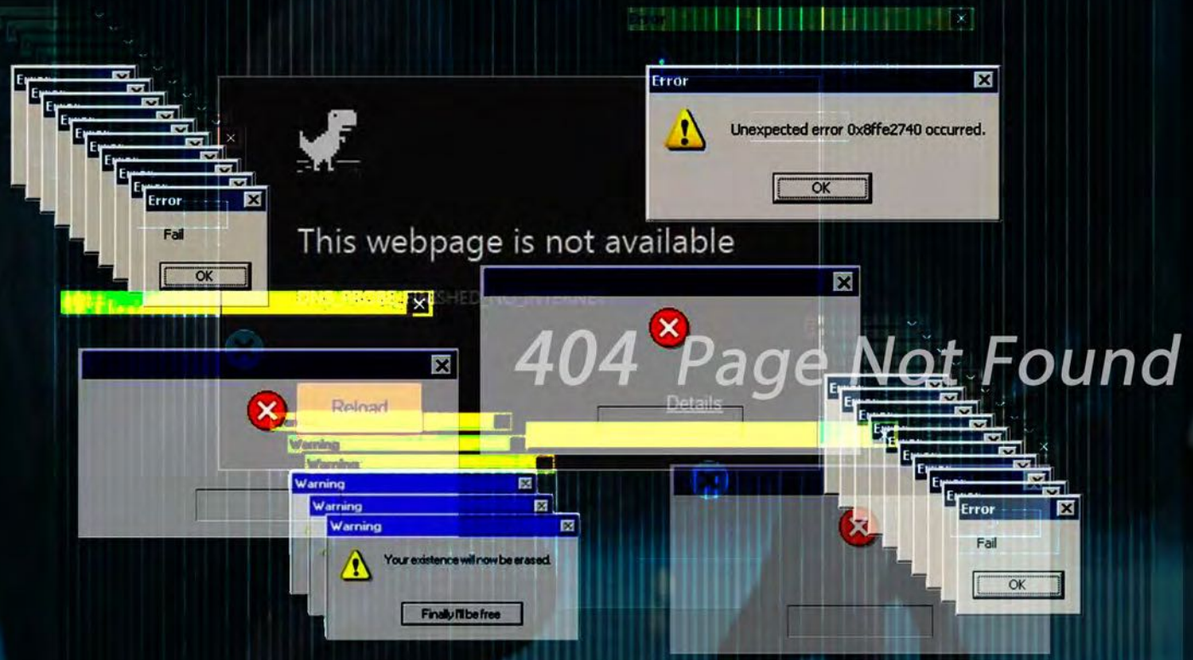
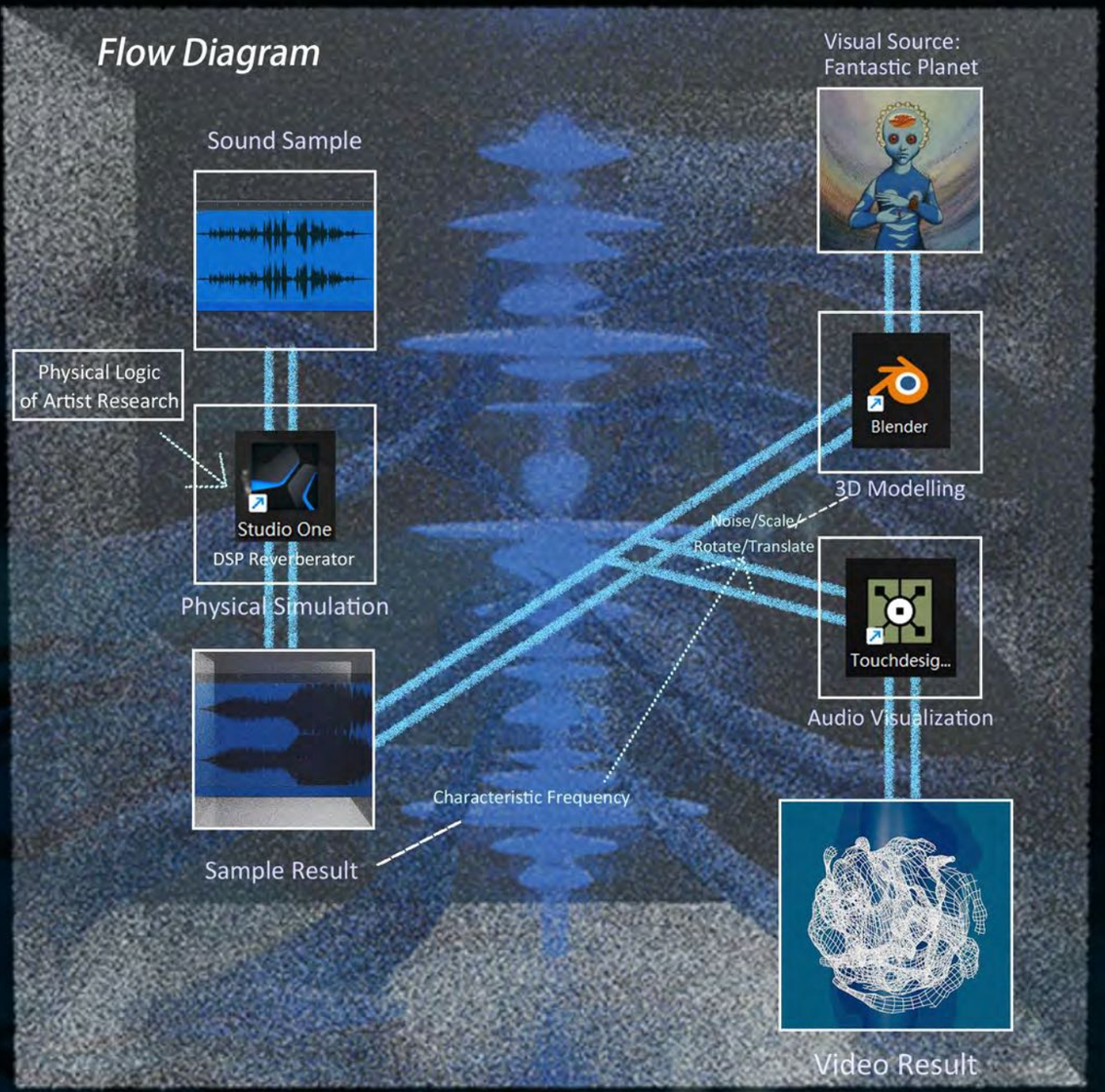


The Walls of China: Information Blocking

China has two walls: the outer wall (the Great Firewall) blocks external communications, while the inner wall restricts information flow between the middle class and the lower class through propaganda and censorship. This project focuses on the 'inner wall,' showing how the middle class struggles to voice their opinions and the lower class finds it hard to break through information barriers. The goal is to raise awareness and encourage discussions on how to penetrate the 'wall' and break these barriers.



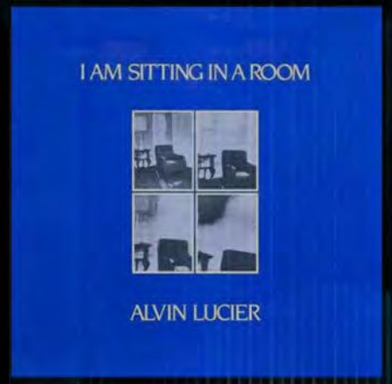
Designer: Dominic Duan
Photographer: Tang
Model: Jiang

Designer: Dominic Duan
Photographer: Tang
Model: Jiang

Designer: Dominic Duan

Photographer: Tang

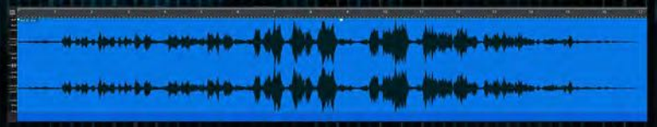
Model: Jiang



Sound Experiment

https://www.youtube.com/watch?v=zjiX4oc8e2U&list=WL&index=27&t

I researched Alvin Lucier's 1969 sound experiment 'I Am Sitting in a Room.' Its physical logic inspired me: the human voice serves as the excitation source and the room as the excited system. In a closed room, sound repeats, amplifying the room's characteristic frequencies and absorbing others. Over time, only the room's characteristic frequencies remain.

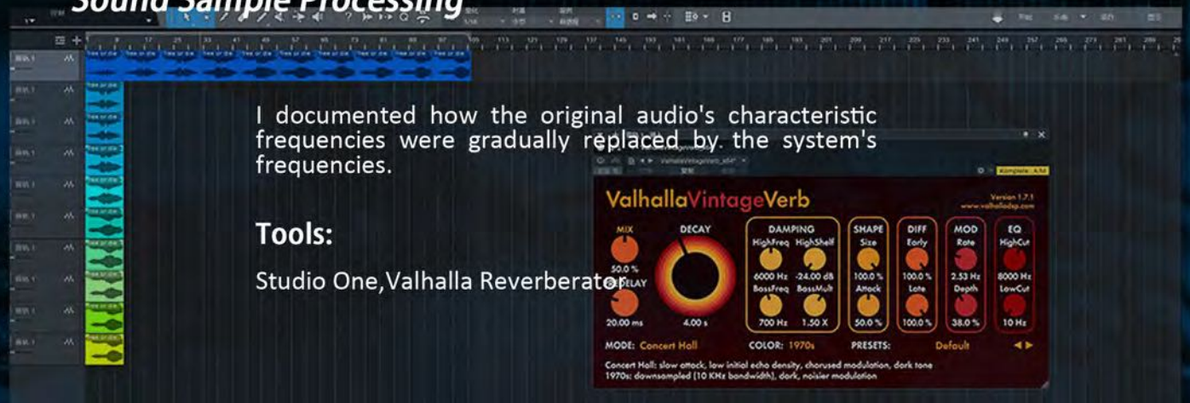


In my project, I used the same method and sampled street speeches by a Chongqing citizen during the 2022 lockdown protests. This video was banned on Chinese social media, showing how voices are drowned out by government censorship and replaced by propaganda.

“曾经有篇课文入选过我们的教材，上面说过六个字：’不自由，毋宁死。’”（There was once a text selected for our textbook, which said: 'Free,or die.'）

https://x.com/whyyoutouzhele/status/1595759992711401475?s=46&t=UFblLwP7cev7BdlSIl_UKA

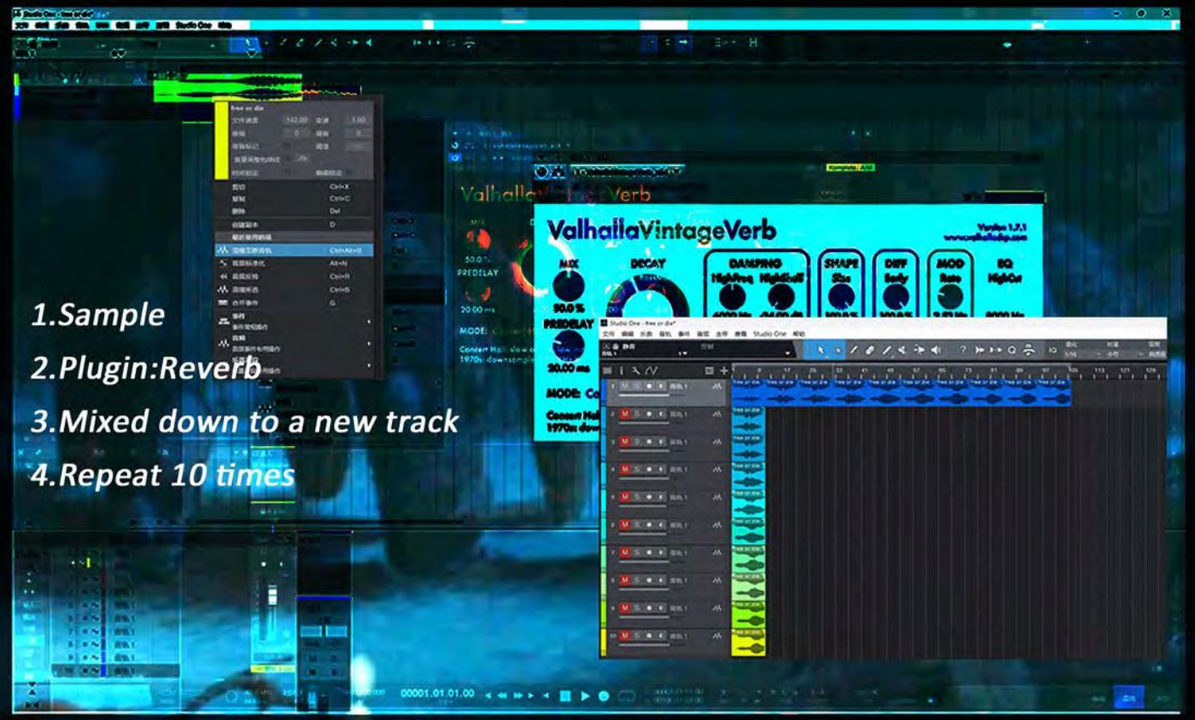
Sound Sample Processing



I documented how the original audio's characteristic frequencies were gradually replaced by the system's frequencies.

Tools:

Studio One,Valhalla Reverberator



Initial characteristic frequencies

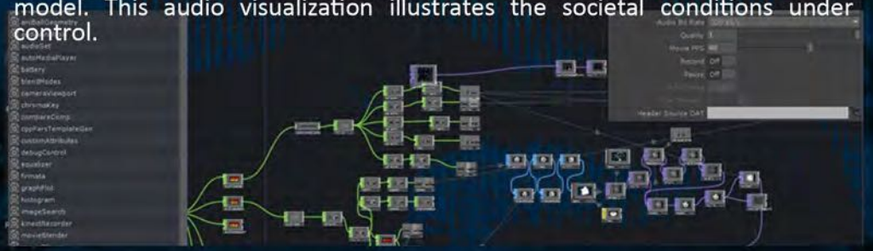
Final characteristic frequencies

Inspired by the movie “Fantastic Planet”, which tells the story of the Oms who, after being enslaved and treated as toys by the Draags, learn advanced knowledge and rebel against their rulers, I created 3D models based on the wild Oms' life hidden in tree hollows during their oppression. I focused on their environment and colors to depict a society under strict control and limited information.

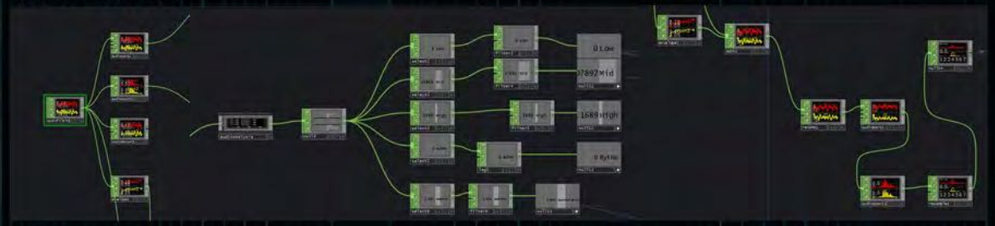
Process

Three-view

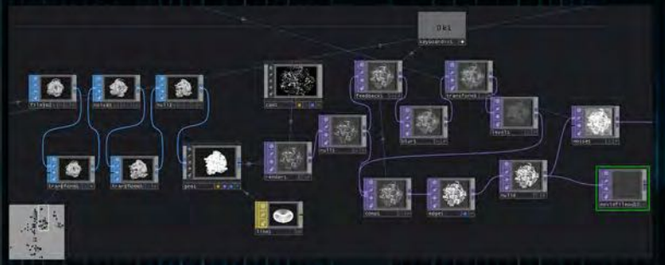
Then I used the audio from the sound experiment, utilizing its frequency, speed, and other parameters to control the morphological changes of the 3D model. This audio visualization illustrates the societal conditions under control.

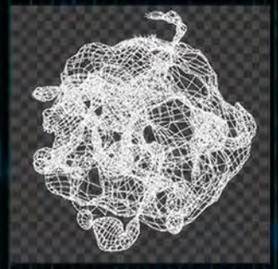


Audio Analysis

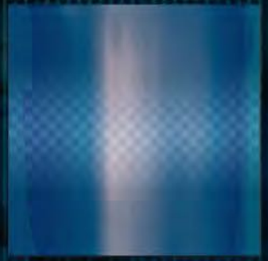


3D Model Processing

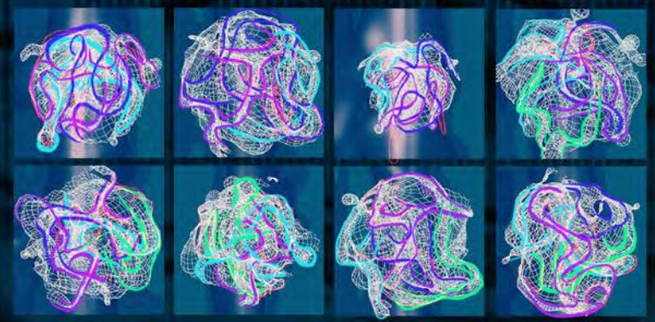




Background Processing

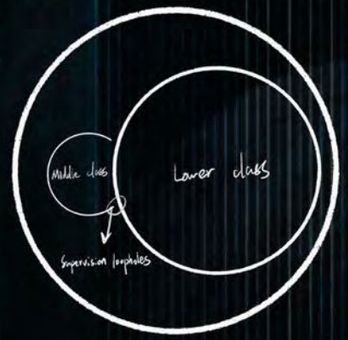


https://youtu.be/EBxTM3i_cPM



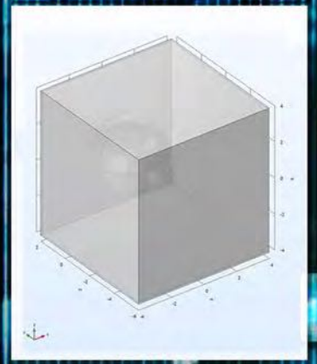
Pattern Experiment

This sketch represents a society where the middle class is smaller than the lower class, and speech is heavily censored. Most voices are suppressed, with the lower class almost entirely silenced. However, some voices from the middle class slip through supervision loopholes,, offering effective solutions.

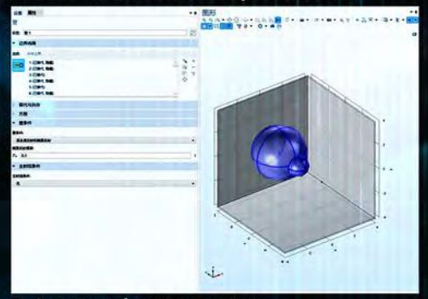


I modeled this concept and used COMSOL to simulate sound ray trajectories, capturing the leaked voices.

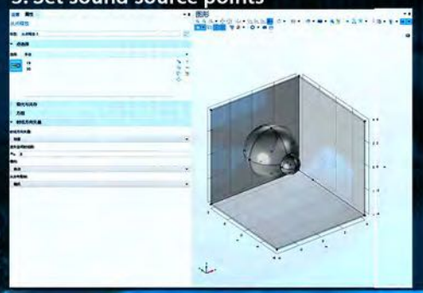
1. Modeling



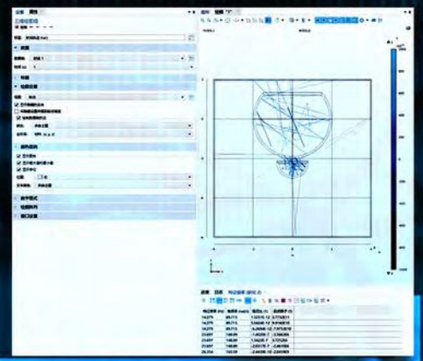
2. Set reflective surface parameters

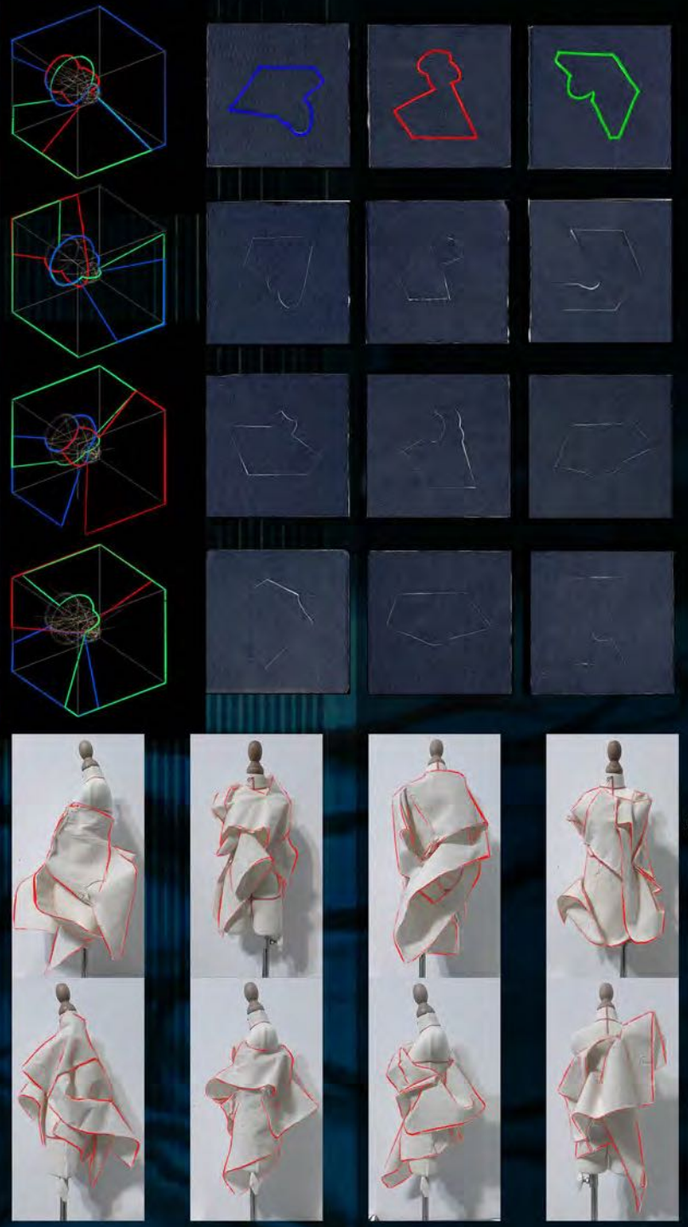


3. Set sound source points



4. Calculate ray trajectories



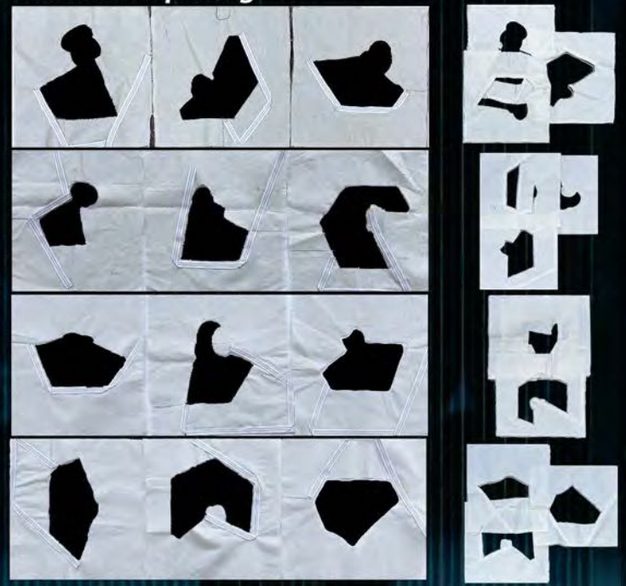


3D Experiment

3D Development

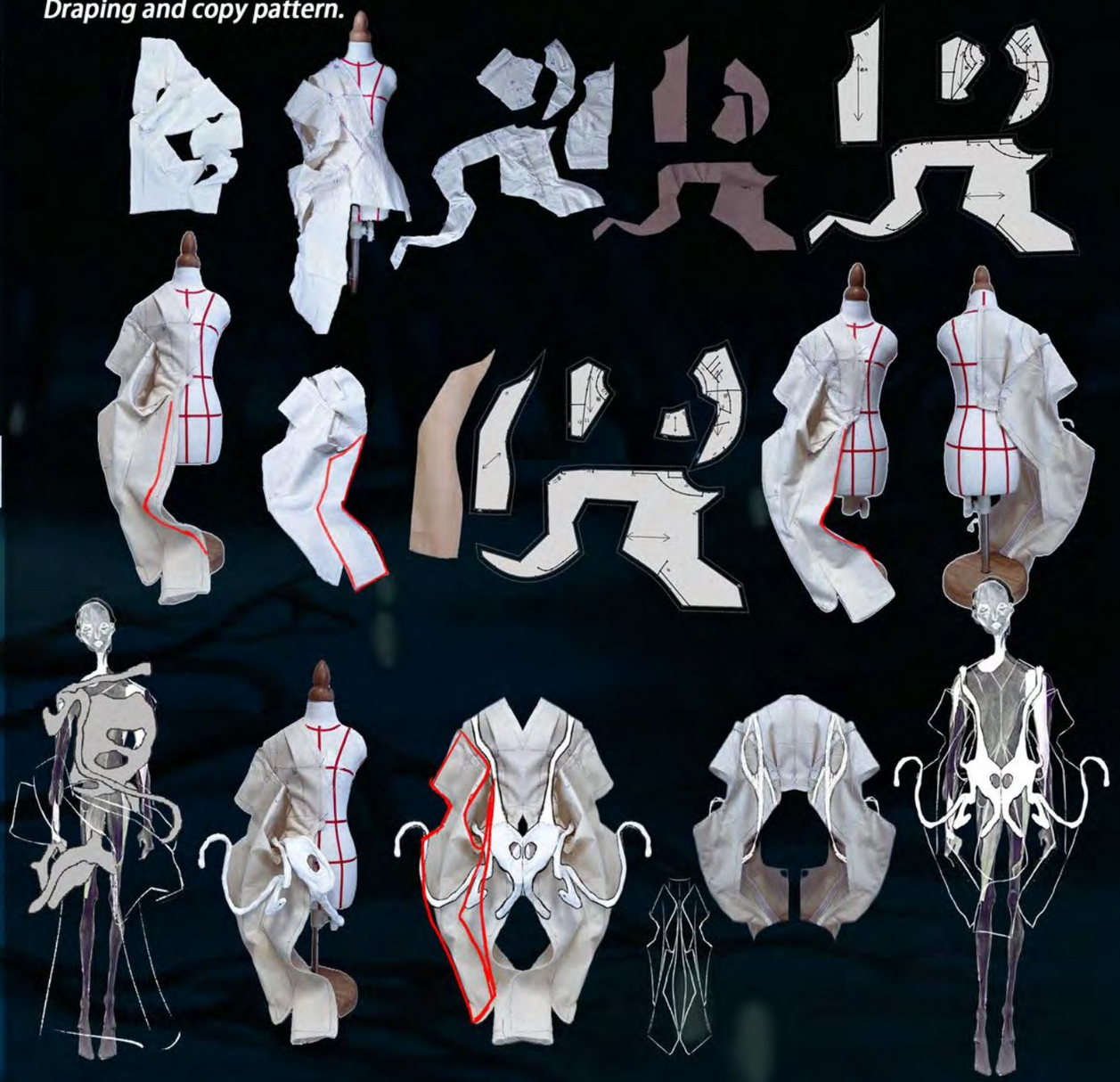
Integrate the pattern pieces with the 3D elements

Pattern Deepening



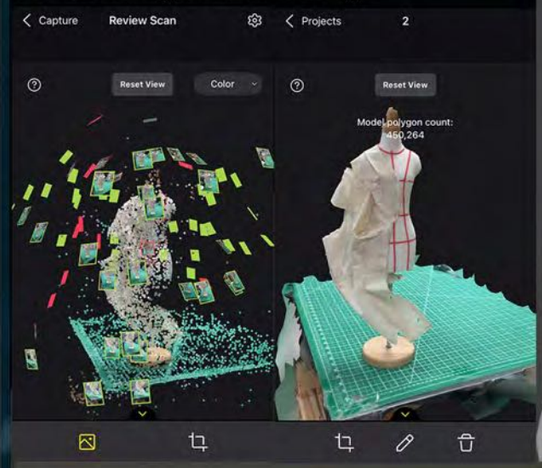
1.Applying boning along the trajectory derived from the physics experiment.
2.Combine a set of patterns into one.

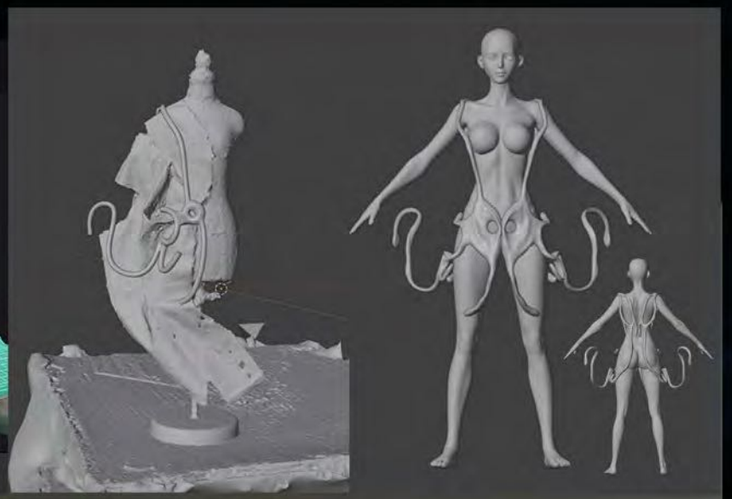
Draping and copy pattern.

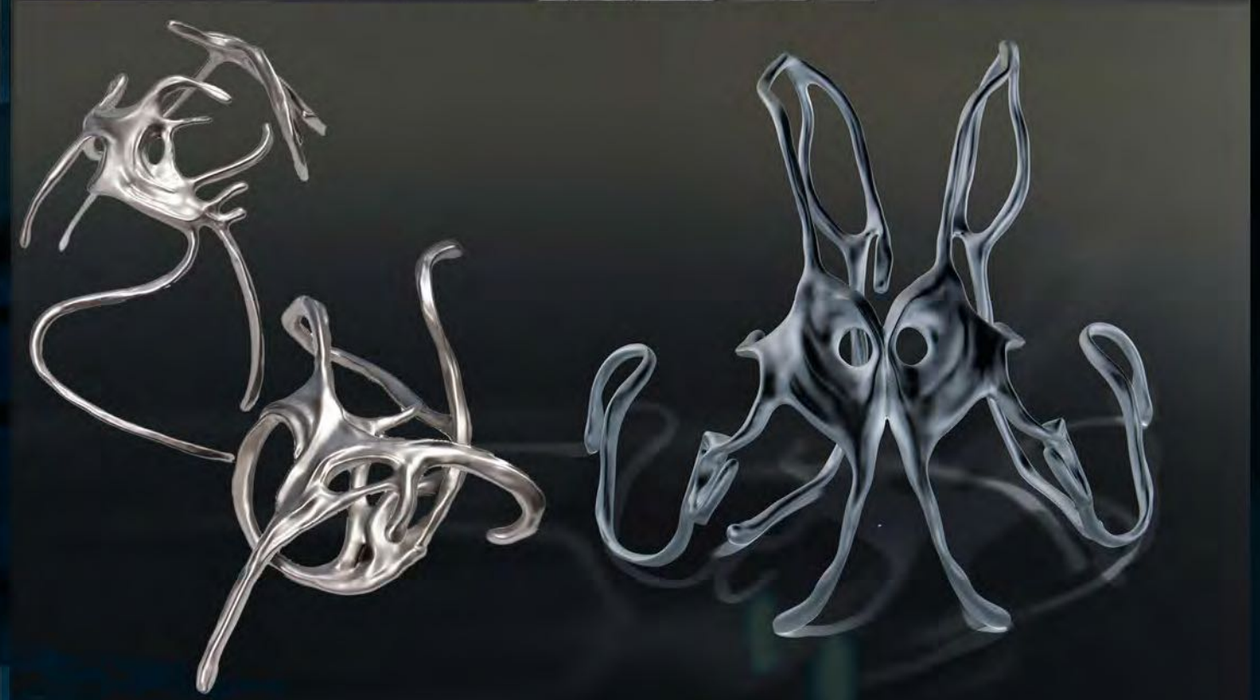


Pattern Cutting & 3D Display

3D Scanning and Modeling







Fabric Development *based on information processing*

To get through the 'wall',I want to express how information flows on fabric and write code to simulate the process of information processing.

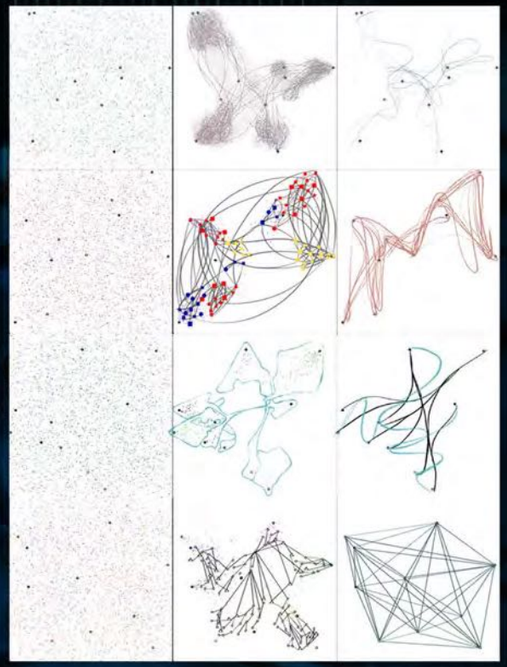
Method 1: Fabric Printing

The first approach is to use scenes from the movie as the primary ambient color, then apply a dot-matrix treatment.

Figure 18 SYMAP of Cypro-Geometric to Hellenistic components in the Khrysokhou drainage.
Key: · Zone I
+, O, # Intermediate Zone I/II
▮ Zone II
1, 5 Single component on single site locus
S Multiple components on single site locus

Method 2: Fabric Modification

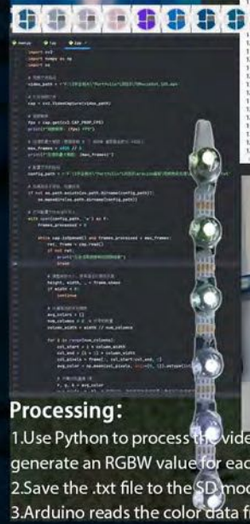
The second approach simulates the process of clustering and analyzing noise information.

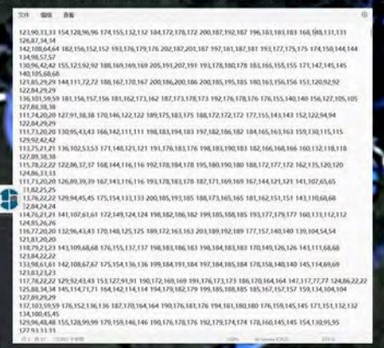


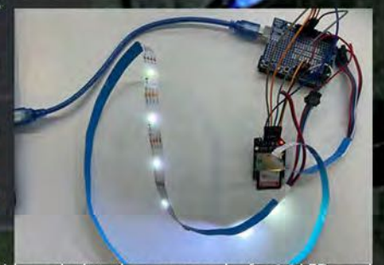
Primarily using fiber optics, a medium for transmitting light signals, to modify the fabric.

Lighting Interaction

Materials List: Optical fiber, Arduino UNO, SK9822 5V, SD Card Module







Processing:

1.Use Python to process the video, calculate the average color for 6-8 LEDs, and generate an RGBW value for each frame, saving it as a .txt file.
2.Save the .txt file to the SD module.
3.Arduino reads the color data from the .txt file to control the LEDs.


```
#include <SPI.h>
#include <SD.h>
#include <FastLED.h>

#define NUM_LEDS 8
#define DATA_PIN 4
#define CLOCK_PIN 5

CRGB leds[NUM_LEDS];
File configFile;

void setup() {
  Serial.begin(9600);
  if (!SD.begin(10)) {
    Serial.println("SD card initialization failed!");
    return;
  }
  Serial.println("SD card initialization successful.");

  configFile = SD.open("COLOR.TXT");
  if (!configFile) {
    Serial.println("Configuration file open failed!");
    return;
  }
  Serial.println("Configuration file opened successfully.");

  FastLED.addLeds<APA102, DATA_PIN, CLOCK_PIN, BRG>(leds, NUM_LEDS);
}

void loop() {
  while (configFile.available()) {
    String line = configFile.readStringUntil('\n');
    if (line.length() > 0) {
      int r, g, b, w;
      char *token = strtok((char *)line.c_str(), " ");
      int index = 0;

      while (token != NULL && index < NUM_LEDS) {
        sscanf(token, "%d,%d,%d,%d", &r, &g, &b, &w);

        // 选择降低白色通道的影响，可以乘以一个系数
        w = w * 0.2; // 将白色通道减少50%

        leds[index] = CRGB(r - w, g - w, b - w); // 减去白色通道值

        token = strtok(NULL, " ");
```

Final Line-up

Look Two

3D Clo & Fitting Process
- Look One

Look Three