



Hi, I'm Zhiman Bai.

Research Project 1

‘Save Your Self’

Reflecting on Shyness as an Aspect of Human Diversity Through a Speculative Installation



[1] The exhibition was held at the Northeastern University Center for Design as part of the MFA thesis exhibition in April 2024.

Shyness

Limitation, Superpower, or Aspect of Human Diversity?

- Shyness is often stigmatized and understood as reticence or social deficiency.
- Shyness is generally perceived as a negative trait in society, obscuring positive aspects that might accompany it, such as modesty, heightened empathy, and thoughtfulness.
- This widespread stereotype can amplify concerns among shy individuals regarding potential negative judgment and rejection in specific social situations.

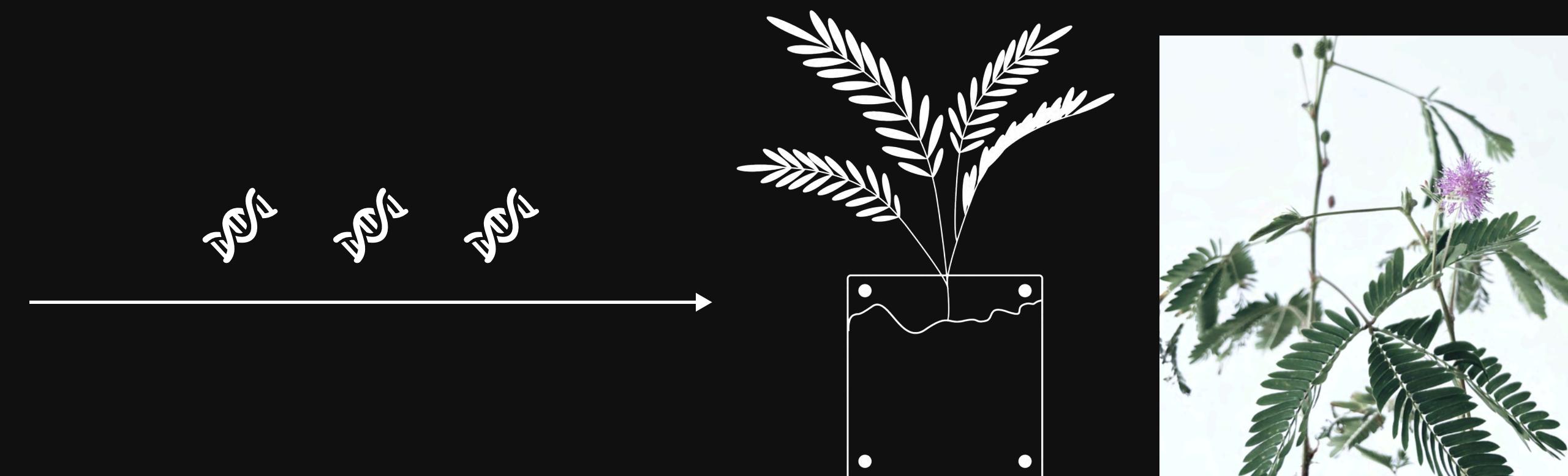
Let's Imagine in 2050

What if the cultural shift towards
extroversion intensifies?
What will happen and how will it
change people's lives?

In 2050

Concealing and Preserving Shyness Memories

Personal Shyness
Experiences and Story



text or digital formats
(JPEGs and MP3s)

transforms the information into a
biological DNA format

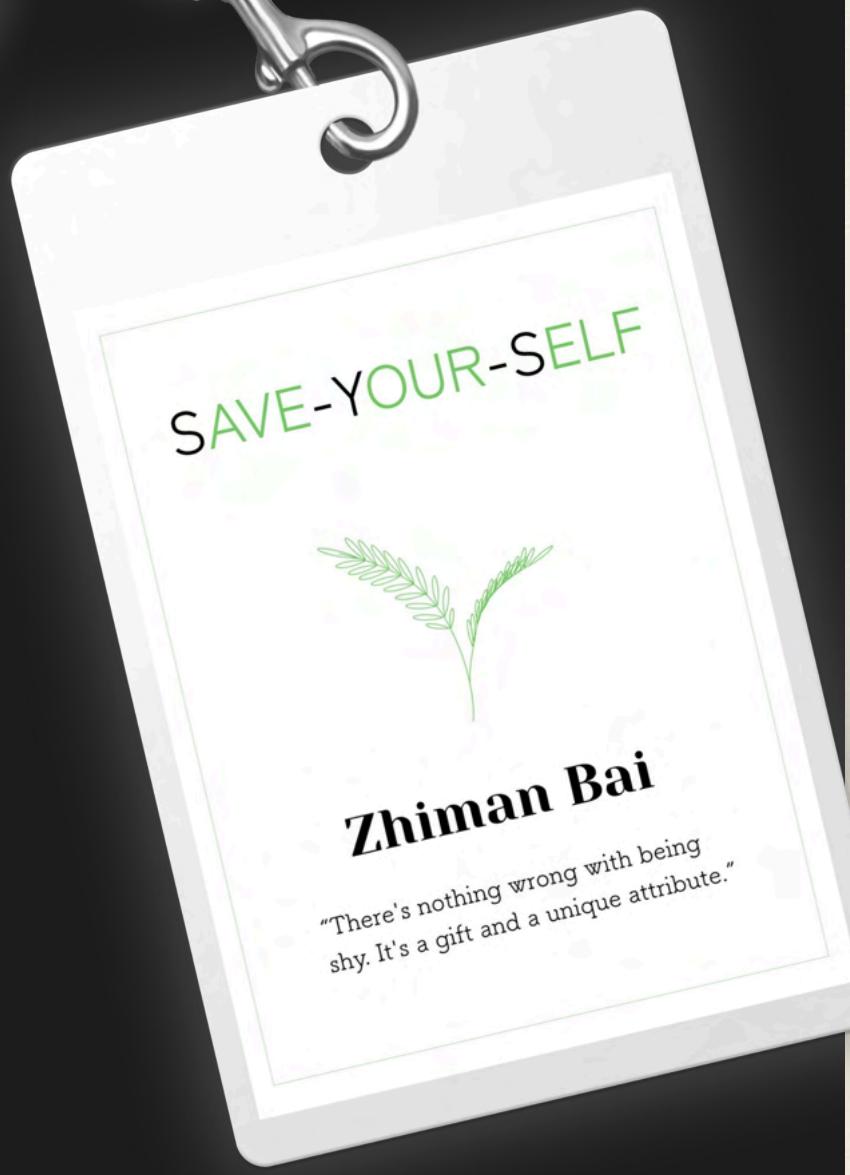
Mimosa Pudica a metaphor for individuals
with shyness.

[1] Mimosa Pudica, commonly known as the sensitive plant, sleepy plant, action plant, touch-me-not, or shame plant.



As a member of the organization "Save Your Self," I deeply value shyness and continuously gather information on trends in extroverted societies.

The Extroverted Society of 2050



Trends?

We need Self-reflection?

Events for Extroverted

Future Times
BREAKING NEWS
The Extroverted Era: Unlocking Opportunities in the Digital Age

Nowadays, a seismic cultural shift has emerged, compelling extroverted personalities to the forefront of societal success. Since the onset of the COVID-19 pandemic, our world has witnessed a profound transformation, with virtual and digital media, the landscape of social activities has undergone a radical evolution. Personalities who thrive on social interaction have proliferated, transcending both online and offline channels. The virtues of sociability, extraversion, and charisma are celebrated as key assets in navigating the modern world.
Traditional office settings have given way to a burgeoning digital community, where virtual interactions reign supreme. Through real-name registration and authentic profile descriptions, individuals can now connect with experiences that closely mirror office interactions. The fusion of physical and virtual realms has created a dynamic environment where networking and personal growth are no longer limited by geographical boundaries.
Yet, this cultural shift has not been without its challenges. A society characterized by constant external stimuli and continuous social engagement has emerged, placing a premium on extroversion and active participation in external spaces. As individuals seek opportunities for social interaction, they turn to those who excel in the art of social interaction. In this extroverted era, the ability to engage in meaningful, meaningful connections is paramount to unlocking greater opportunities for personal and professional success.
As we venture further into the digital age, one thing is clear: the extroverted personality will play a central role in shaping the future of human interaction and innovation.

The Daily News
The Extroverted Workplace
SOCIAL MEDIA: THE CATALYST FOR EXTROVERTED DOMINANCE IN MODERN SOCIETY

In today's digital landscape, extroverts are thriving like never before. The rise of social media platforms has created a dynamic environment where networking and personal growth are no longer limited by geographical boundaries. As individuals seek opportunities for social interaction, they turn to those who excel in the art of social interaction. In this extroverted era, the ability to engage in meaningful, meaningful connections is paramount to unlocking greater opportunities for personal and professional success.
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Join the conversation on the Extroverted Society! From virtual gatherings to digital communities, the world is buzzing with energy and connectivity. Share your thoughts on the benefits and challenges of living in an extroverted culture. Let's connect and explore together!
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Extroverted News Daily @EN_daily
BREAKING Extroverted Society on the Rise! From virtual hangouts to buzzing social scenes, the trend is clear: CONNECTION IS KING. Join the movement and embrace the energy of this thriving society! #SocialRevolution

Digital Extrovert Community @DEC
BREAKING NEWS
The Extroverted Society Takes Center Stage! From bustling city streets to digital communities, the spotlight shines on constant engagement and social connection. Join the conversation as we explore the vibrant heartbeat of this dynamic world! #BreakingNews #ExtrovertedSociety

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ALERT: In the Extroverted Society, Reflective Moments Are at Risk! Don't let constant surveillance and shallow interactions overshadow the importance of introspection and deep connections. It's time to reclaim your space for reflection!

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By Zhiman Bai | STAFF WRITER
April 9th, 2050 5 am EDT

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#ExtrovertedCulture #DigitalCommunity 🌎🌟

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The Extroverted Society of 2050



Alexander Chen
@Alexander Chen

"Just another day thriving in this extroverted society! 🌟 From virtual meetups to networking events, every interaction fuels my passion for connection. Who else is loving the buzz of social energy today? Let's keep the momentum going! 💬🚀"



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- Beyond the Screen: Extroverted Traits Redefine Social Interaction in 2050
- Unlocking Success: How Extroverted Personalities Dominate the Digital Landscape

The Daily News

Issue #01

Friday
5 August 2050



"Social media serves as the catalyst propelling extroverted dominance in modern society, shaping social interactions and amplifying the influence of outgoing personalities."

SOCIAL MEDIA: THE CATALYST FOR EXTROVERTED DOMINANCE IN MODERN SOCIETY

In the dynamic landscape of modern society, extroversion has emerged as the guiding force, shaping social interactions, work dynamics, and personal identities. With the advent of digital platforms and virtual communities, the cult of extroversion has found fertile ground to flourish and proliferate.

Promotional campaigns extolling extroverted traits saturate both online and offline spaces, heralding the virtues of sociability, assertiveness, and outward expression. Individuals are inundated with images and narratives glorifying the gregarious and outgoing, reinforcing the notion that success and fulfillment lie in being visibly active and engaged.

Real-name registration and profile pictures in virtual communities serve as digital avatars of this extroverted ideal, compelling individuals to present themselves in a manner that aligns with societal expectations. The pressure to conform to these norms leaves little room for introspection or contemplation, as individuals are swept along by the relentless tide of social activity.

In this hyperconnected world, where visibility is prized above all else, the allure of extroversion

The Extroverted Workplace

In the extroverted workplace, collaboration and communication thrive, fostering a dynamic environment where networking and social interactions are key drivers of success.

In today's competitive job market, the extroverted persona is often prized in professional environments, with outgoing and assertive individuals seen as natural leaders and team players. The rise of social networking platforms has further emphasized the importance of networking and building professional relationships, with extroverted personalities thriving in environments that prioritize social engagement and collaboration. From networking events to virtual meetings, extroverted professionals excel in making connections, building rapport, and seizing opportunities for career advancement.

The Rise of Extroverted Influencers

Looms large. Social interactions that once took place in physical spaces now unfold seamlessly in the digital realm, blurring the boundaries between public and private spheres. The result is a society where extroverted traits reign supreme, and the quieter, more introspective qualities embodied by shyness are increasingly marginalized.

Yet, amidst the constant pressure to conform to extroverted norms, there are voices of dissent. Some individuals, while outwardly embracing the extroverted ideal, harbor a sense of unease about the relentless pursuit of visibility and social validation. They yearn for moments of solitude and reflection in a world that values constant social engagement.

As we navigate this extroverted landscape, it is essential to recognize the diverse spectrum of human experience. While extroversion may dominate the cultural narrative, it is not the sole measure of individual worth or success. By embracing the richness of human diversity and celebrating the myriad ways in which we express ourselves, we can create a more inclusive and compassionate society for all.

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129 230 23.1k 33.1k

William Walker @William · 11/25/2050

But isn't it a personal choice how much we engage with the digital world? If someone feels overwhelmed, they can always take a step back. #DigitalDetox #SelfCare".

234 340 13.1k 3.1k

Isabella Brown @Isabella · 11/25/2050

It's not that simple when the digital community imposes constant surveillance. We need to address the systemic issues that lead to this lack of privacy and space for reflection. #PrivacyMatters #TechOverload"

324 843 35.1k 24.1k

Ike Chen @IKECHEN · 11/25/2050

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Mia Taylor @MiaTT · 11/25/2050

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"People need moments of self-reflection in an exhausting, extrovert-driven society!"

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WE DELIVER DAILY UPDATES TAILORED FOR THE EXTROVERTED COMMUNITY



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392 Retweets 930 Likes

36.1k Likes

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Shyness
Information

Remedy for
Extroverted
Society



Retrieving Self-Reflection Data from Mimosa Pudica Plant DNA



Our organization, 'Save Your Self', has developed a device that can be paired with a plant. This device facilitates individuals to retrieve information from plant DNA, decode it, and transform it into various keywords and prompts for self-reflection.

Different plants can provide diverse information related to self-reflection prompts. People can select their preferred plant based on the specific aspects of self-reflection they wish to focus on.

This allows people to engage in moments of self-reflection, disconnect from the digital world, reconnect with themselves, and embrace solitude and peaceful contemplation to preserve their unique selves.

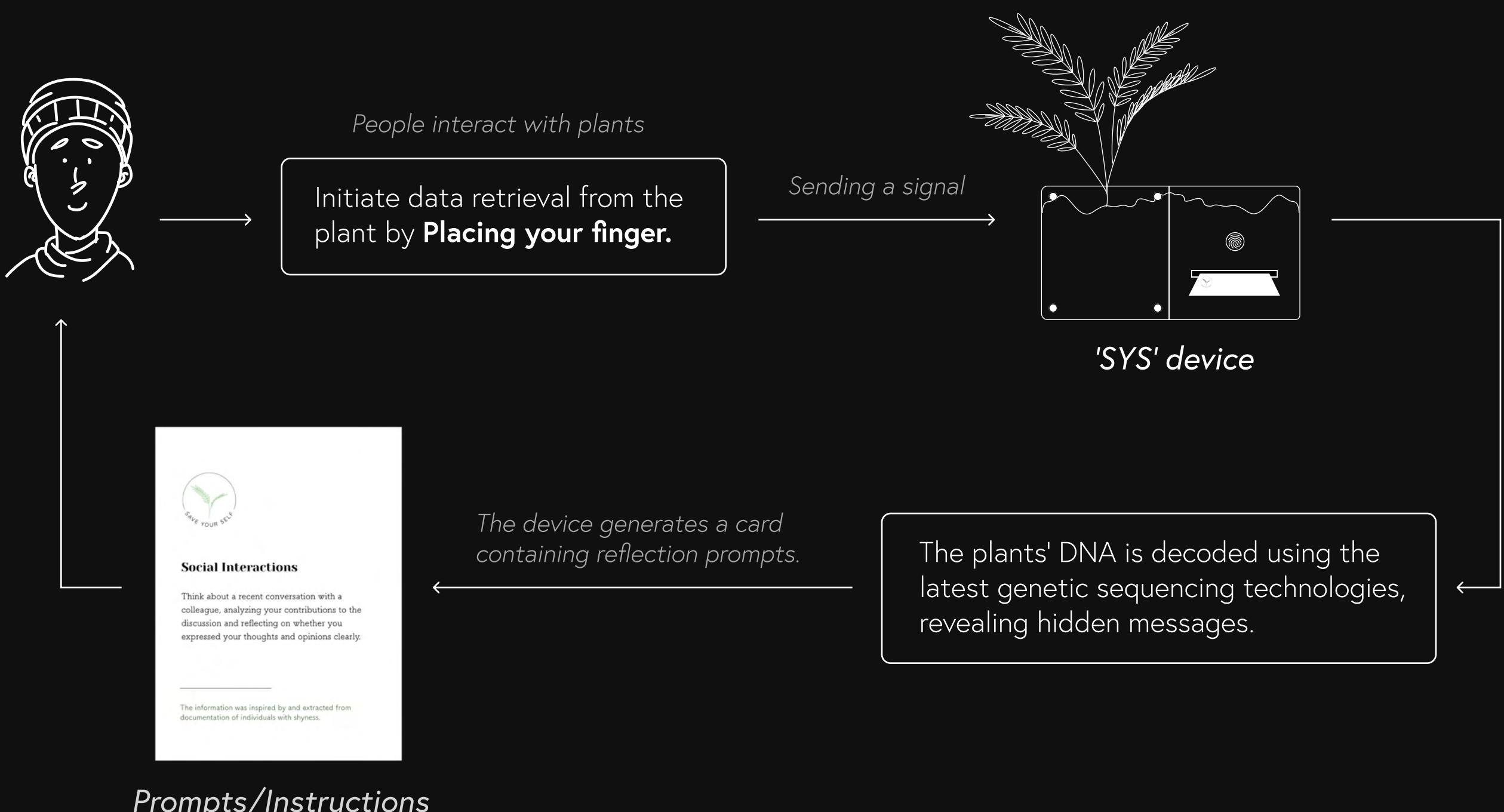
To acknowledge the resources of each prompt, all information from plant DNA is stored by individuals with shyness.

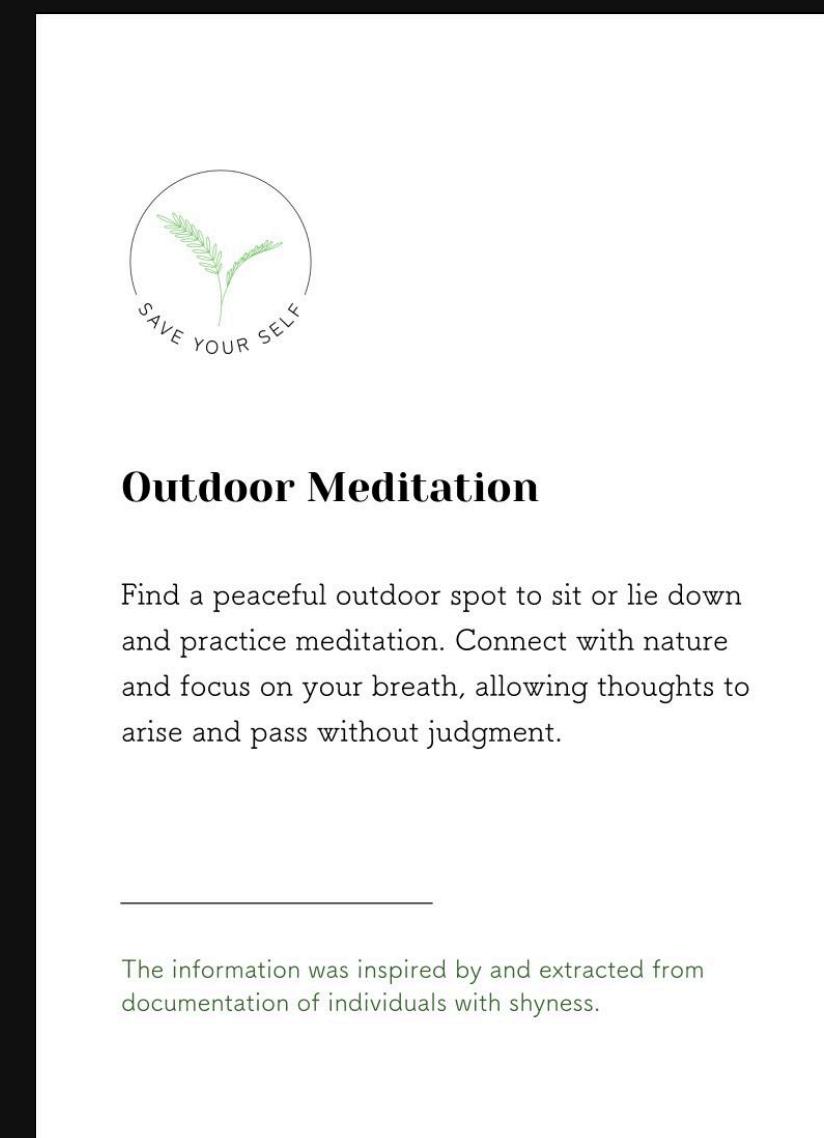
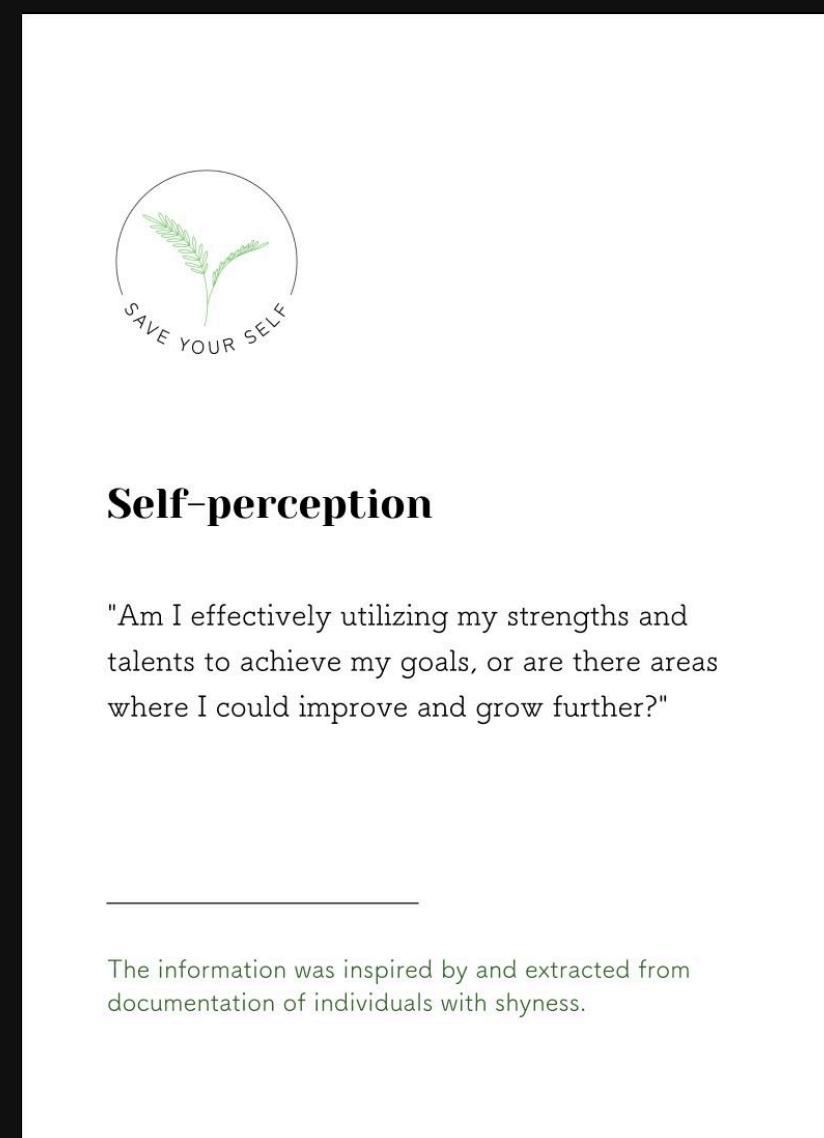
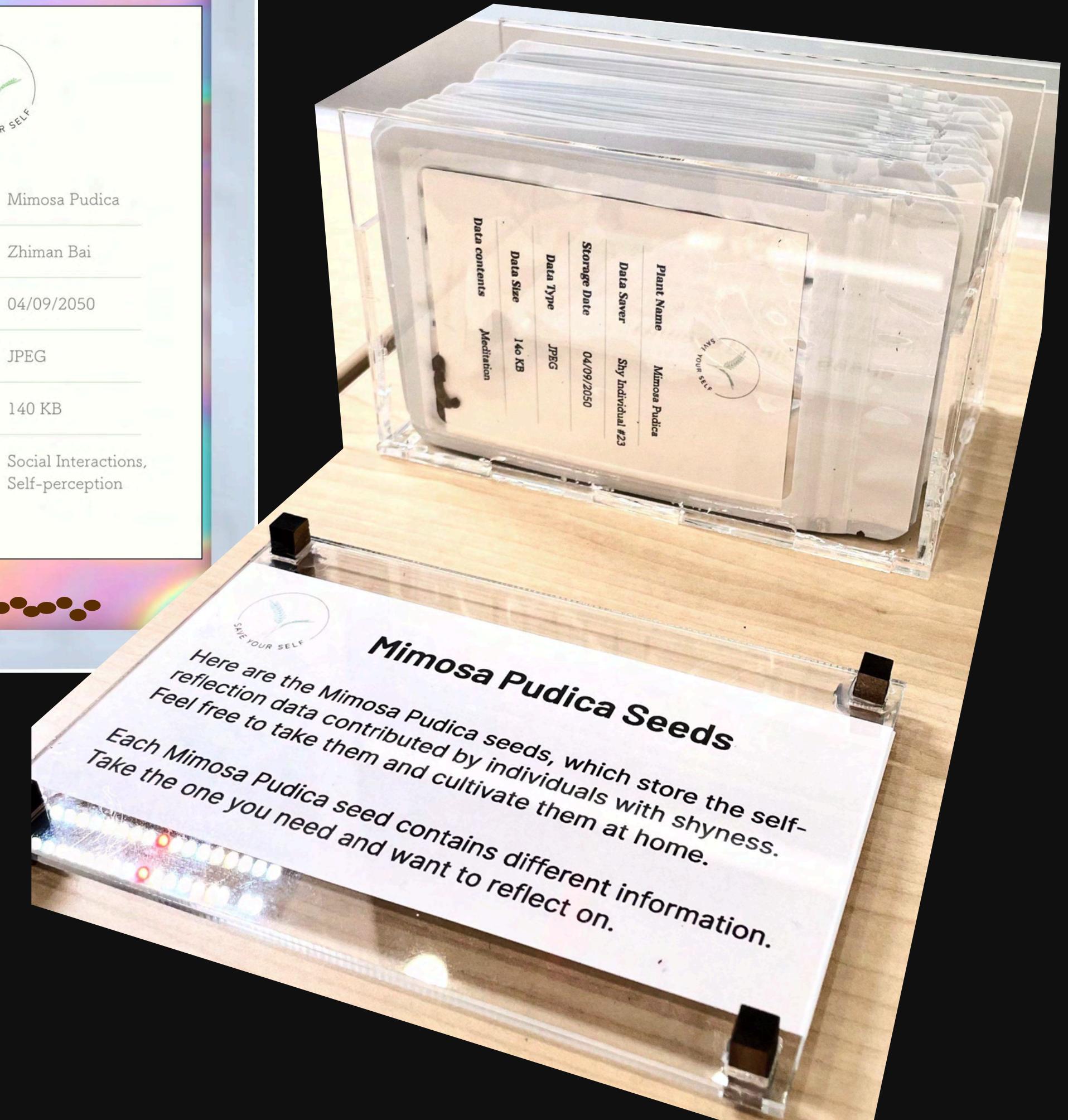
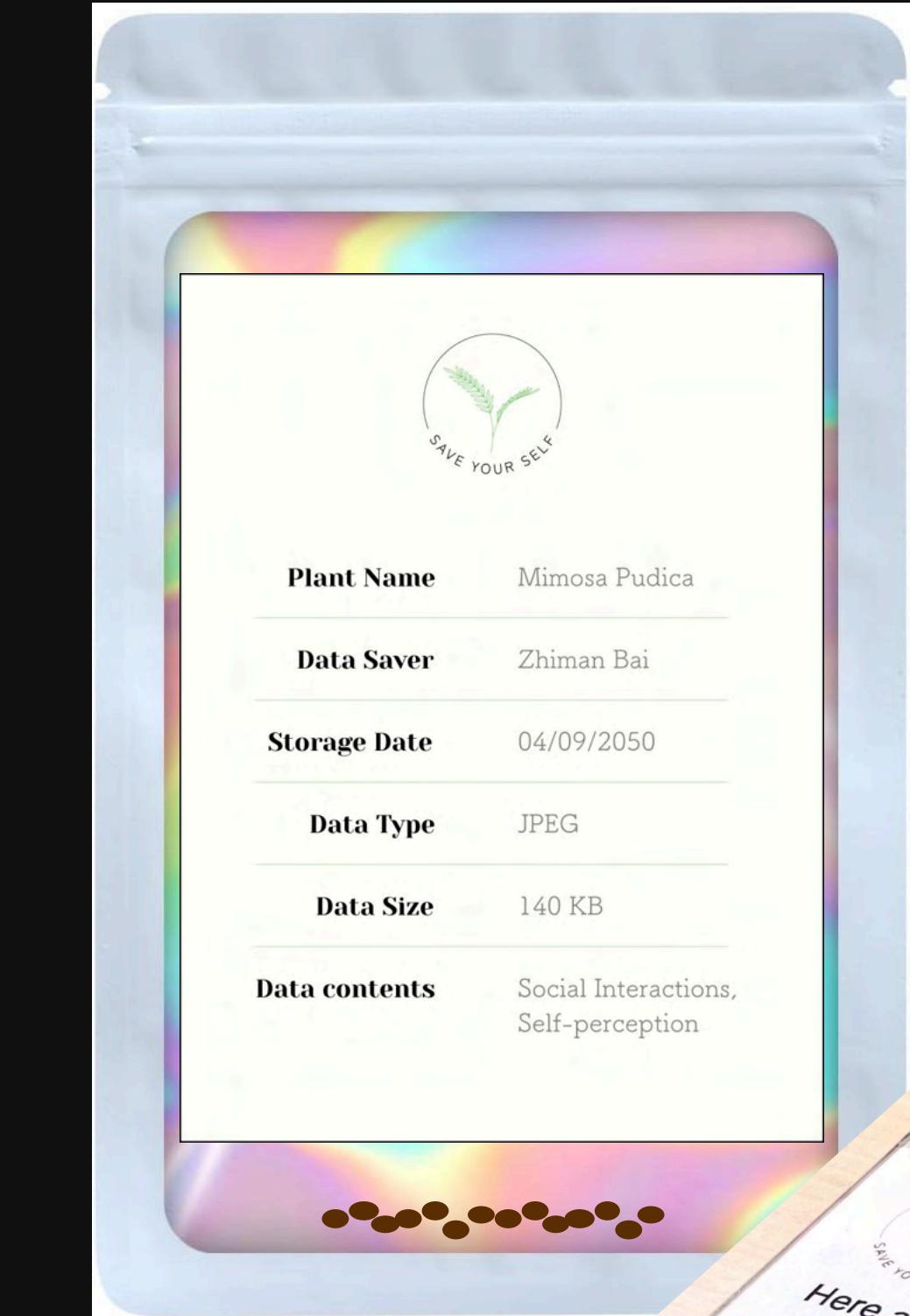
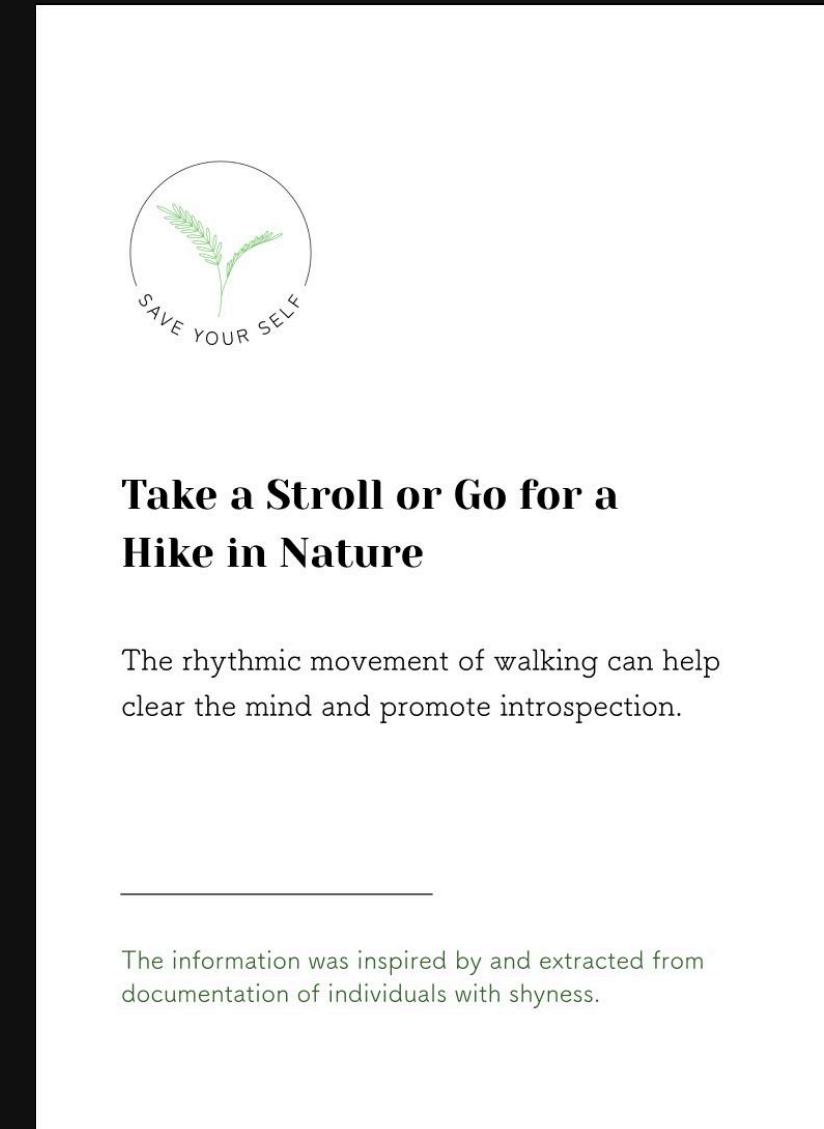
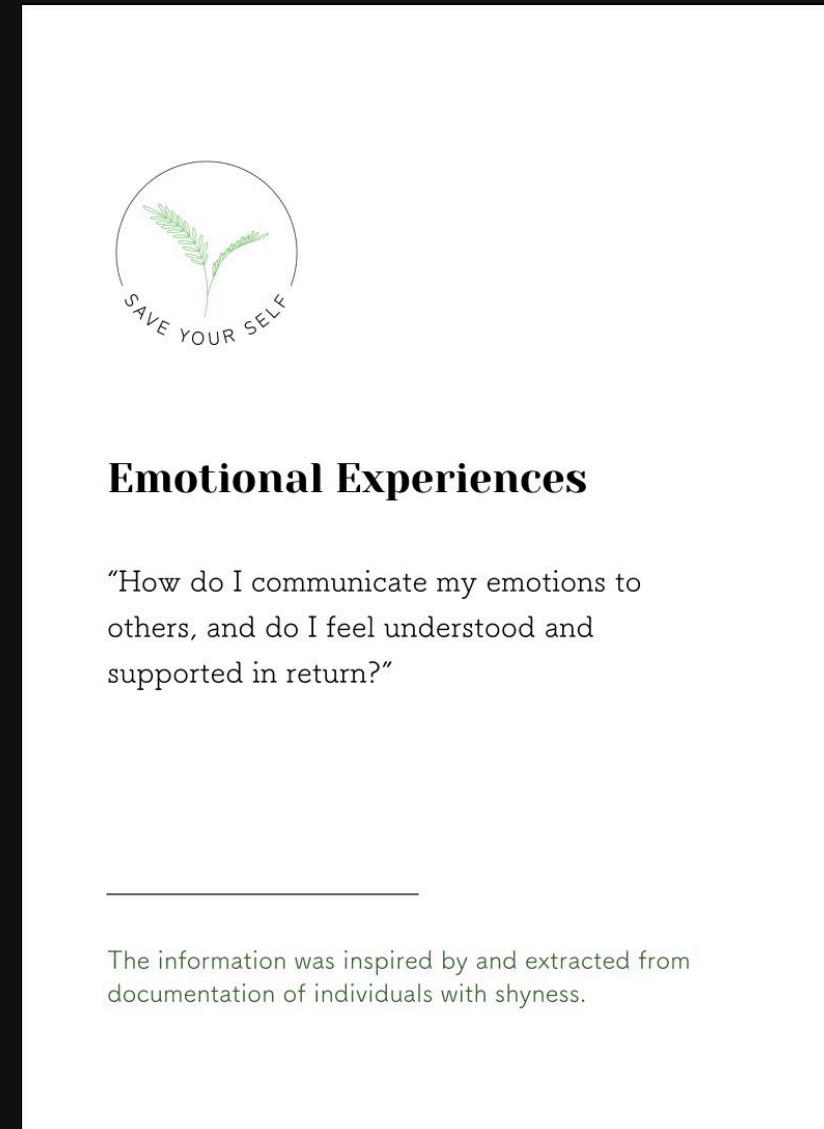




"Save Your Self"- A Device to Assist Self-Reflection in 2050

How It Works





Self-reflection prompts

Mimosa Pudica Seeds Storing Shyness Information

Methodology

Qualitative Research - Interviews

- Four individuals who self-identify as shy.
- Aged 18 and above.
- Both students and faculty members at Northeastern University.

Speculative Design Approach



Theoretical Frameworks

Innate Need for Social Acceptance. *The presence of an innate human tendency to connect with others and cultivate diverse relationships¹.*

Shyness and Social Acceptance. *One of the strongest predictors of shyness (...) is a high desire for social approval and fear of disapproval¹.*

Personal Development through Empowerment. *Empowerment is a dynamic and multidimensional interplay between internal developmental experiences and external contexts².*

[1] Leary, Mark R., and Kelly E. Buckley. 2000. "Shyness and the pursuit of social acceptance." In Shyness: Development, consolidation and change, edited by W. Ray Crozier, 139-153. Routledge.

[2] Mouchrek, Najla, and Mark Benson. 2023. "The Theory of Integrated Empowerment in the Transition to Adulthood: Concepts and Measures." Frontiers in Sociology 8 (April): 893898. <https://doi.org/10.3389/fsoc.2023.893898>.



Embracing Shyness

- This research and speculative installation aim to initiate dialogue within the community, encouraging individuals to critically reflect on their perceptions of shyness in real life and **foster an inclusive social interaction environment**.
- By empowering individuals with shyness, the goal is to **embrace it as an aspect of human diversity, making them feel supported and welcomed in contemporary social settings**.
- It **helps them navigate social interactions** with greater confidence and inclusivity, facilitating the management of their shyness for personal growth and development.

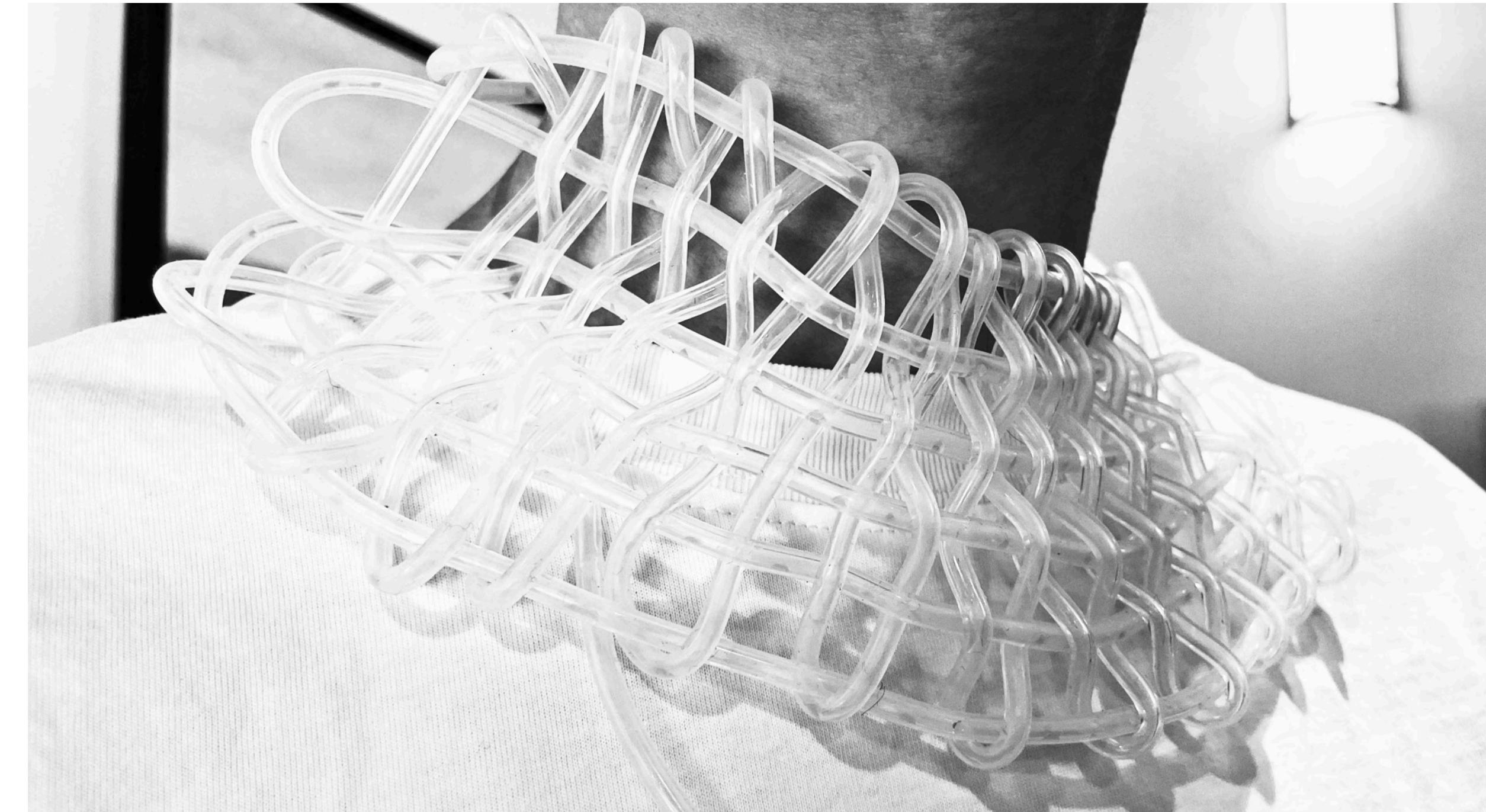
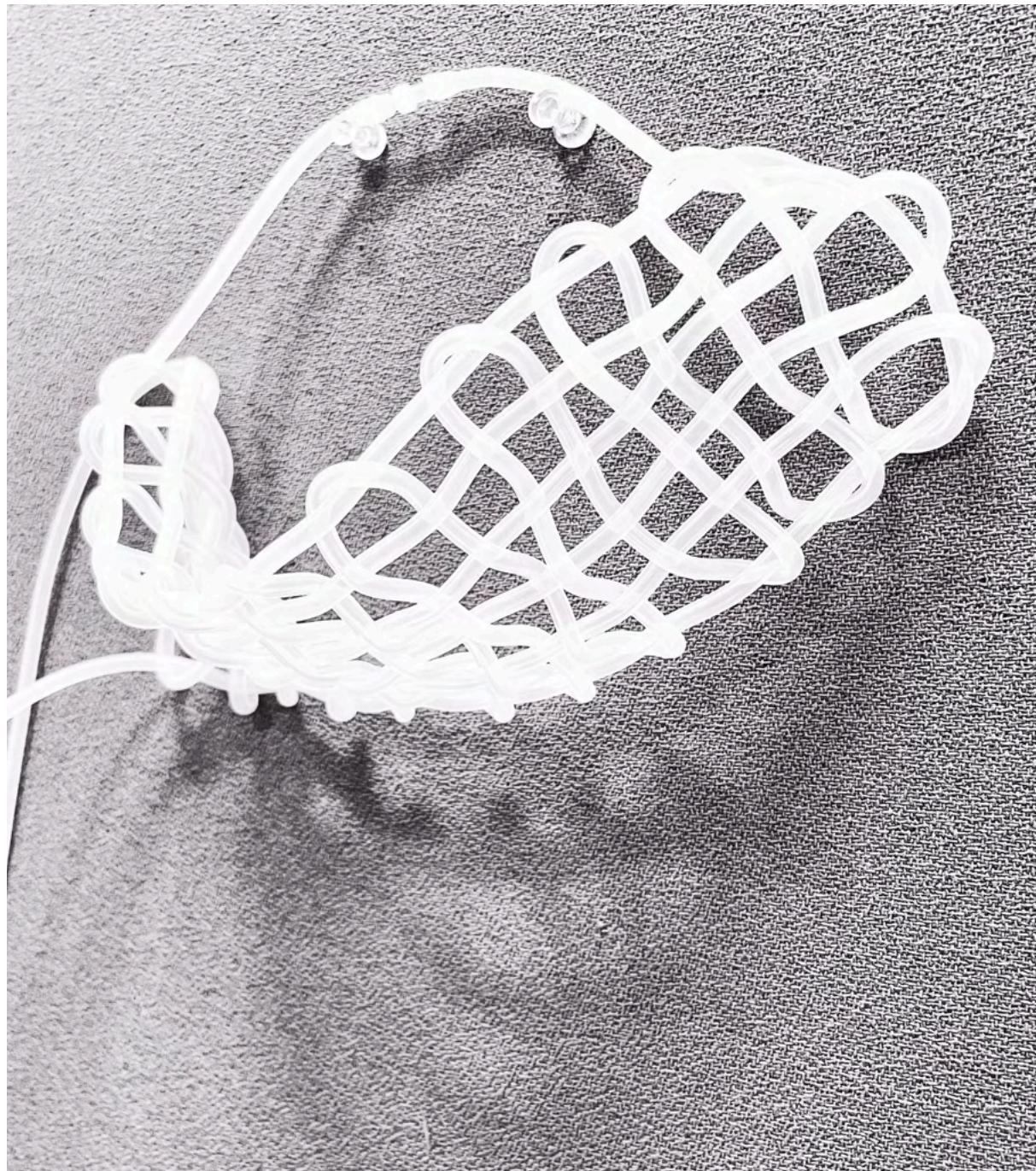
[1] This thesis received the 'Department of Art + Design' Award at Northeastern University in 2024. Please find the full paper [here](#).



Project 2

Flowing and Expression

A Woven Choker



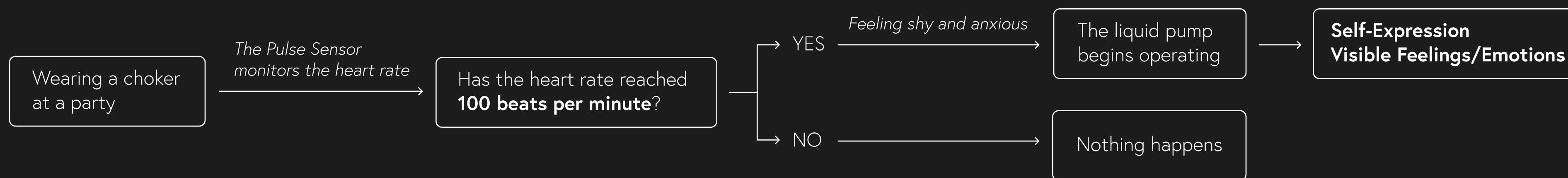
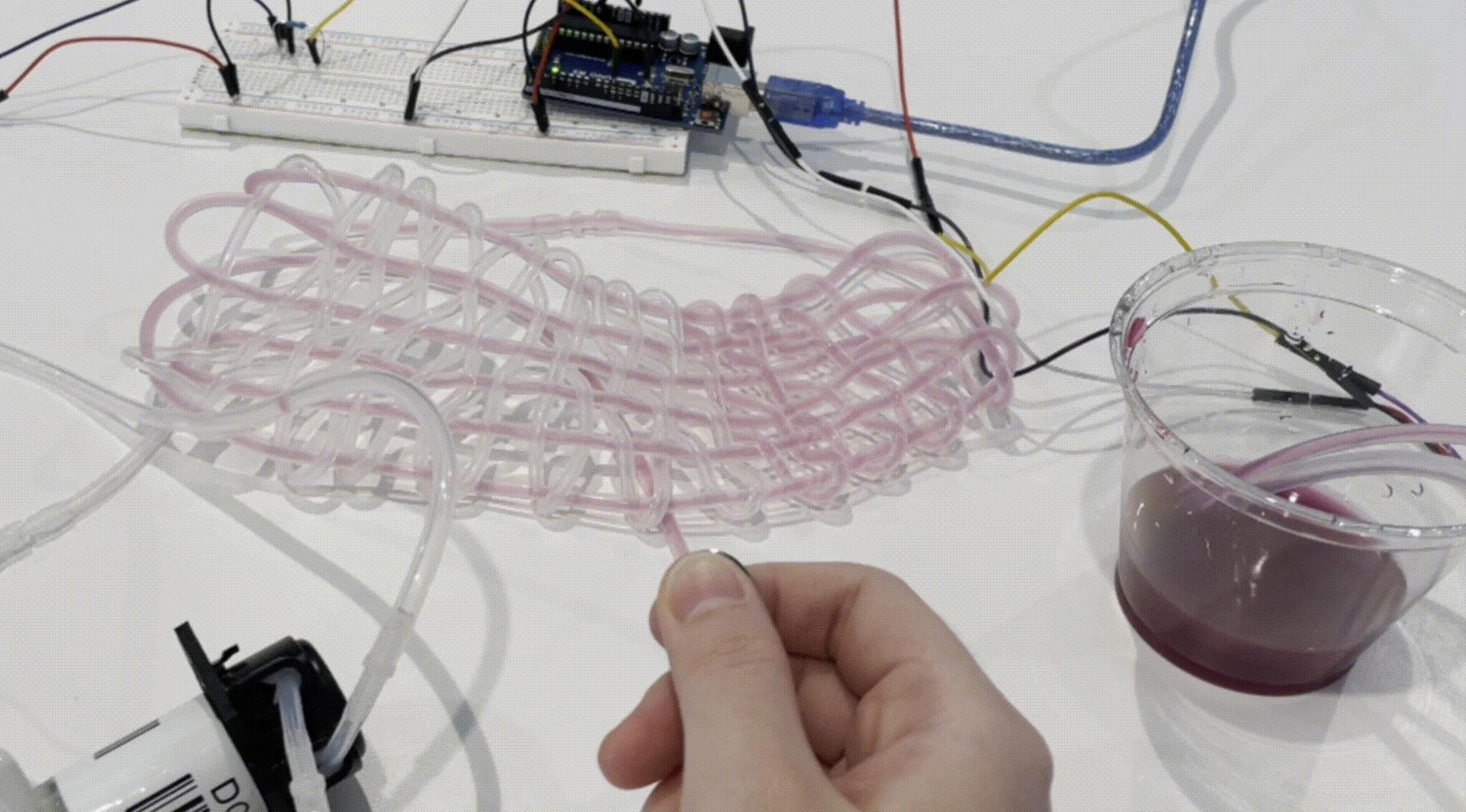
[1] Check out [the video of the project](#).

Self-Expression Through Dress

Dress is both an intimate experience of the body and a public representation of it¹.

How can we use wearables with visual or haptic feedback to convey emotions, such as anxiety or nervousness, and build nonverbal communication?

[1] Entwistle, Joanne. 2000. "Fashion and the Fleshy Body: Dress as Embodied Practice." *Fashion Theory* 4 (3): 323–47. <https://doi.org/10.2752/136270400778995471>.





Project 3

The Paradox of Digital Intimacy

Mediated Touch vs. Direct Human Touch:
Making Sense of Modern Communication

[1] The exhibition took place at the Boston Cyberarts Gallery in 2023.

[2] Check out [the full video of the project](#).



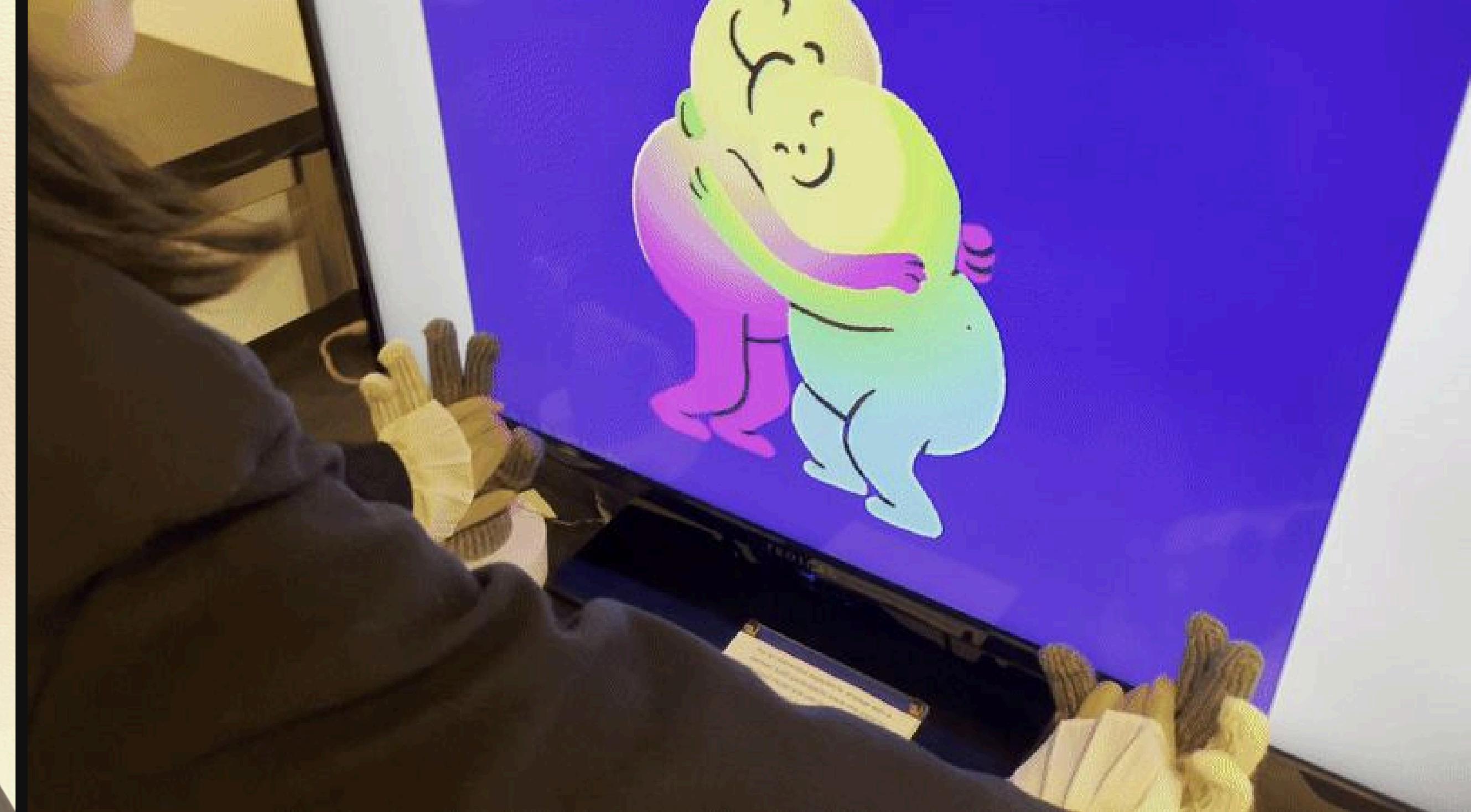
How can we balance the digital expanse with our deep human desire for meaningful connection?

- Digital interactions are reshaping communication and significantly affecting mental health, particularly among younger populations¹.
- Zoom Exhaustion & Fatigue².
- The challenges of simulating the emotional and multidimensional aspects of human touch through haptic technology, and the gap between virtual tactile experiences and the complex emotional depth of real human interactions³.

[1] Twenge, Jean M., and W. Keith Campbell. "Associations between screen time and lower psychological well-being among children and adolescents: Evidence from a population-based study." Preventive medicine reports 12 (2018): 271-283.

[2] Fauville, Geraldine, Mufan Luo, Anna CM Queiroz, Jeremy N. Bailenson, and Jeff Hancock. "Zoom exhaustion & fatigue scale." Computers in Human Behavior Reports 4 (2021): 100119.

[3] Culbertson, Heather, Samuel B. Schorr, and Allison M. Okamura. "Haptics: The present and future of artificial touch sensation." Annual review of control, robotics, and autonomous systems 1, no. 1 (2018): 385-409.



Part 1 - Direct Human Touch



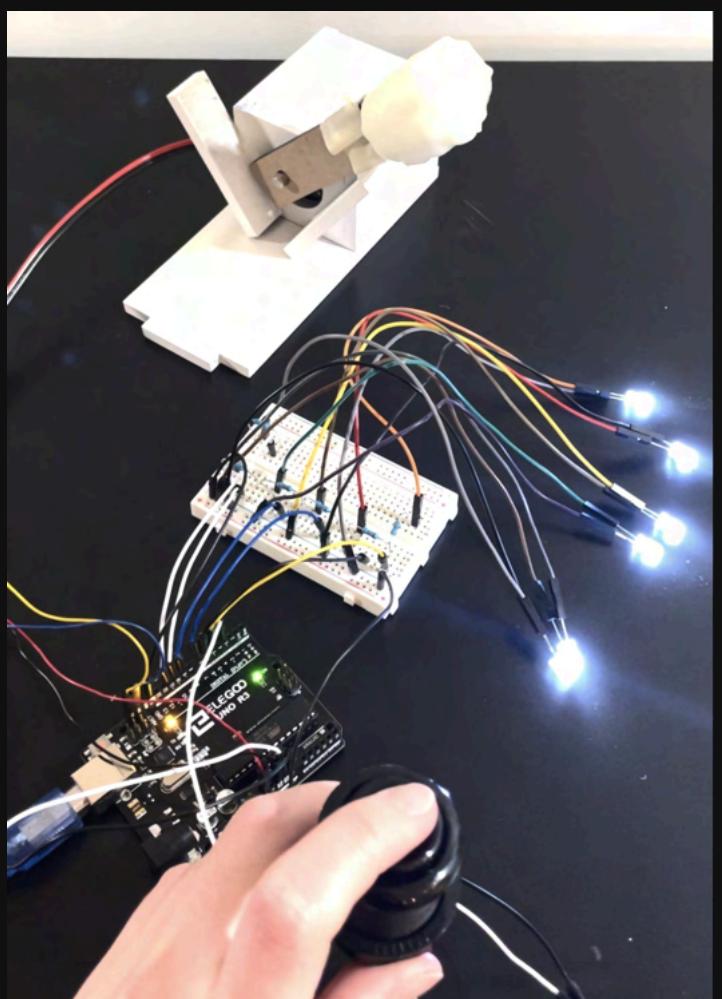
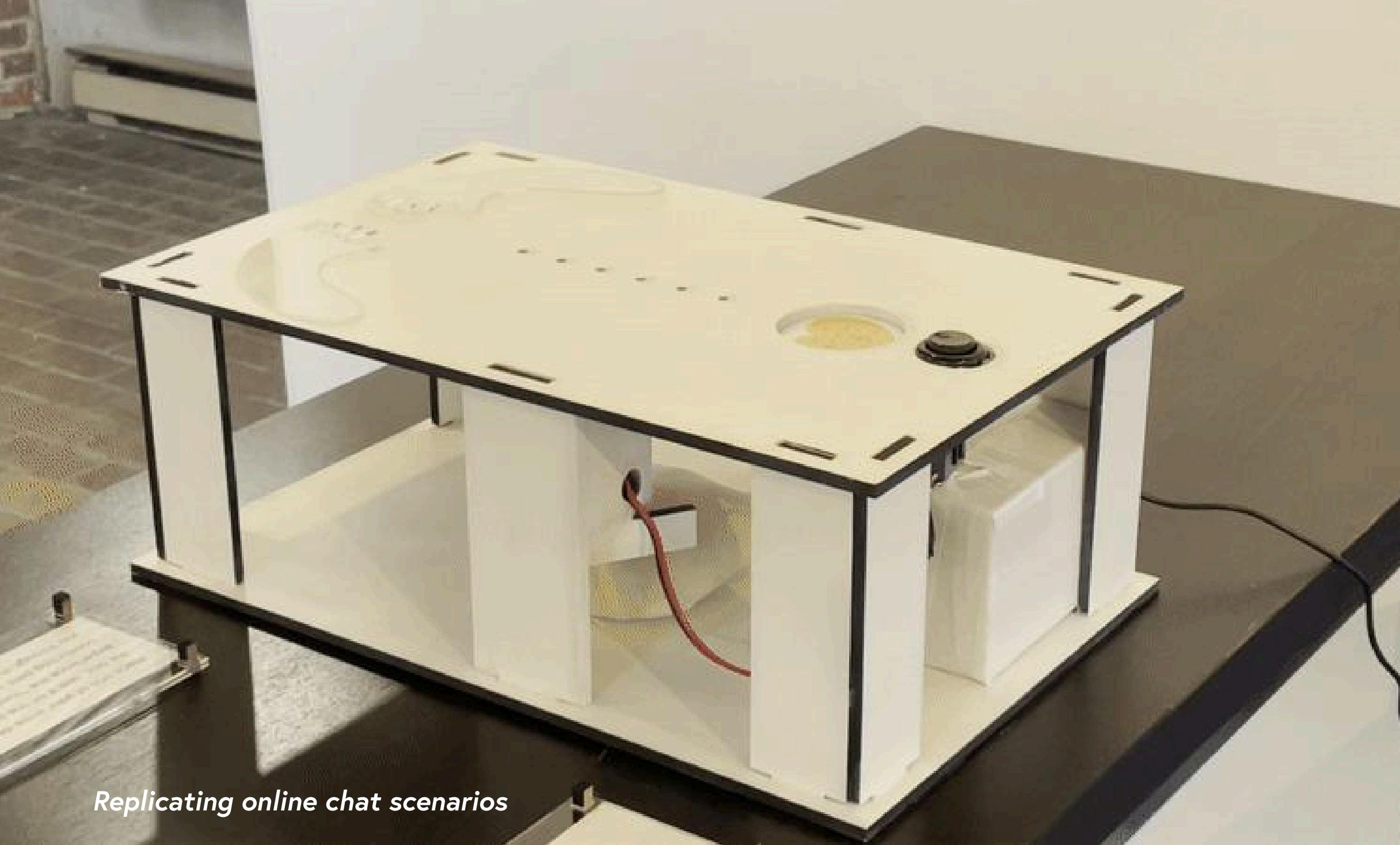
Materials:

Life-sized hand model with soft gloves embedded with conductive thread.

This part aims to evoke memories of interactions in physical communication.

Visitors are encouraged to engage with a partner, with both participants placing one hand on the hand model while using their free hand to interact with each other, exploring various postures and gestures (such as holding hands) that trigger the GIF.





Part 2 - Mediated Touch

Materials:

A gear motor wrapped with bubble wrap and rubber material.
LEDs for analog message transmission
Soft pillow designed to guide visitors in placing their hands.

This part aims to immerse visitors in the context of mediated touch and online communication. It requires a minimum of two participants: one activates the system by pressing a button (mimicking the act of sending a hugging emoji online), while the other places their arm in a designated area to experience messages from their friends conveyed through a comforting 'pat.'

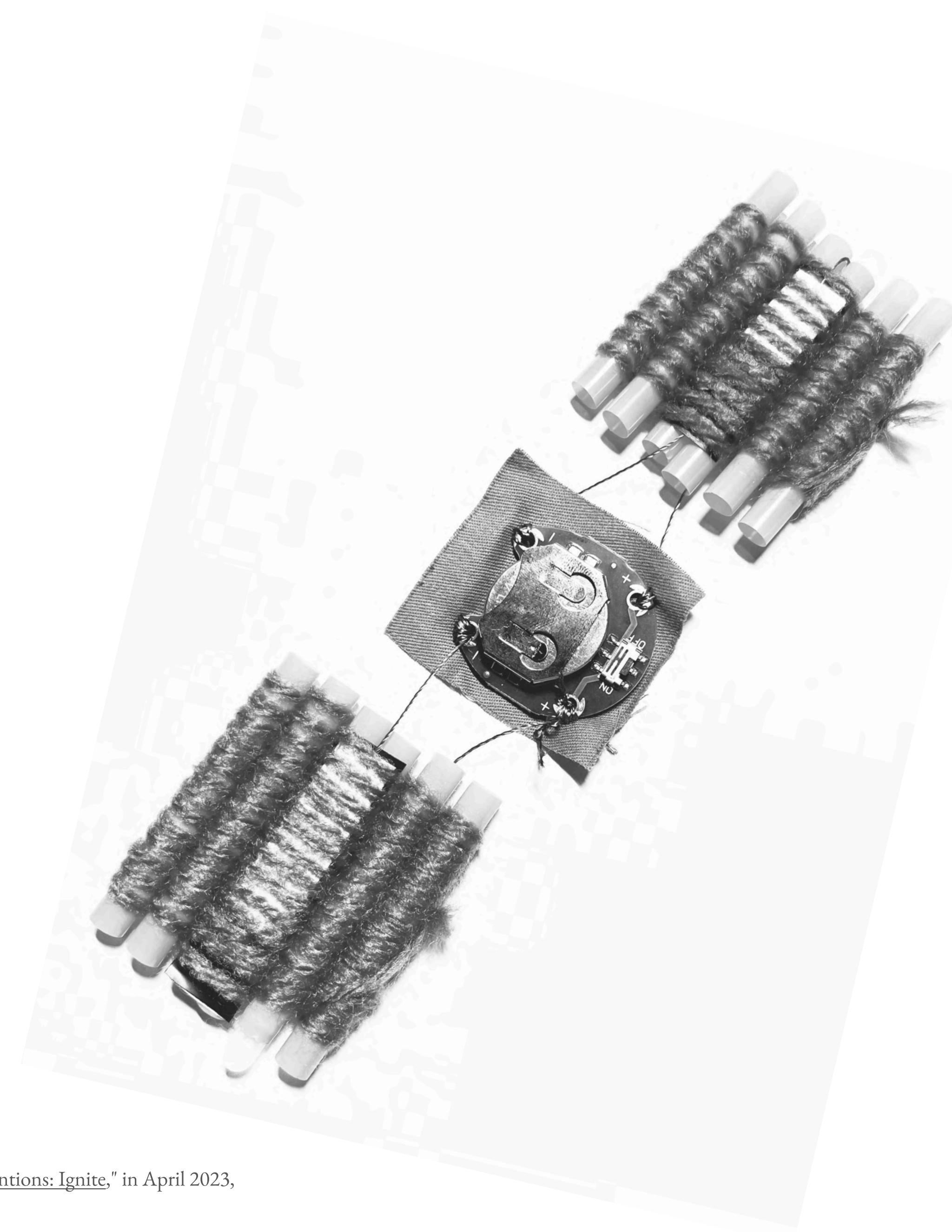
User Feedback and Further Thoughts

- Visitors emphasized the importance of being able to physically see someone's face and interact, which brings people closer.
- Visitors in long-distance relationships expressed **a desire to experience the feeling of 'direct human touch' remotely.**

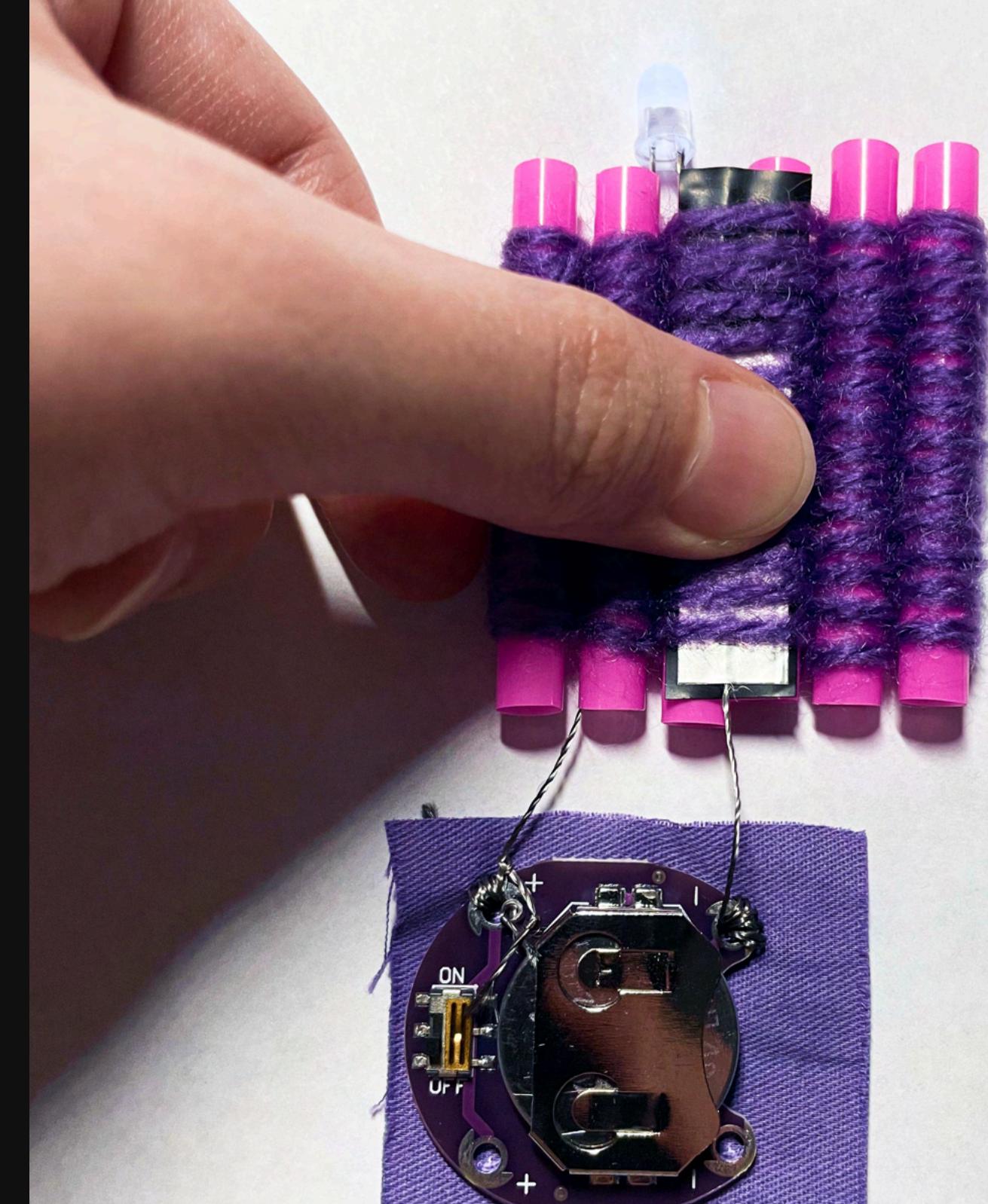
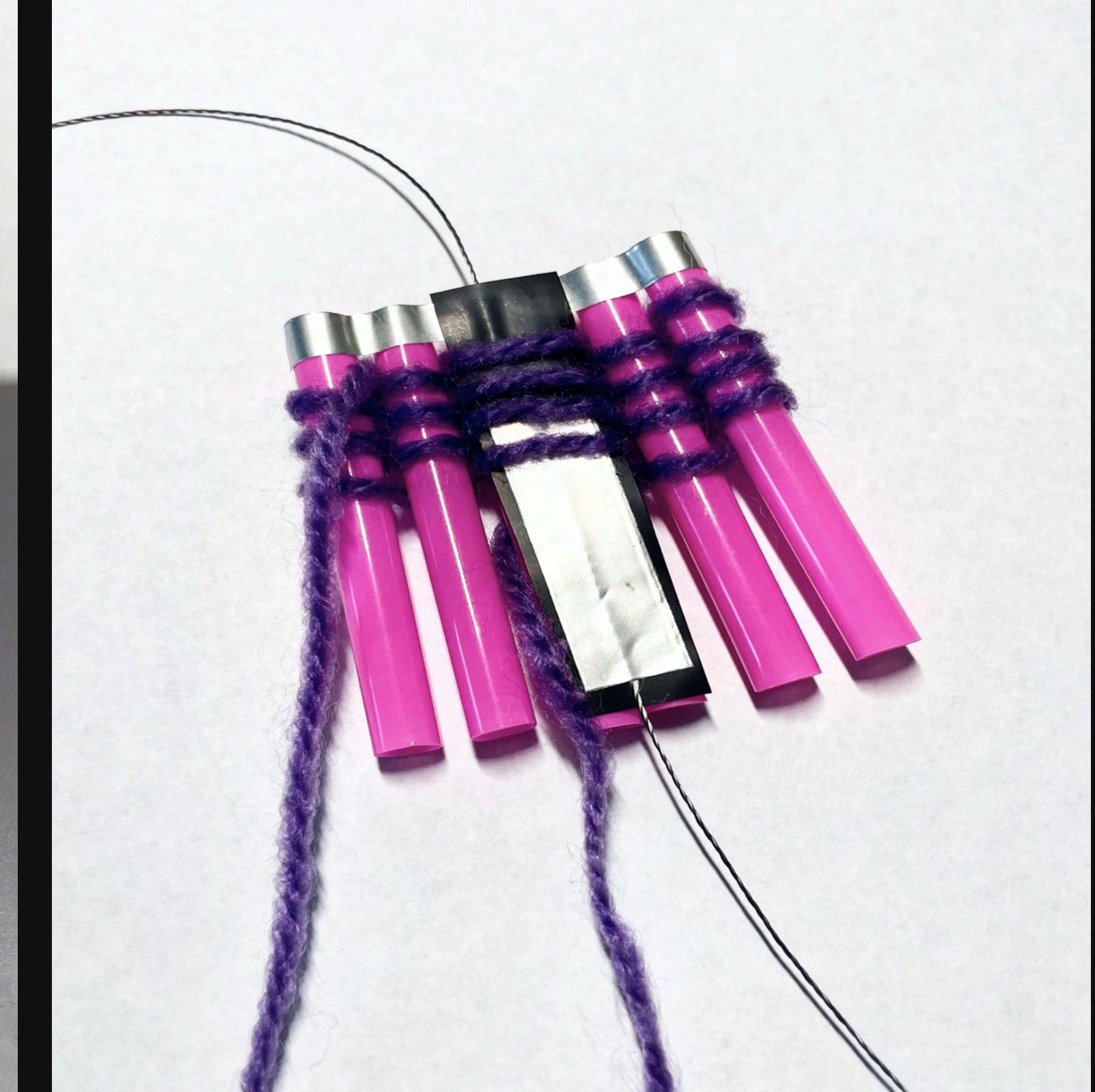
Project 4

Straw Weaving

Where Age-Old Weaving Methods Meet
Contemporary Electronics
(A Journey from Straw Weaving to E-textiles)



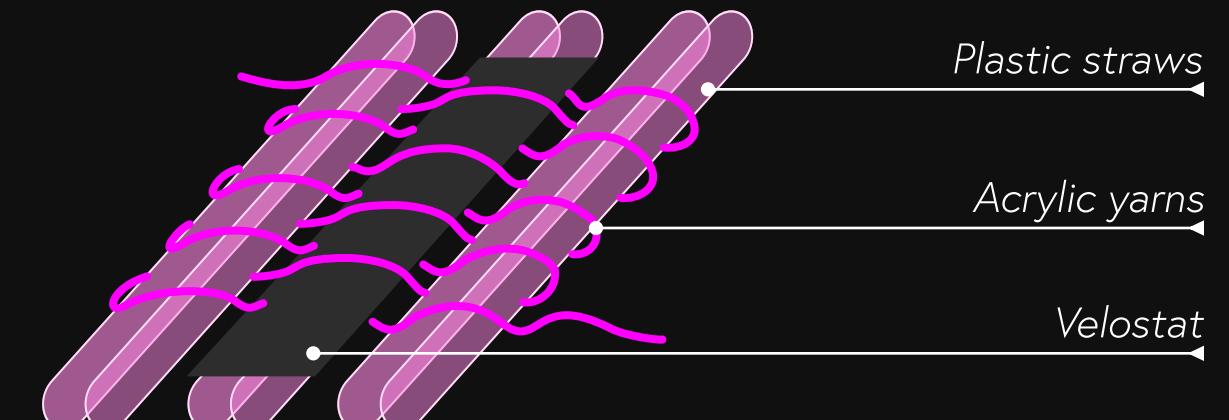
[1] The poster was presented at [Northeastern University's Scout 6th Annual Design Conference, "Interventions: Ignite,"](#) in April 2023, and at the [UXPA International Conference](#) in June 2024.



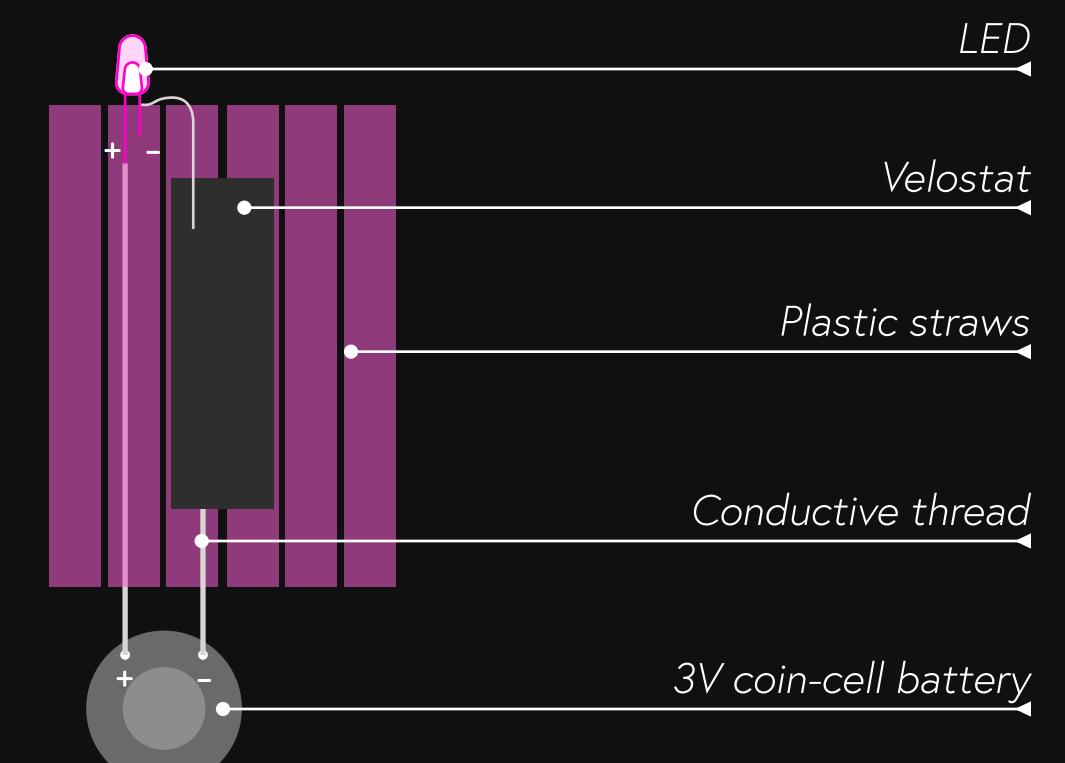
Materials:

Velostat (a black plastic sheet which is pressure-sensitive and conductive)
LED
Threads
Acrylic yarns
Plastic straws
Conductive threads
A 3V coin-cell batteries
Coin cell battery holder

01 Sandwiching Velostat between plastic straws and acrylic yarns.



02 Attach the Velostat and an LED to a battery.



STRAW WEAVING

Innovating a Soft Interactive Interface by Combining Age-Old Weaving Methods with Contemporary Electronics

By Zhiman Bai

Introduction

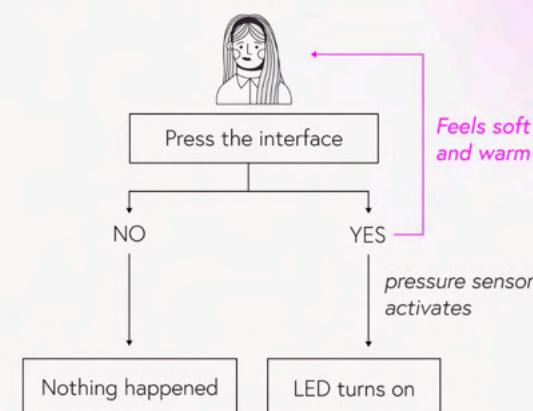
This experimental project involves creating a soft interface e-textile swatch to explore the intersection of traditional straw weaving techniques and modern electronics. The soft interface is made of plastic straws, with acrylic yarn woven over and under them to form a cohesive structure. Integrating a pressure sensor and LED to build an electrical circuit creates a soft, flexible, and responsive interface. The pressure sensor activates when the interface is pressed, triggering the LED.

Straw Weaving Techniques

Straw weaving is a traditional craft that involves taking dried straw, usually wheat or rye, and splitting it into thin strips. These strips are then woven together using various techniques to create intricate patterns and designs.

The resulting woven pieces can be used for various purposes, including decorative items, baskets, and even clothing.

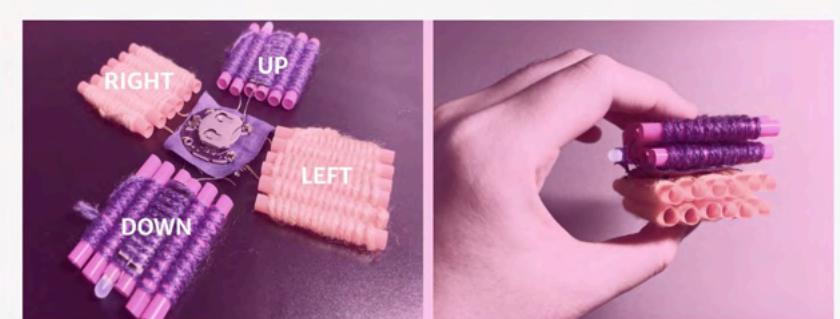
User Flow



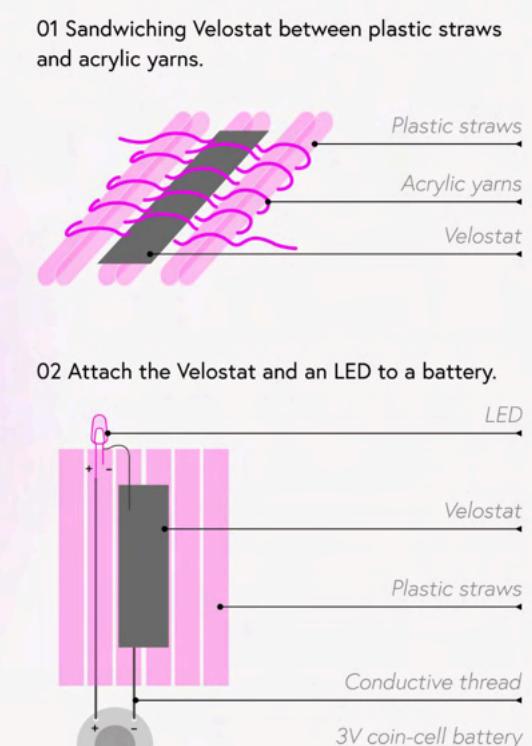
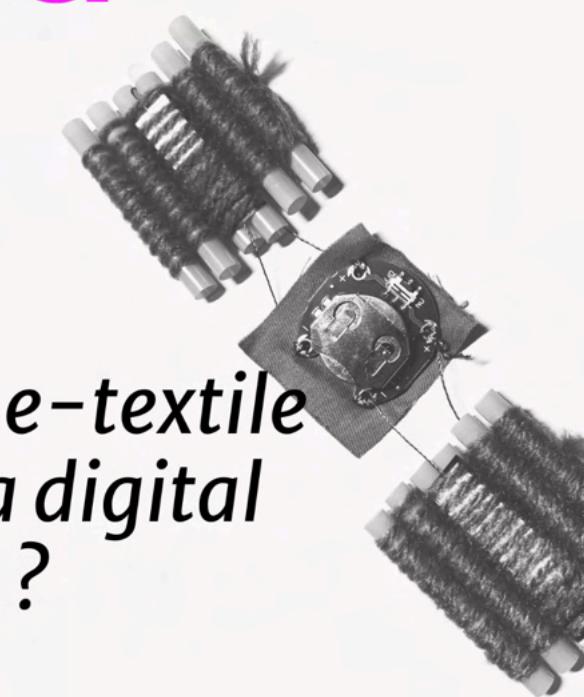
Application

Soft 4-Key Keyboard with Arrow Keys (Up, Down, Left, Right)
It can serve as a "soft controller" for games.

- Soft, flexible, and portable
- Provides responsive interaction



It is a way to repurpose single-use plastic straws and reduce waste. By weaving with plastic straws, these materials can be given new life and transformed into beautiful, functional, sustainable, and eco-friendly items.



Discussion

01 Innovative User Interface

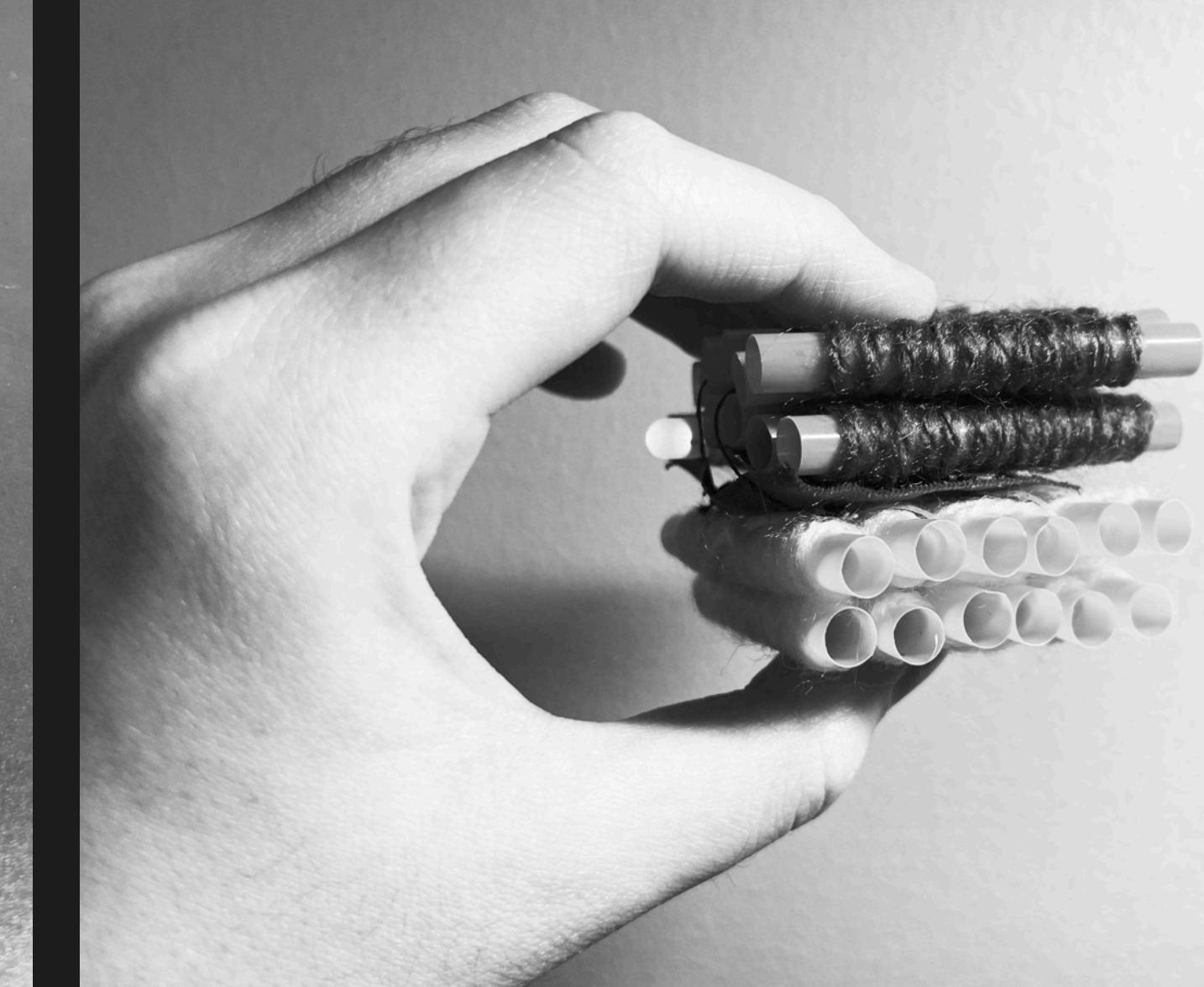
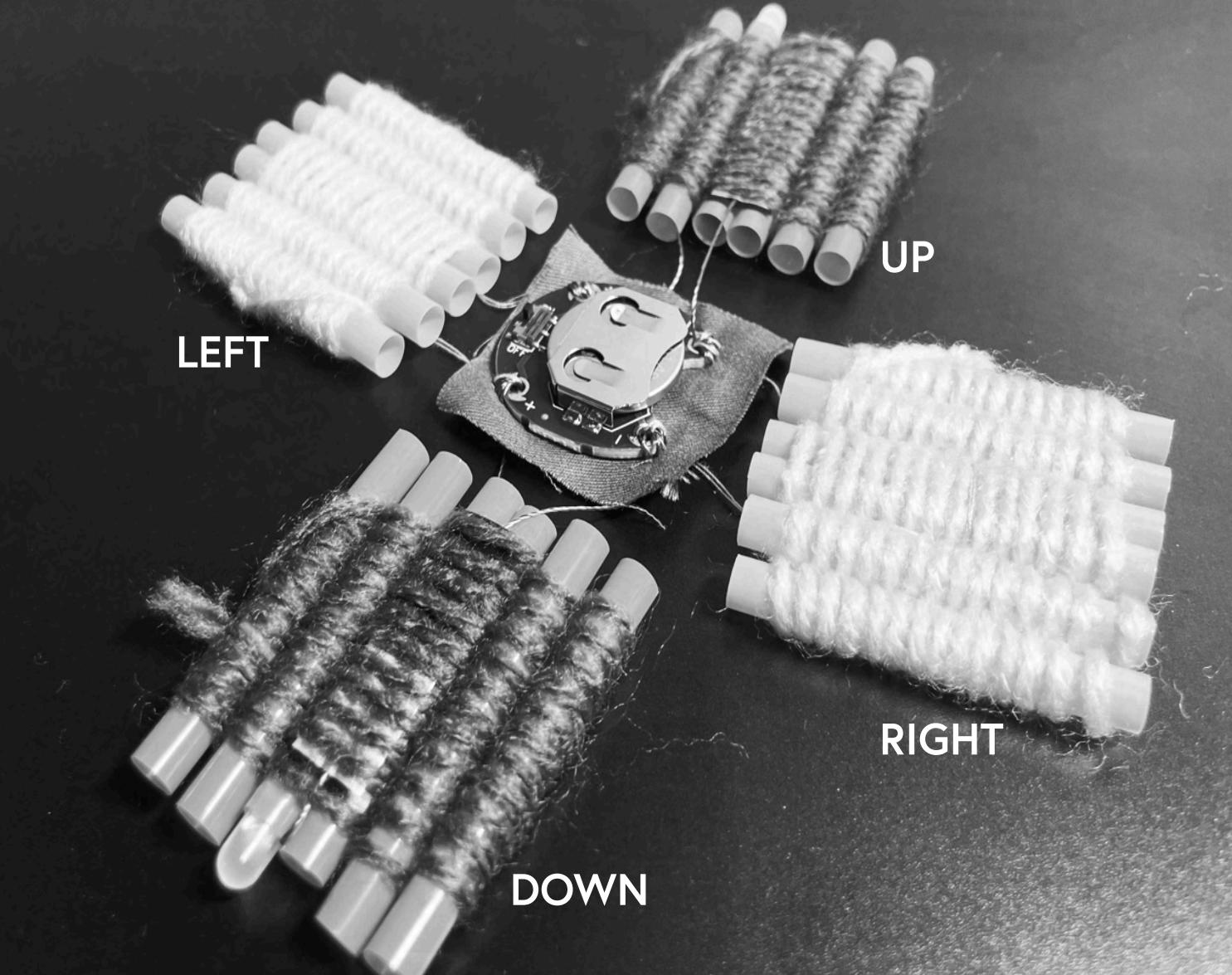
This experiment explores transforming textiles into soft interfaces and utilizes various materials to innovate alternative interfaces that enhance user interaction. These interfaces are tactiley soft yet responsive, introducing new perspectives to improve engagement and user experience.

02 Traditional Art Meets Modern Tech

This project illustrates the integration of traditional artwork with modern technology. It bridges the gap between craftsmanship and technology, urging us to think beyond conventional boundaries and sparking creativity. Integrating aesthetics with functionality inspires us to envision and pioneer innovative solutions in future design.

03 Sustainable and Eco-Centric

It is a way to repurpose single-use plastic straws and reduce waste. By weaving with plastic straws, these materials can be given new life and transformed into beautiful, functional, sustainable, and eco-friendly items.



[1] The poster on the left was presented at the [UXPA International Conference](#) in June 2024.



Thank you!