

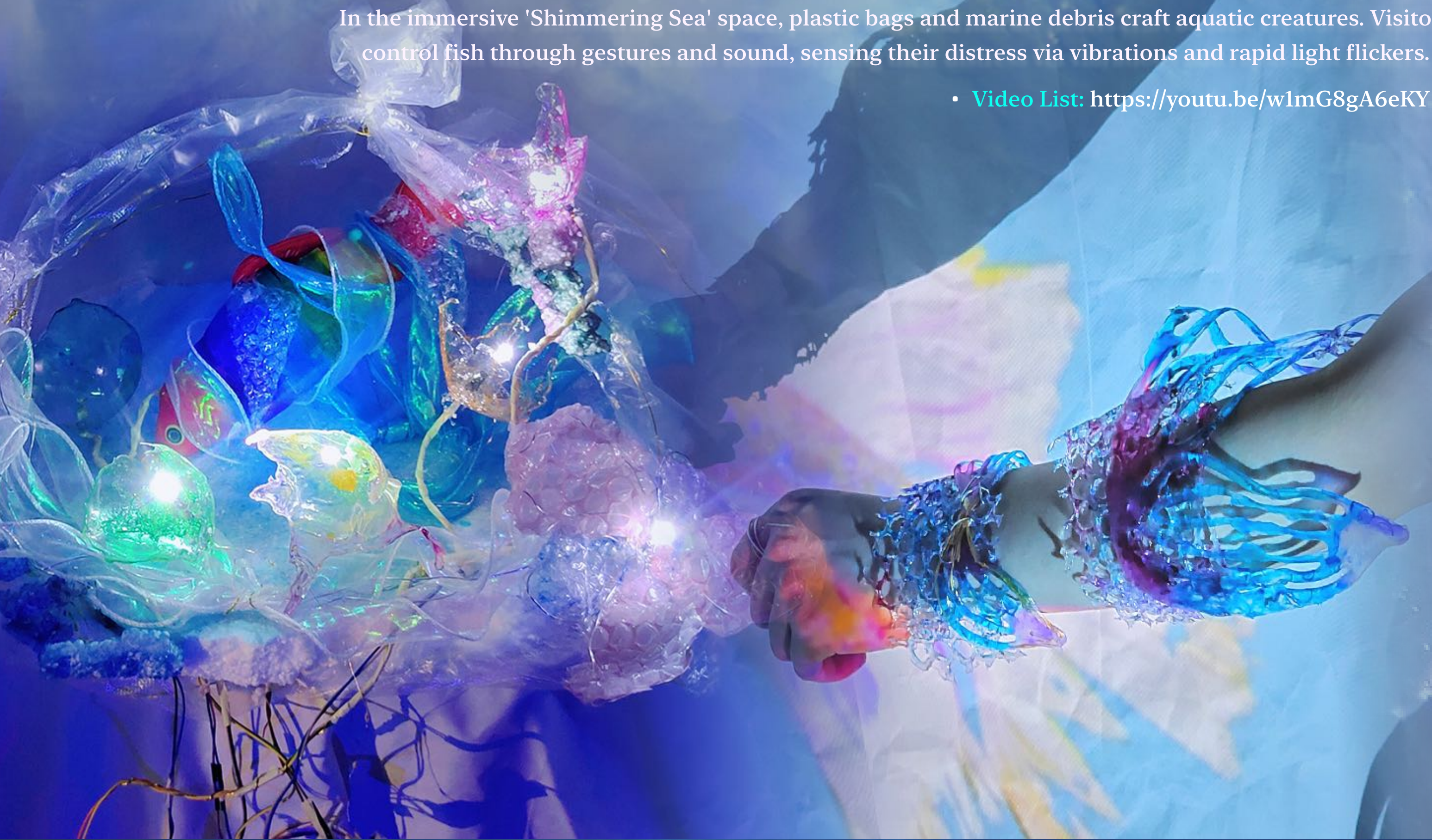
Shimmering Sea

—Human Aesthetics, Environmental Irony, and Species Crisis

Glitter pollute oceans, causing mass fish deaths. Humans counter this by genetically engineering colorful fish satirizing our pursuit of beauty amid environmental harm and a species crisis.

In the immersive 'Shimmering Sea' space, plastic bags and marine debris craft aquatic creatures. Visitors control fish through gestures and sound, sensing their distress via vibrations and rapid light flickers.

- **Video List:** <https://youtu.be/w1mG8gA6eKY>



Inspiration 1 —Glitter & Pollution: Inside The Beauty Industry's Latest Controversy



"Glitter looks like shimmery plankton. Most fish are attracted to shimmery objects that catch the light." From the microscopic glitter particles to shampoo bottles, the beauty industry has become a major factor to ocean pollution.

GLITTER MICROBEAD



glitter microbead found on beach



A single plastic microbead has the capacity to be one million times more toxic than the water around it.

Glitter has sharp edges that pose more of a hazard at tearing and perforating guts of fishes.

It is estimated that 8 million tons of plastic enter our oceans each year. Currently, over 90% of fish have plastic fragments and microplastics in their stomachs.

Inspiration 2 —Human beings impose the aesthetic preferences onto animals



Teacup puppy

Sought after for their small size, face the problems due to breeding practices that choose to prioritize miniaturization over their well-being



Scottish Fold

Resulting in health issues like hearing problems, joint concerns, and neurological complications, raising ethical and welfare concerns.



Gene-edited fish

By introducing exogenous genes into the fish's body, fish can acquire specific aesthetic features, such as denser scale and more vibrant colors.

Brain Storm

—Excessive aesthetics could lead to marine pollution and drastic fish population decline

Glitter and other chemical substances cause marine pollution, resulting in mass fish deaths and a sharp decline in their numbers. Simultaneously, humans employ genetic mutation techniques to create colorful fish, aligning with human aesthetics.



Mind Map

—Overall process to prompt reflective experience on excessive aesthetics and animal right



Animation

—Using TouchDesigner for Gesture-Controlled fish & Blender for 3D Fish Animation

I utilized TouchDesigner for Particle Ocean and Gesture-Controlled Fish, and Blender for 3D Fish Animation, along with employing interactive media screen forms such as projection and Leap Motion sensor for interaction.

1 gesture-controlled fish

Using TouchDesigner to transform 2D fish into a 3D particle cloud.

- 1 Bring hand near sensor
- 2 Hand closer, fish pulsates
- 3 Dissolves into particles

2 glitter fish

Creating a 3D animation with Blender to depict fish created under human-imposed aesthetics.

- 1 Modeling
- 2 Connect geometric node
- 3 Draw animation path
- 4 Coloring and rendering

Color swatches for the fish models:

- #F2CBEF, #D6ADD5, #F9B0F1, #F7E62C, #FFE988, #FDF7E7
- #18C256, #1D6AD3, #32BBE5, #F7E62C, #D329F2, #B394CA
- #F9787F, #ECD75D, #5ECDE4, #0276E1, #3DCAF9, #BADFDA

Process – Fabricate the arm device and main device

Arm device

1 Shape the materials using UV glue and the waste plastic foam sheet, then proceed with heating and curing under UV light.



2 Coloring the components with glass paint

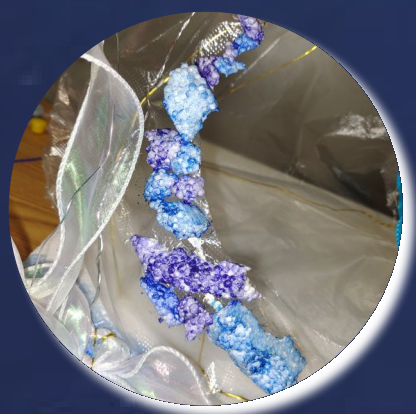


3 Carefully assemble the components into the shape of a fish and then wear it on the arm. The use of vibrant, multi-colored plastic fish symbolizes the impact of cosmetics on ocean pollution and marine life.



Main device

I create a visually stunning marine environment using an array of plastic pollutants, symbolizing the shackles imposed on the oceans by human excesses in the pursuit of beauty.



seaweed crafted from foam board



flowers made from bubble wrap



plants made from plastic ribbons



an ocean made from plastic bags



Assemble a mirror frame using wood, apply a layer of white paint to the frame, and decorate the mirror with various plastic ornaments.



To enhance the visual presentation, plastic bags are utilized to bind the fish, while all marine life is meticulously crafted from plastic waste materials, symbolizing the pervasive issue of ocean pollution.



Utilize UV glue to craft plastic flowers and add vibrant colors to enhance the look



Programming – Arduino pattern sensor flicker

Flow chart

Sound

reach pitch

Sound sensor

high output signal

Bread Board

transmit signal

Arduino UNO board

transmit signal

Computer

transmit signal

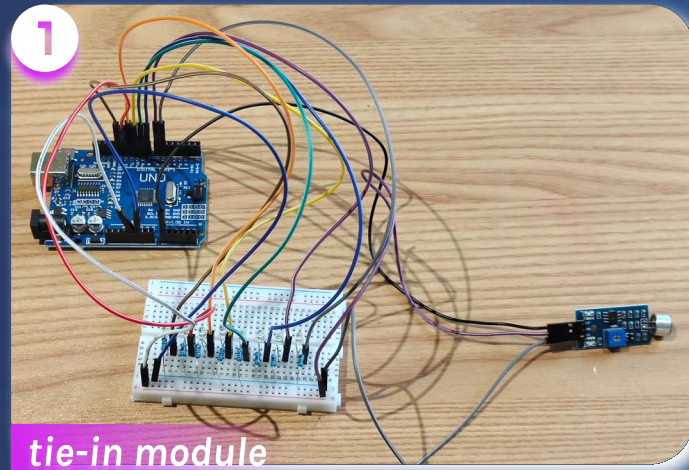
Arduino IDE

the 1 signal

LED light

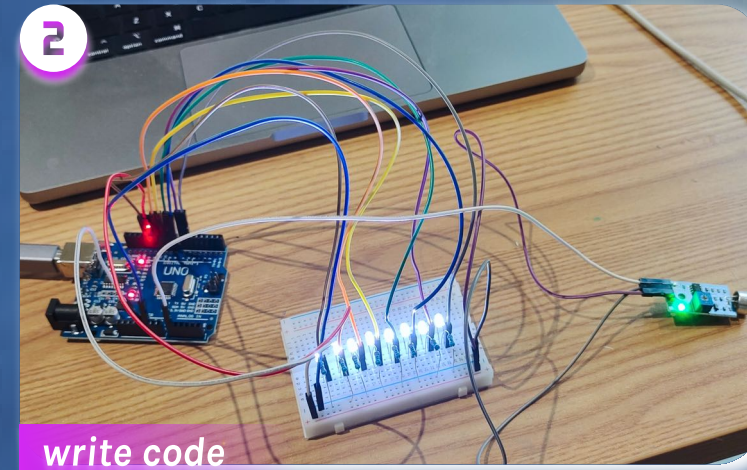
the 0 signal

Go off



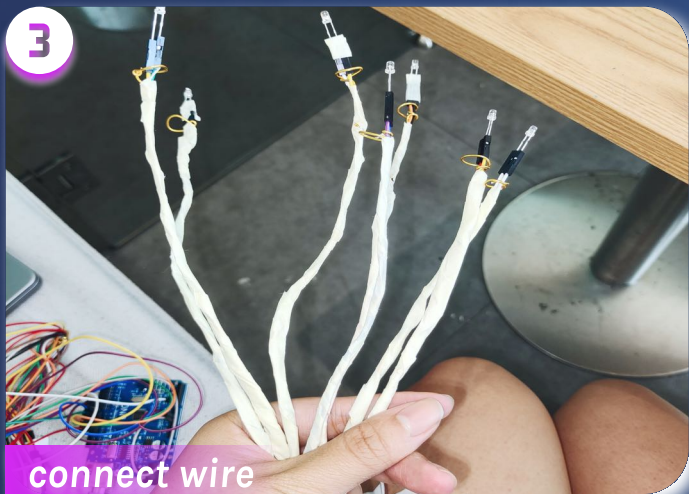
1 tie-in module

Connecting light bulbs and resistors to a breadboard, and using jumper wires to connect the breadboard to an Arduino UNO and a sound sensor



2 write code

Writing code on the Arduino IDE to control the lights to turn on one by one when a certain level of sound is reached



3 connect wire

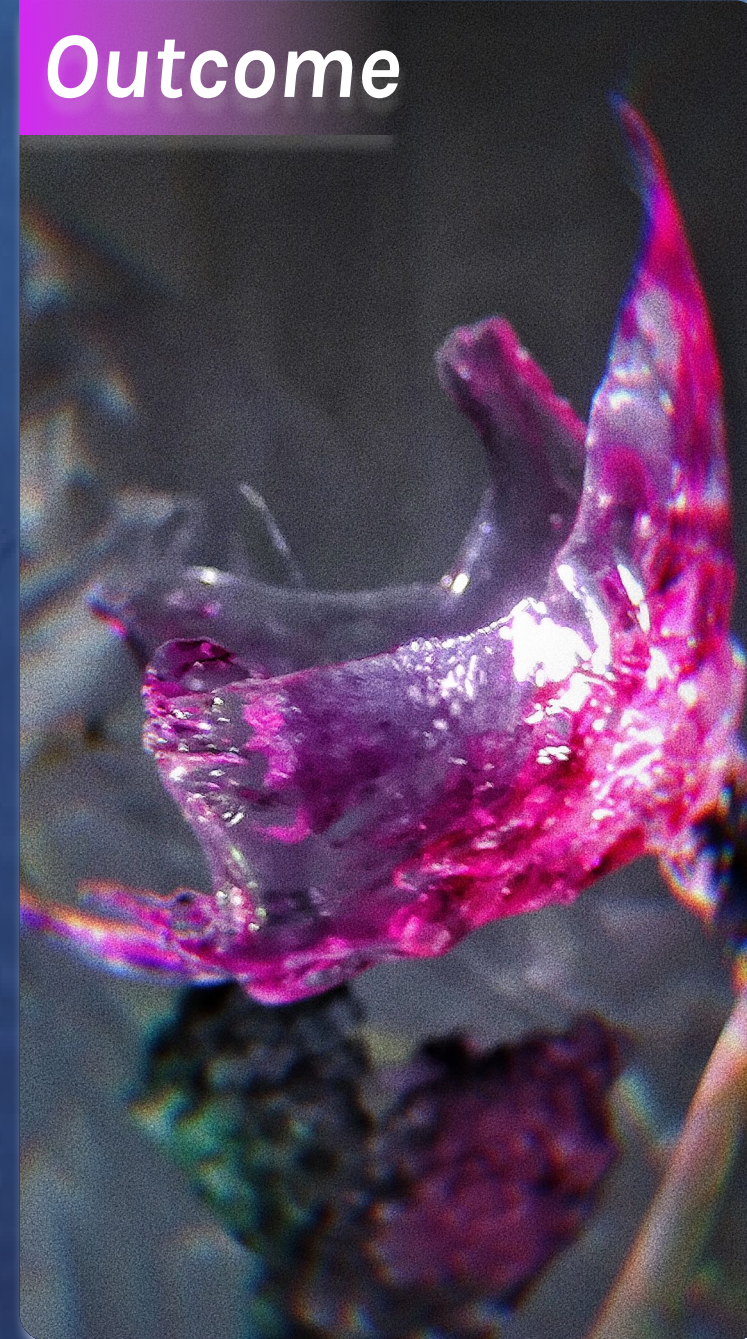
Connect the wires and the light bulb, then wrap them with masking tape.



4 Attach bulbs

Attach the bulbs to the flowers made of UV glue

Outcome



Testing



Lights can be turned on one by one



Testing under a blue background



Add fish to test the vibration

Interaction

—Enter the room and follow the indicator tone for an immersive experience



Enter the room and notice a mirror



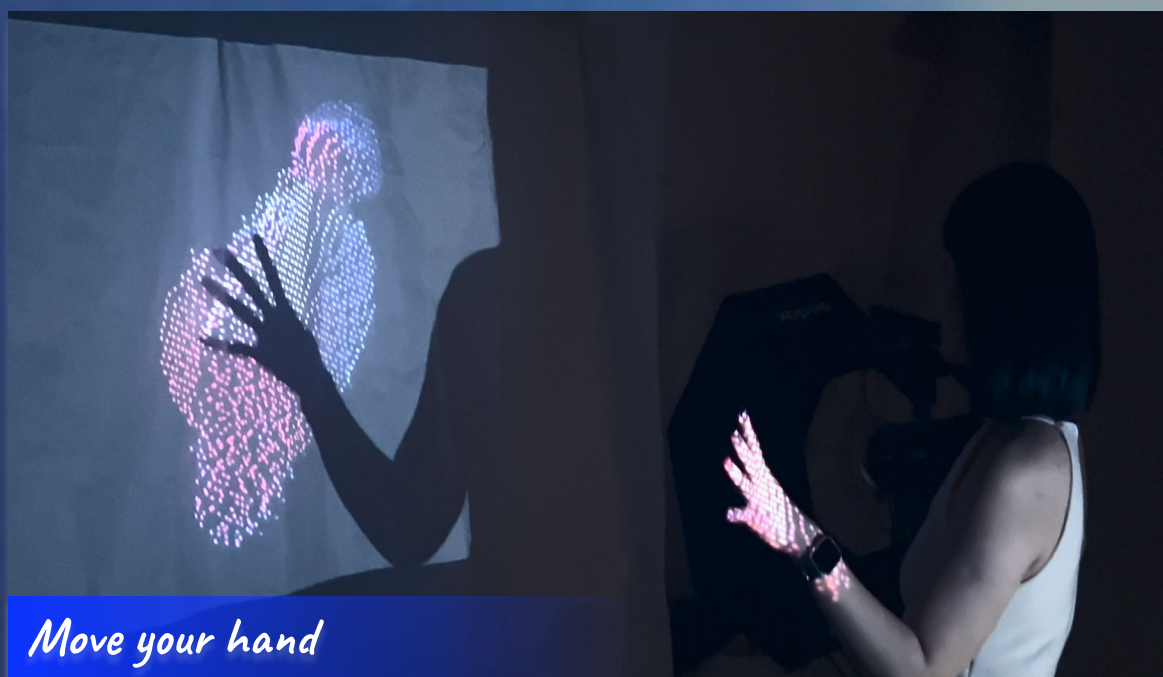
Equip the arm device



Sit down in front of the mirror



Pick up the glitter for makeup



Move your hand



Control the shape of fish



*Approach the device, and one by one,
the lights illuminate while the fish
vibrates vigorously*