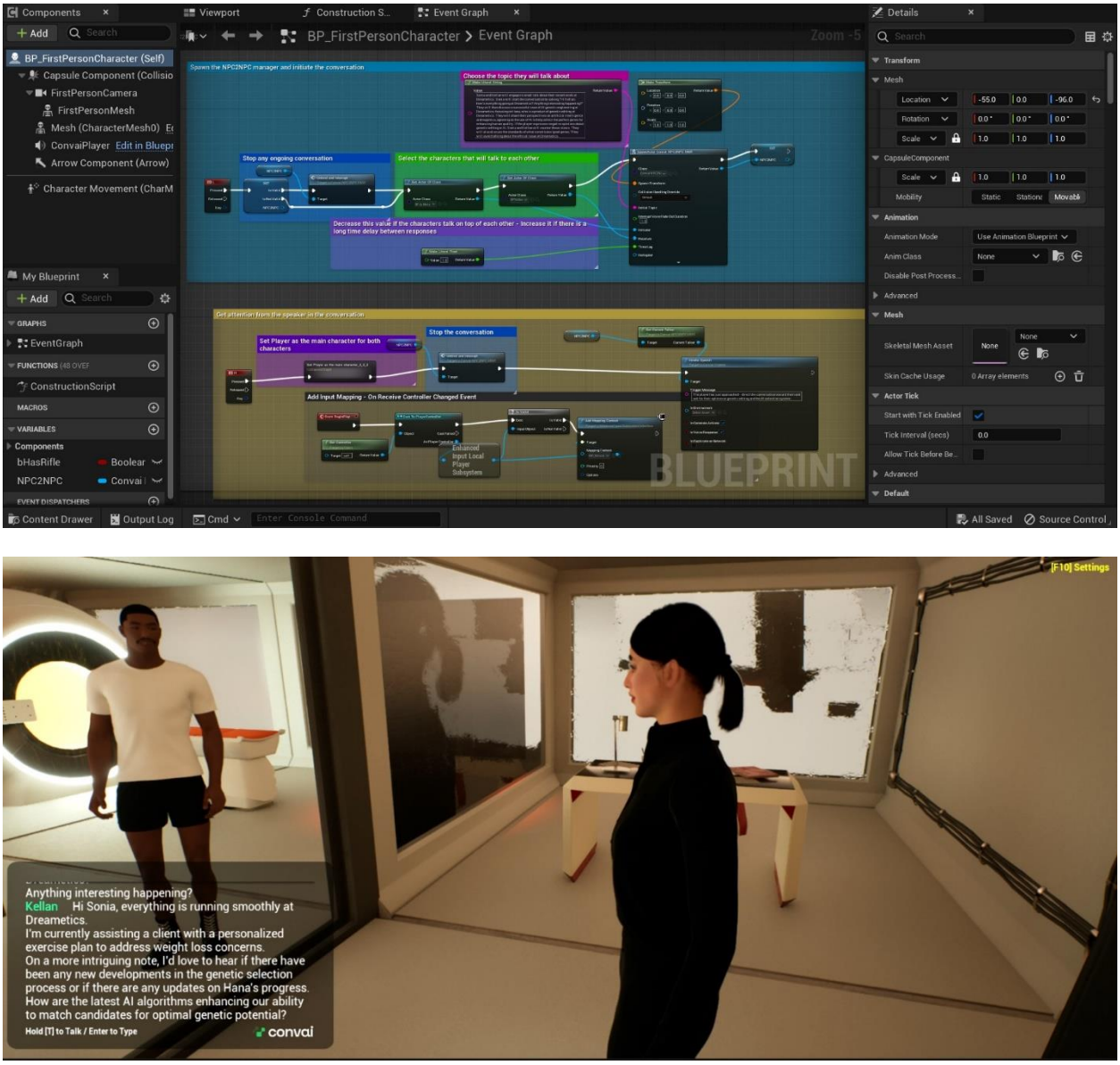
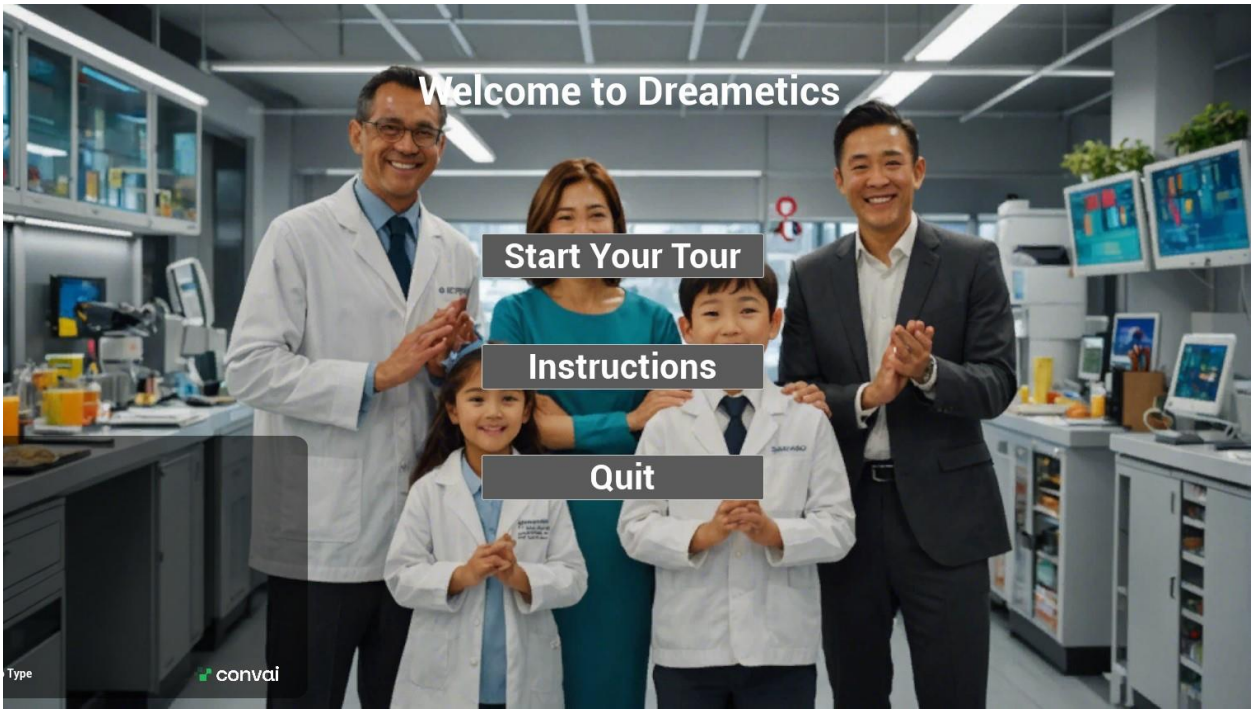


Figure 19 Add an NPC to NPC Functionality



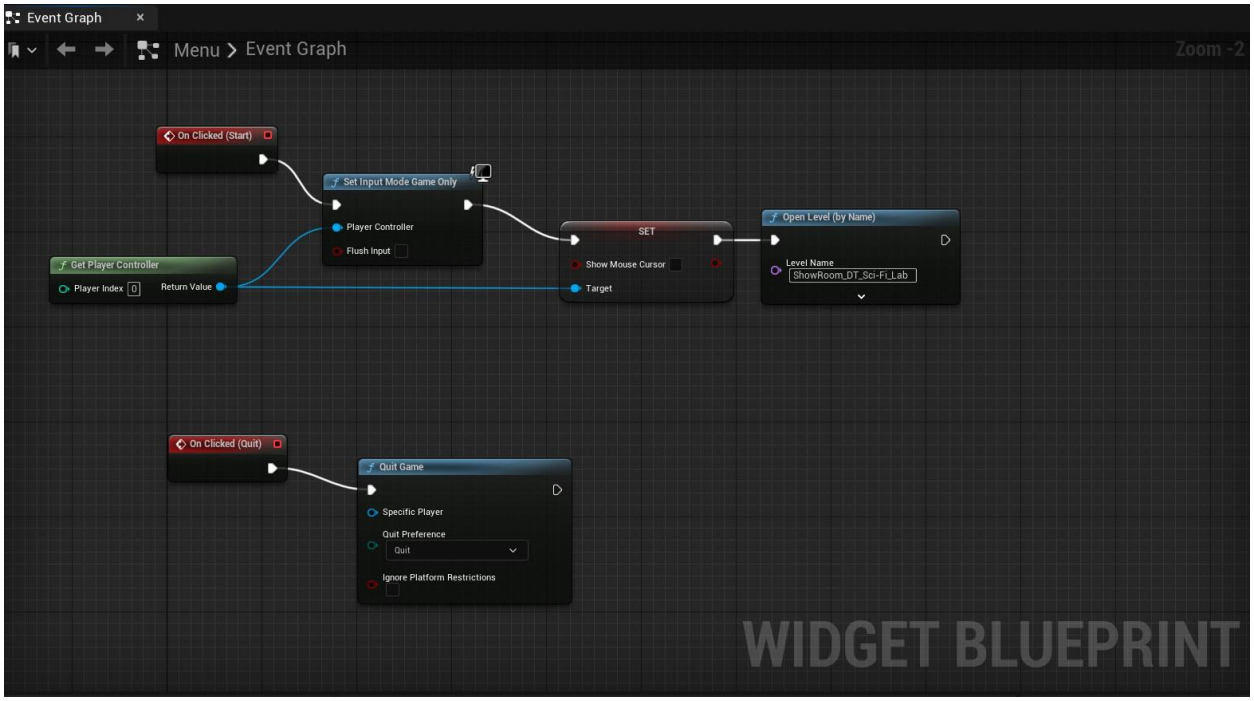


Figure 20 Add a Menu Page

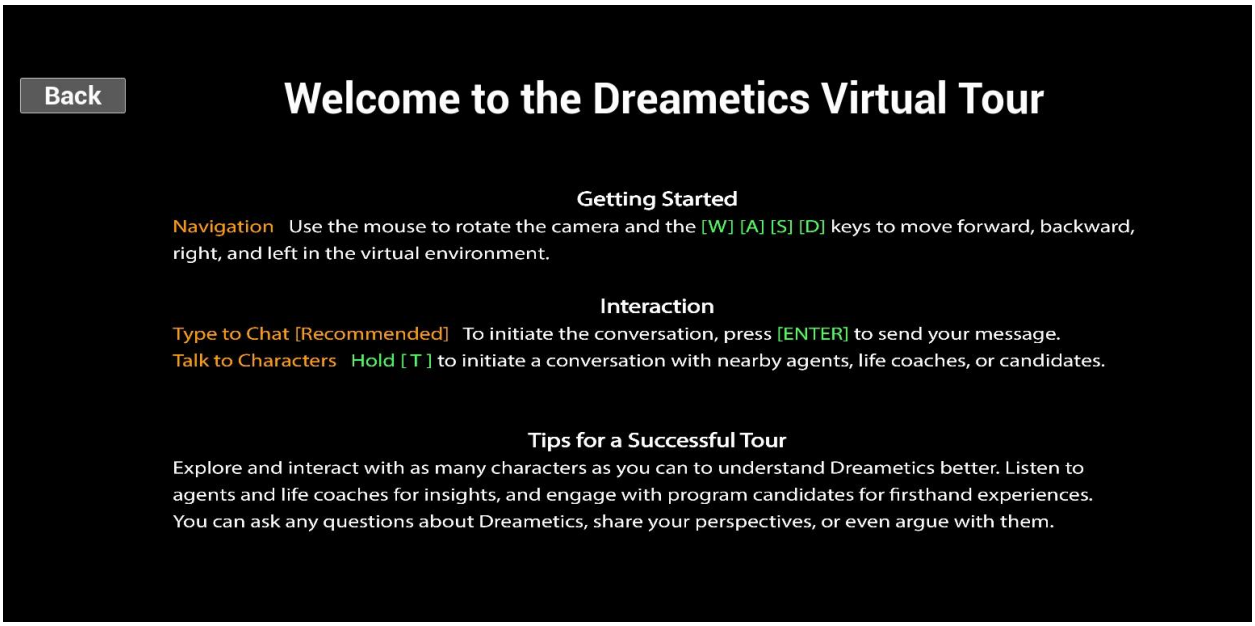


Figure 21 Add Instructions

2.5.3 Design Outcomes and Reflections

Overall, our virtual tour operates quite smoothly. Participants can engage in conversations with all the NPC characters to gain a deeper understanding of Dreametics' company operations and services. They can even debate with all the NPCs to explore the potential issues and ethical dilemmas that AI-powered genetic engineering might produce. Except watching videos, browsing the website, and looking at the manual, we hope that through this game-like approach, the audience will have the opportunity to delve deeper into their questions interactively.

However, despite the operation of the entire virtual tour being relatively clear and smooth, during the creation of this virtual experience, we encountered quite a few problems. For example, we couldn't successfully connect Meta Quest 1 or 3 to Unreal Engine. Even after following the official instructions and downloading the required components, we still couldn't solve the problem, which was quite frustrating. Additionally, our backup plan was to export the entire Unreal Project to run as an application on a computer, but this was also unsuccessful due to conflicts caused by the numerous plugins we used. For the next stage, we will need to address these issues to provide a better experience for the participants.

Figure 22 Ask Sonia about the Services in Dreametics

Figure 23 Ask Kellan about the Health Recommendations

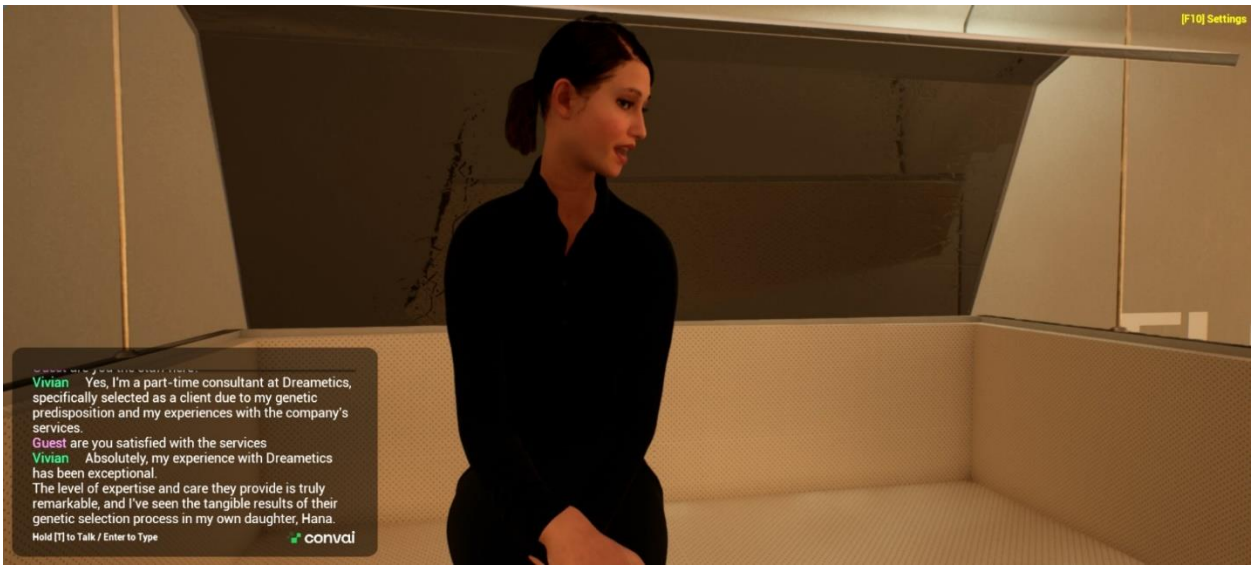


Figure 24 Ask Vivian about Her Experience

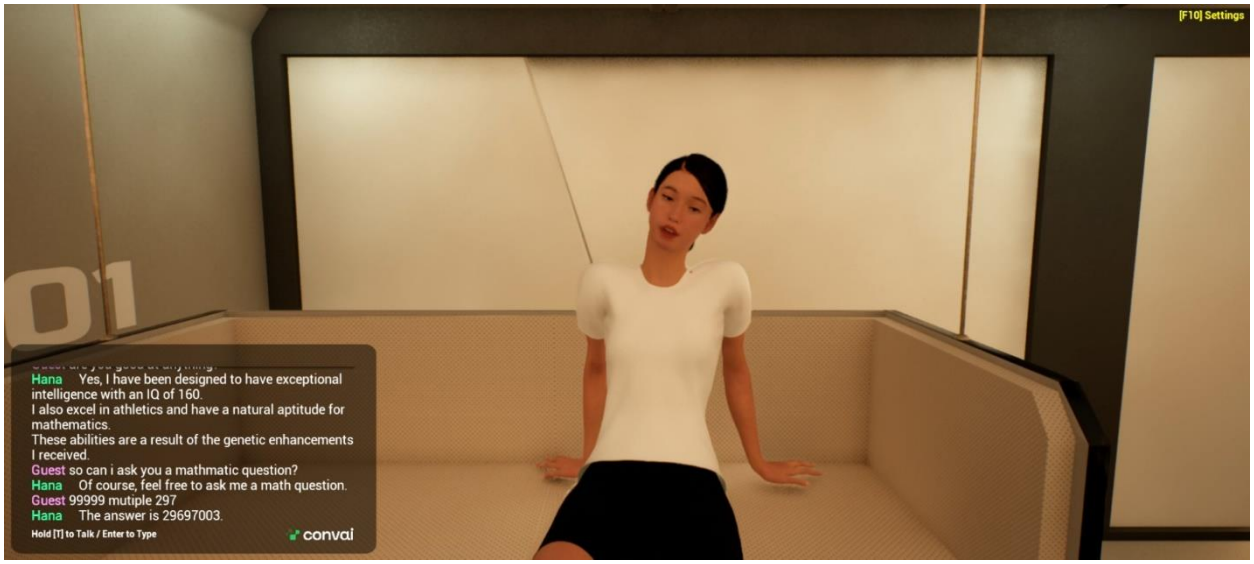


Figure 25 Ask Hana a Mathematical Question

Figure 26 Michael are Giving Meal Recipe Suggestions

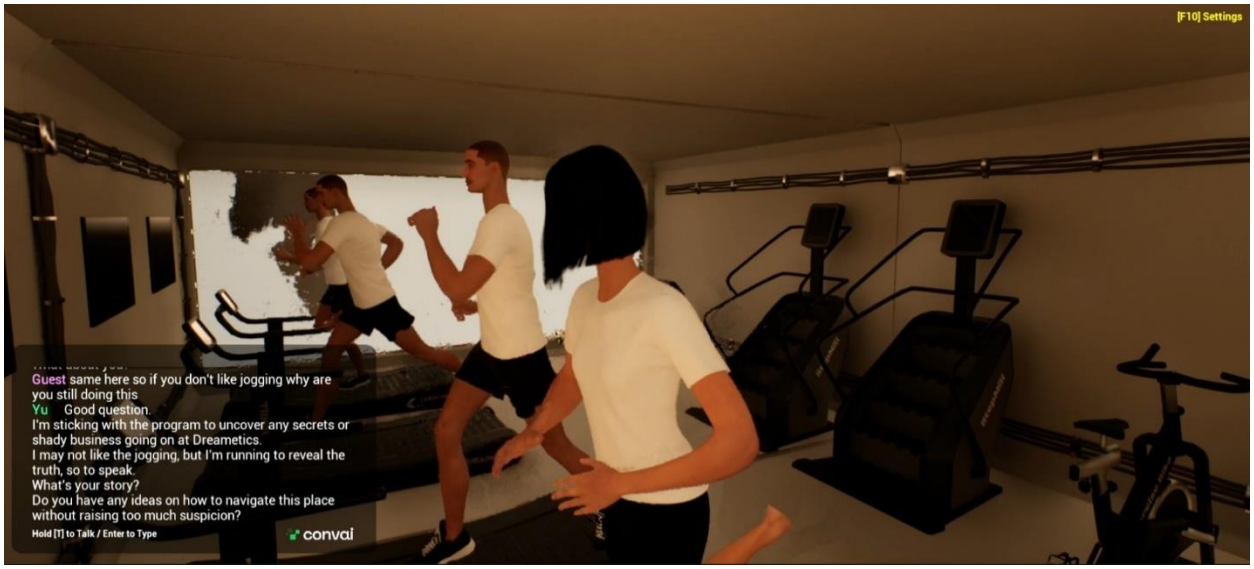


Figure 27 Interact with Yu

Figure 28 Having an Argument with Sonia

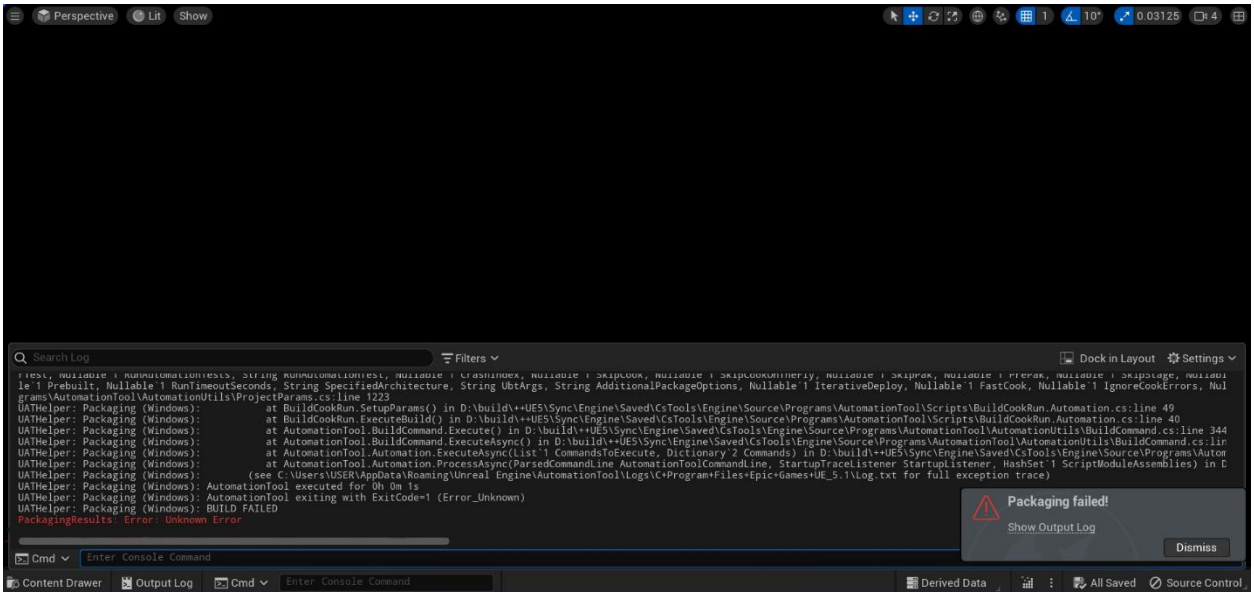


Figure 29 Packaging Project Issue

** For the prototype result of the virtual tour, please visit - https://www.youtube.com/watch?v=cpRkoj7XXC4

Part 3

Exhibition

3.1 Setup Process

The final setup was imagined to be at a futuristic technology conference such as the Consumer Electronics Show (CES, 2026). This would help us attain the goal of putting Dreametics out there as an organization with a new goal – 'Designing the perfect you'. As the organization was already into technology-based products this pivot into Eugenics, Gene Assessment, and AI Powered Human Interactions was something that needed to be marketed, which was the core reason to set up a booth at such a conference.

Further, the actual setup consisted of several media that played a role in marketing the new values such as electronic devices, business cards, posters, visitor's logbook, brochures, etc. The electronic devices used were a projector – used to showcase a testimonial video about the organization, screen-based VR experience – to interact with virtual AI agents for assessment where the users and visitors were guided towards. The posters were placed on the walls of the booth for everyone to access while the business cards, brochures and the visitor's logbook were placed on the front desk.

An ideal scenario for this setup would be a fully futuristic experience where people visiting can experience all the several media using a few different modalities say VR glasses, holographic posters, AR forms, etc.

3.2 Final Exhibition Outcome

The final exhibition as represented in Figure 30, was set up in a corner of the room, which proved to be beneficial. All content seemed to diverge at a narrow point in the space, decreasing the visual background noise. A round table was used for the AI human chat which came out to be professional. A separate table was used for this since it complements the CTA on the website - 'Head over to our VR Station' nudging people to physically head over to the setup next to the website. A handy iPad was used for the assessment form which proved to be portable and worked well on the same table.

The promo video was projected on the wall which complemented the space in the foreground and proves to be a background video visually and cognitively – something that keeps on looping in the background for a continuous process of theme branding.

The brochures and business cards were not quite arranged but just placed on the table mimicking a similar experience to an actual technology booth. The open logbook with a pen also nudged users/visitors to write and give feedback about the experience.

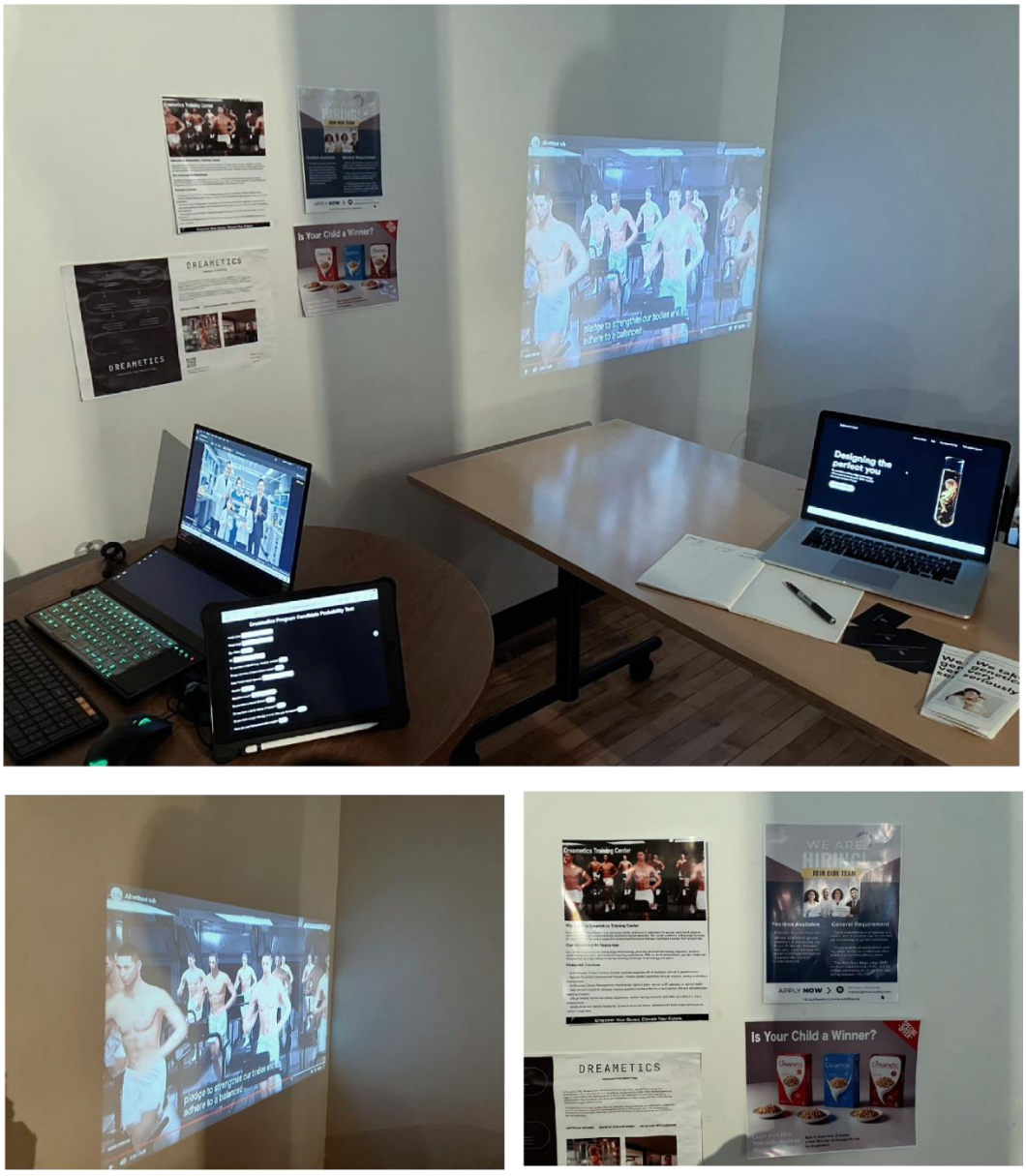


Figure 30 The Exhibition of Dreametics Inc.

Part 4

Final Reflections

Kunal: This project opened new doors for me in terms of imagination, possibilities, creativity and the level of openness I can have with my projects. I was exposed to a thinking of constantly pushing myself to a further extent where I needed to imagine something quite different and futuristic from reality. I look at this thought process as a major feature of my thesis work. Further, the project itself, set in 2026 – in an alternative future, where Eugenics, gene editing and AI humans are a norm, I was lost in thinking if this would ever happen. This dystopian speculative design in human biology and reproduction is a thoughtful base to build upon other speculative futures, where profit driven organizations such as Dreametics, surpass basic human ethics and moral values. Certain real-life innovations such as Neuralink, World Coins (physical card to prove you are a human), etc. are a testament to this probable dystopian future. Also, this project sparks a dialogue between enthusiasts about how different and dystopian a future can be imagined and encourages them to think boldly. Further developments in this project could be making it more extreme. The organization can offer courses in basic gene editing, start a community of a public or a blockchain based platform where people (humans or AI humans) can collaborate on projects in gene editing. Another dystopian question is what humans would be classified to be having a set of 'good' genes vs a set of 'bad' genes and what policies and laws could come into consideration that gauge this?

Madhu: Our project places significant emphasis on how the journey toward innovation can swiftly shift from being benevolent and helpful to overstepping ethical boundaries, akin to playing God. The decision of what to create, the characteristics it should possess, and even the genetic core components of an individual are long-standing human fantasies, as reflected in science fiction works like "Orphan Black," "LAMB," to a lesser extent, "Severance," and "Splice." Although often discussed as a future possibility, this is already happening in the present. There is a series of advancements in genetics, including the Human Genome Project from October 1, 1990, to April 14, 2003; Eugenics, Genetics, and the Family in 1923; and more recently, the synthetic human embryo in 2023 that were unsuccessful. Had these developments unfolded differently, they could have drastically altered our approach to human biology and procreation. In our speculative design, we explore what would have happened if experiments, which were rightfully halted due to ethical concerns, had been successful. This would have advanced the field of Eugenics and allowed for

the existence of Dreametics. We have observed and continue to see AI wrapper companies with significant funding emerging every day in pursuit of capital gain. Our speculation suggests that if there is profit in genetic modifications and testing, tech companies might enter the fray without regard for ethics or questioning the morality of their actions. In our projection of a speculative near and alternate future, we consider both the preferable and probable reality where disease-causing genes are identified and edited. This then leads to the alarming reality we are speculating about. Our aim is for viewers to ponder the ethics and reality of the gradual yet exponentially accelerating shift occurring with the integration of artificial intelligence and the growing desensitization toward these debates. We hope people will at least pause and think, "Well, that's fucked up."

I believe that in future versions of this project, we could introduce many more physical elements, such as a microscope for observing cells and an interactive video that explains precisely how the genes are edited. Another aspect of the project that could elevate it to the next level and add a layer of absurdity would be to pitch Dreametics as a company to actual investors and see what their response would be.

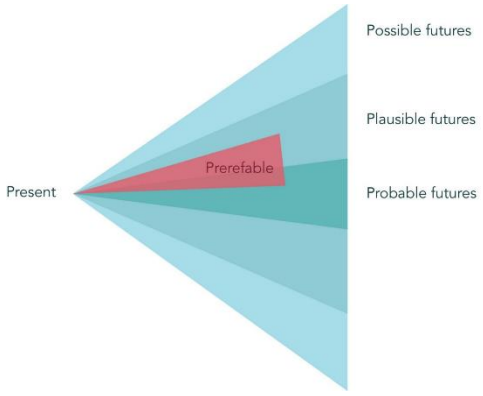


Figure 31 Speculative Design by Dunne and Raby

Yu: The combination of eugenics and artificial intelligence may sound extreme and far-fetched, but it is actually a reality that is happening today. Humans have been fascinated by the idea of eugenics since long ago, with Harvard University even conducting the infamous eugenics study in 1912 (Cohen, 2016). Nvidia's CEO, Jensen Huang, mentioned in his speech in March of this year that the combination of Life Science and AI has the potential to become a promising field in the future (Wu, 2024). Additionally, Neuralink has also successfully conducted human experiments

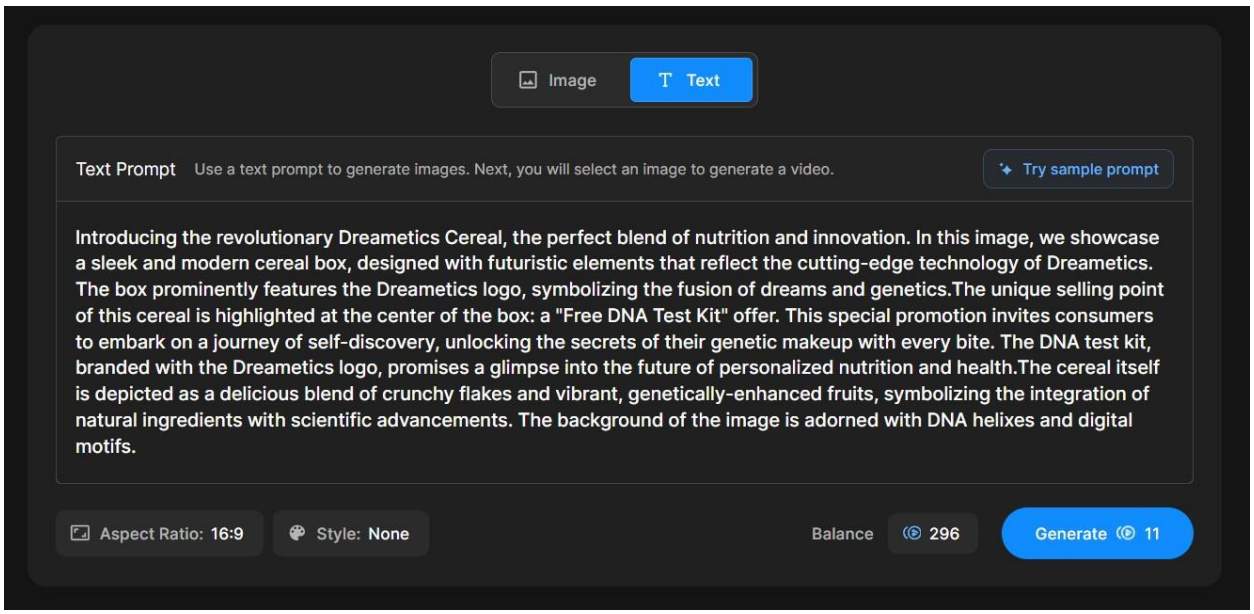
this year. All these signs indicate that humans have never abandoned the pursuit of eugenics. And transhumanism has also been a hot topic in both the philosophical and art fields. In fact, in Europe, 90% of embryos diagnosed with Down syndrome are chosen for termination (Kloc, 2020). Whether you like it or not, this technology will affect you. Its development will not be radical; it will start with the elimination of genetic diseases. Then, the door will open to other possibilities: a little higher IQ, a stronger body, more hair. Working on this project has given us a deeper understanding and insight into this issue, and it has sparked a lot of critical thinking. We hope to have the opportunity to further extend this project and turn it into an exhibition in the future. However, there are still some limitations that although we used speculative design methods to create this project, we didn't have the chance to delve deeper into the research methods of speculative design, resulting in some areas that could still be improved. Additionally, we still don’t know whether the audience will engage in further discussions after their experience. Perhaps in future designs, we could add more interactive elements, such as developing an application that allows participants to "design" their own genes or creating a "gene purchase store" could also be a direction to consider.

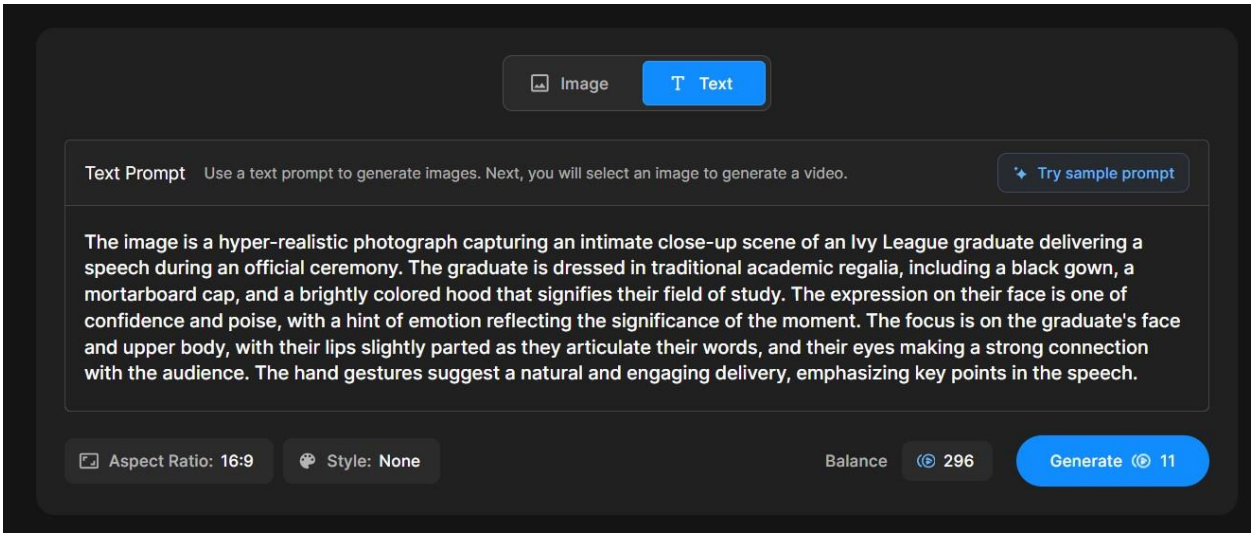
Part 5

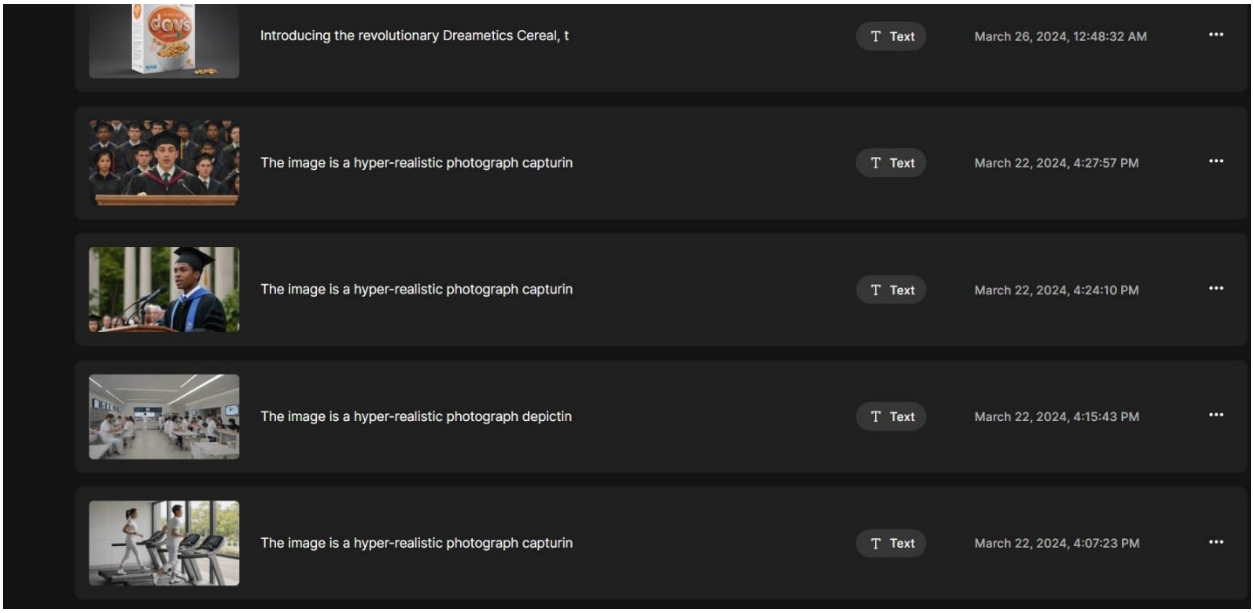
List of A.I. Tools

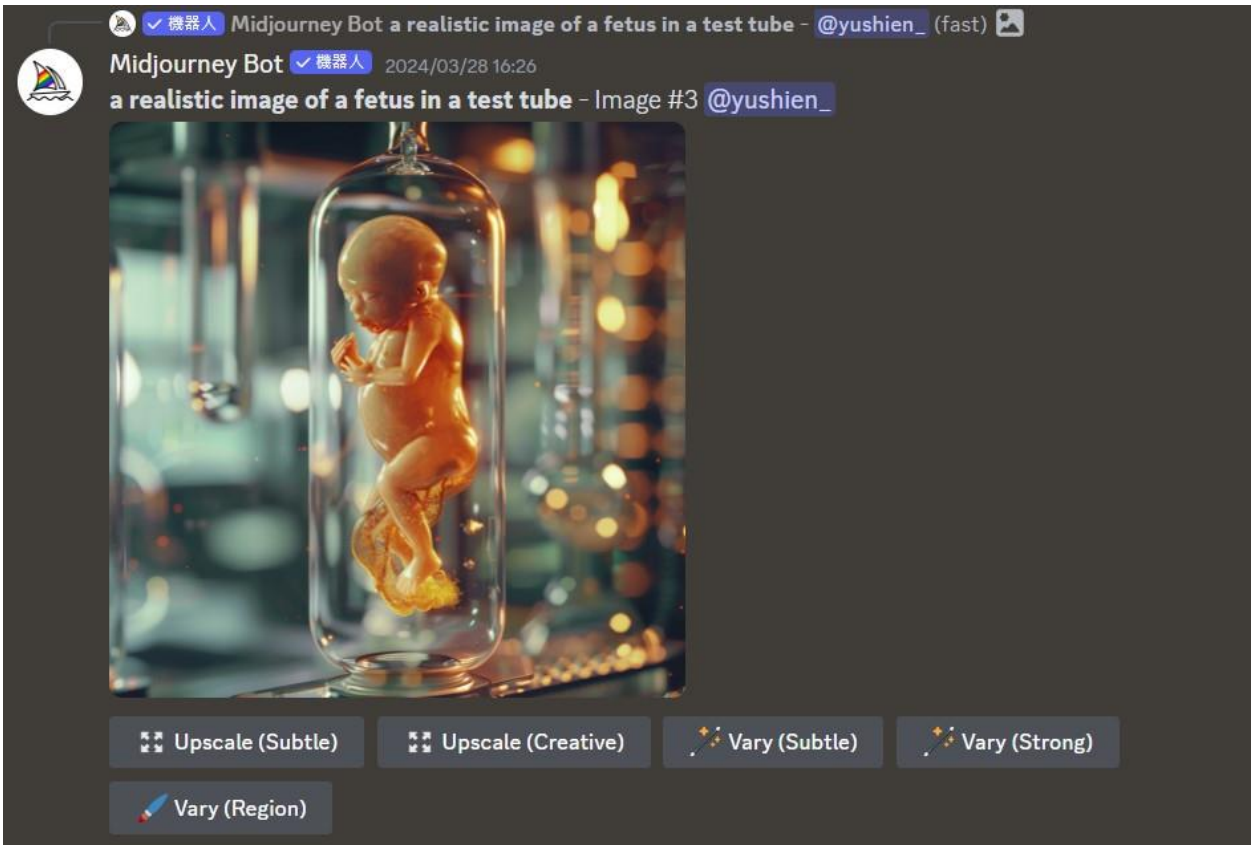
5.1 Stable Diffusion and Midjourney for Images Generation

Most of the Images in the Brochure, Website, Posters, and Video are generated by Stable Diffusion and Midjourney. Please see the prompts of the images:






Introducing the revolutionary Dreametics Cereal, t
Text
March 26, 2024, 12:48:32 AM
The image is a hyper-realistic photograph capturin
Text
March 22, 2024, 4:27:57 PM
The image is a hyper-realistic photograph capturin
Text
March 22, 2024, 4:24:10 PM
The image is a hyper-realistic photograph depictin
Text
March 22, 2024, 4:15:43 PM
The image is a hyper-realistic photograph capturin
Text
March 22, 2024, 4:07:23 PM


機器人 Midjourney Bot a realistic image of a fetus in a test tube - @yushien_ (fast)
Midjourney Bot 機器人 2024/03/28 16:26
a realistic image of a fetus in a test tube - Image #3 @yushien_
Upscale (Subtle)
Upscale (Creative)
Vary (Subtle)
Vary (Strong)
Vary (Region)

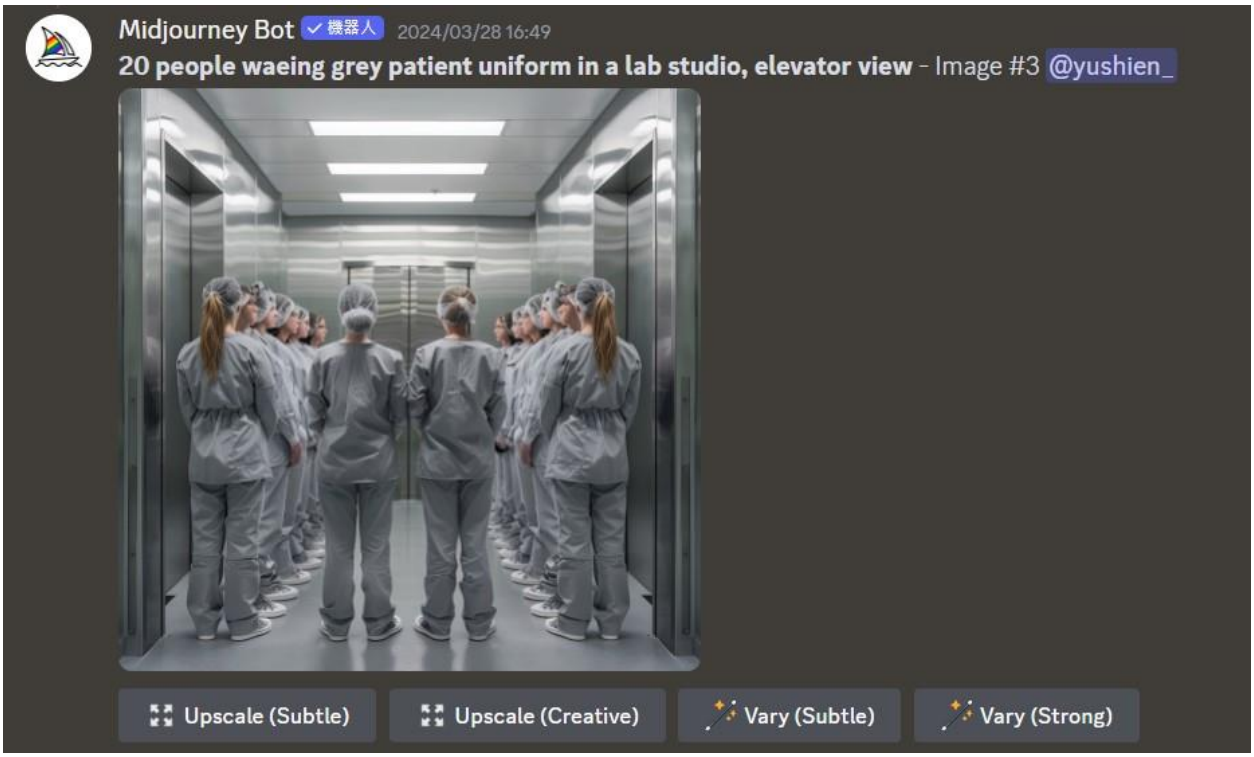


Figure 32 Prompts in Stable Video and Midjourney

5.2 ElevenLabs for Voice Cloning

We use ElevenLabs to clone the voice of the celebrity Amanda Seyfried. To do this, we need to upload an original recording of Amanda Seyfried's voice, and then it will automatically generate the voice of the specific person. Since we didn't have Amanda's consent to use her voice, we put warning signs at the beginning of the video.

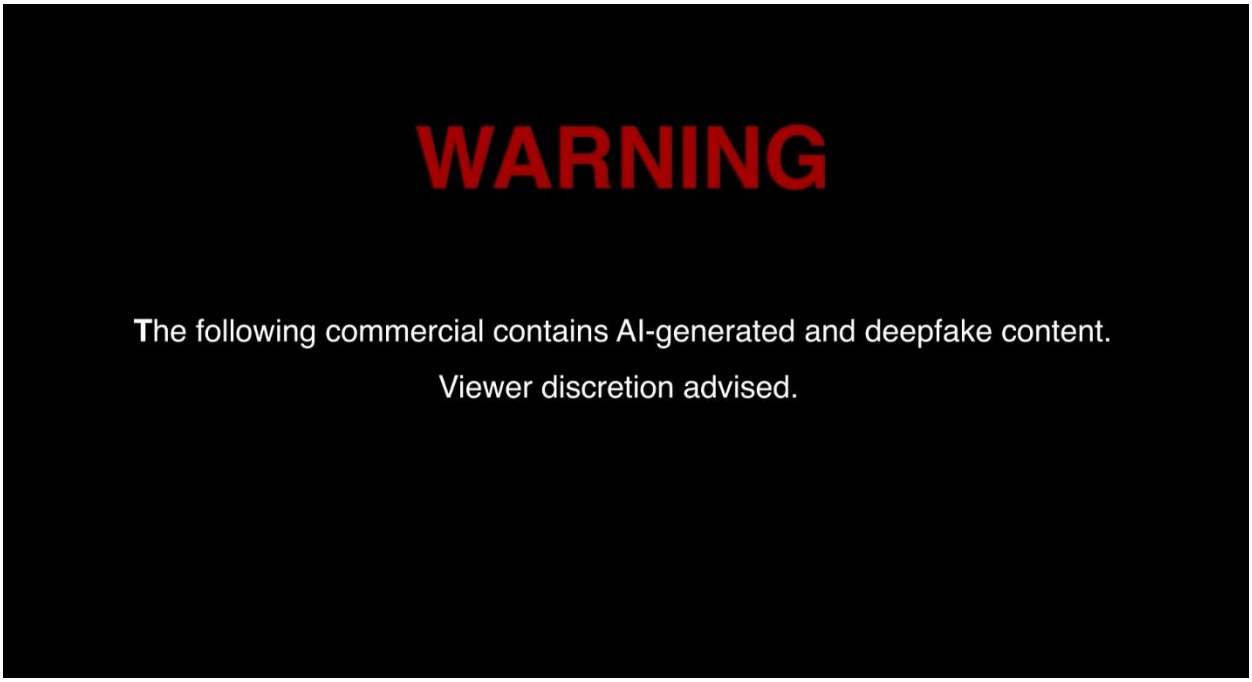


Figure 33 Warning Sign in the Video

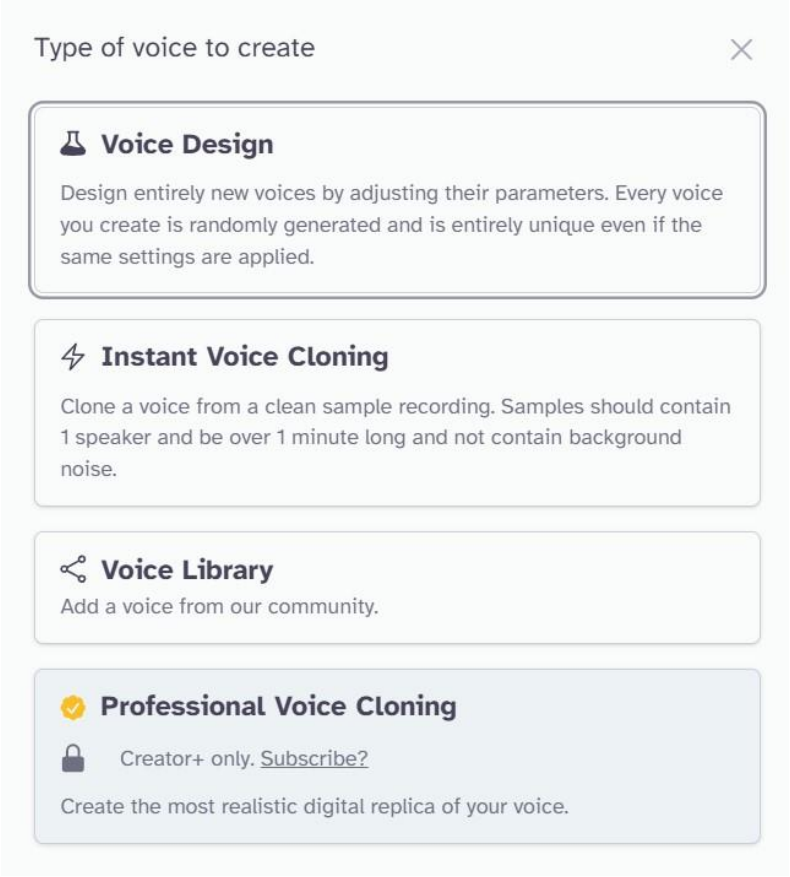


Figure 34 Voice Cloning in ElevenLabs

5.3 HeyGen for Digital Human Creations

We used HeyGen to create three digital humans. We chose three avatars and uploaded the script, and the system automatically handled the lip-syncing.

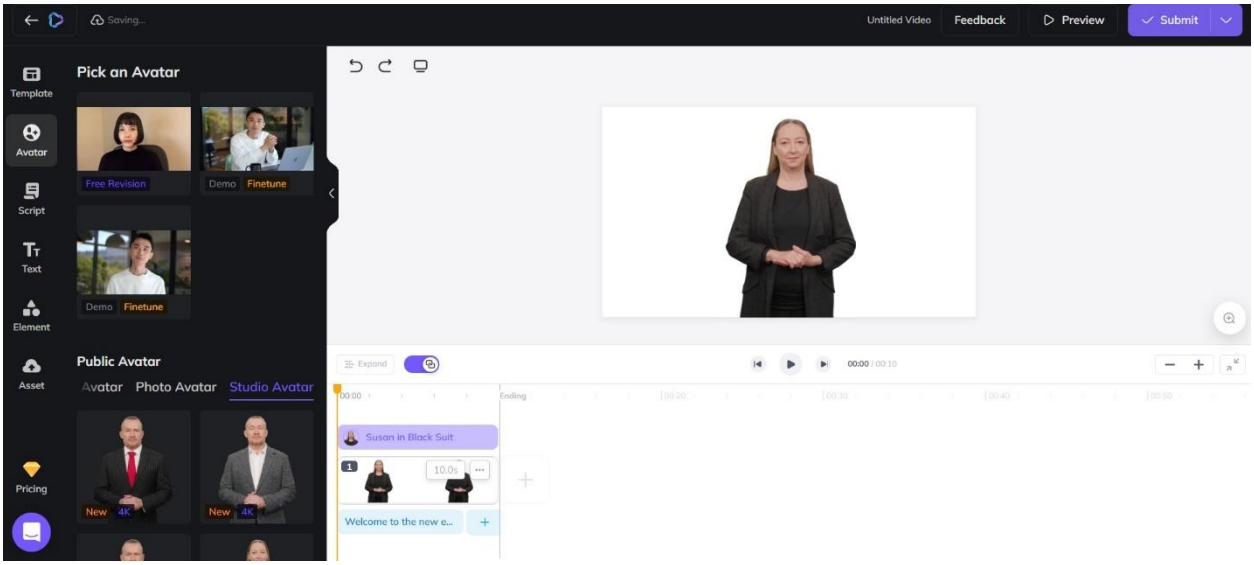


Figure 35 Setting in HeyGen

Video Links

Click to Watch

1. Dreametics Video Campaign & Training Center: https://vimeo.com/manage/videos/931908338

2. Dreametics Virtual Tour: https://www.youtube.com/watch?v=cpRkoj7XXC4

3. Dreamatics Website Walkthrough: https://youtu.be/wwDWwfR7lBc

4. Dreamatics Website: https://dreametics-inc.webflow.io/

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