

# Portfolio

Daisy Chen

2022

# ABOUT



## EDUCATION

University of California, Berkeley  
Master of Design  
2021 - 2022  
Berkeley, CA, United States

New York University Shanghai  
B. S, Interactive Media Arts  
2017 - 2021  
Shanghai, China

## EXPERIENCE

UX Designer Intern | Indeed  
Summer 2022

HCI Researcher | Berkeley Institute of Design  
Fall 2021 - Spring 2022

UX Designer Intern | NetDragon  
Summer 2020

**Hi, I'm Qianyi (Daisy) Chen.**

I'm a product designer and design researcher who creates human-centered experiences and explores the future of work, healthcare, and social impact using design thinking and emerging technology. My works are presented on CHI Late-Breaking Work 2022, ICER 2021 (the 17th ACM Conference on International Computing Education Research), and featured on MIT Reality Hack 2022.

# 01 KUBE

Fall 2021

*#Physical Computing  
#User Research*

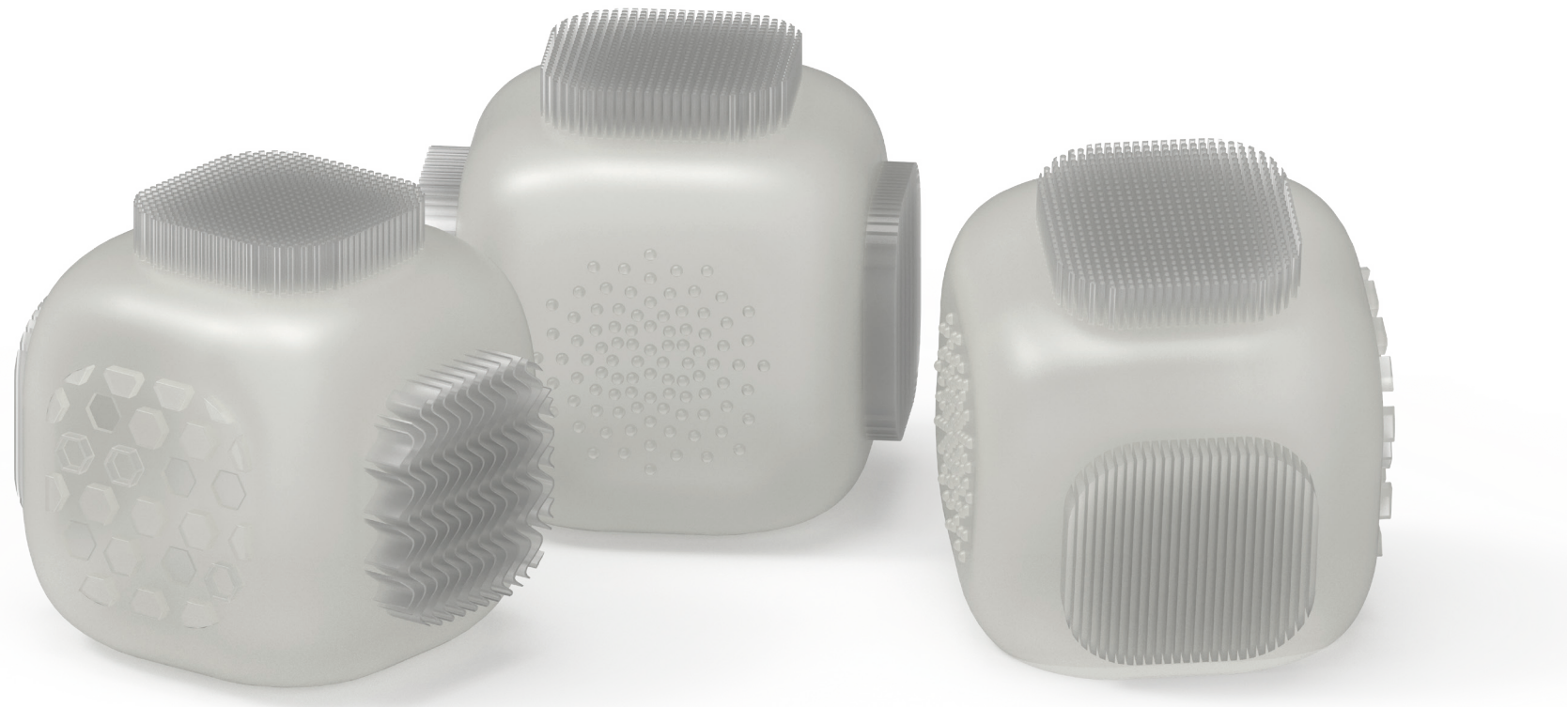
Berk Dincer  
Jacob Kritzinger  
Kaila Negron  
Qianyi Chen  
Tania O'Neill



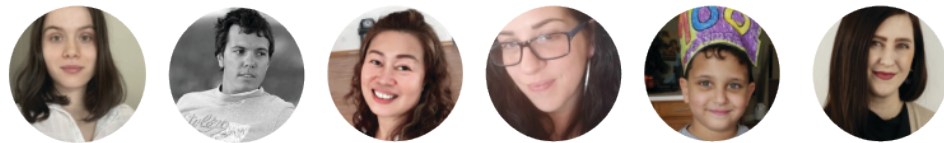
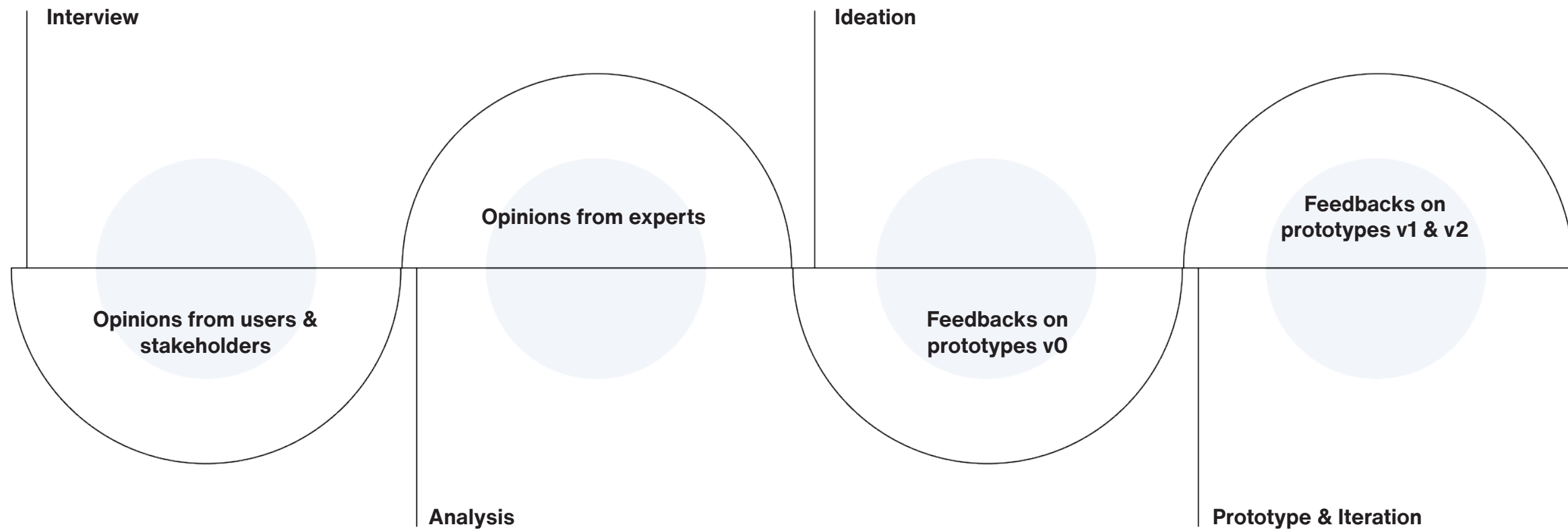
# OVERVIEW

**Kube is a sensory toy created for autistic children to overcome anxiety during collaborative play and learning.**

It embeds physical textures that provide a soothing experience for emotional control and sensory outputs that enable both individual and cooperative play.



# RESEARCH

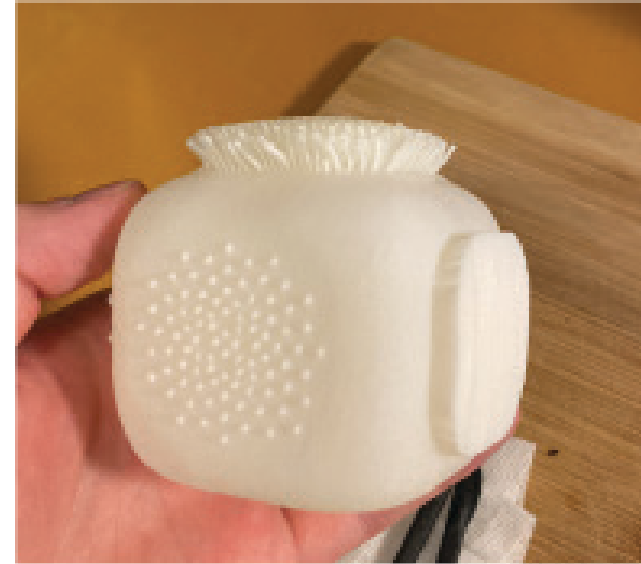


Our feedback providers include: autistic children, mother of autistic children, expert of autistic children therapy, interaction designers, healthcare experts, etc

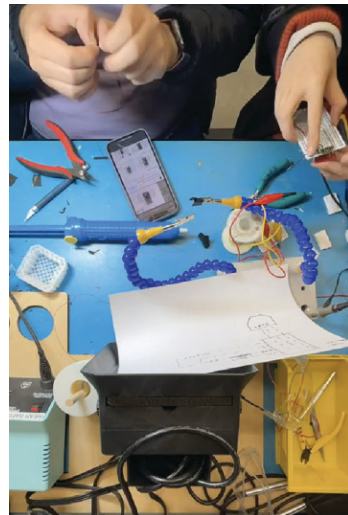
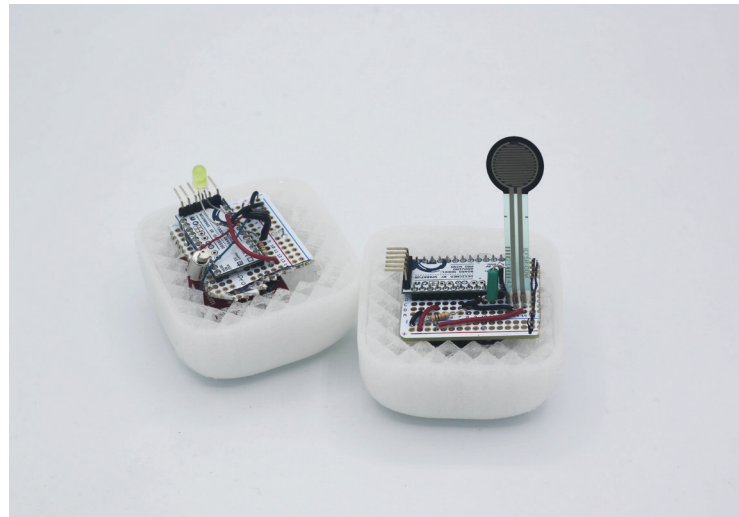
# PROTOTYPE

## TEXTURE

Our group considered how creating pronounced textures could encourage repetitive action as an outlet for self-stimulatory behavior.



# PROTOTYPE



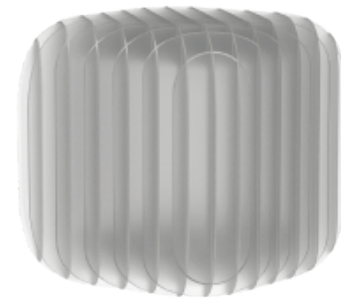
## Components

- Tilt Ball Switch Sensor
- 3V Vibrating Motor
- 5mm LEDs
- Piezoelectric speaker



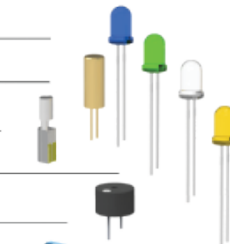
## KUBE Exterior

Agilus30 - PolyJet Elastic Photopolymer  
Cube with textured sides



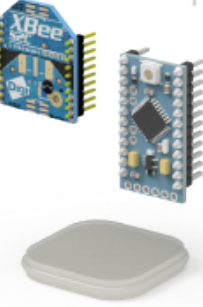
## Core

Translucent FDM 3D Printed TPU soft elastic  
plastic core - Shore hardness 95A



## Control System

Arduino Pro Mini & XBee S2C RF  
Communication Module



## Access Panel

Agilus30 - PolyJet Elastic  
Photopolymer Cube Cap

# FINAL BUILD



Feel and explore the texture



Light pulsates for soothing in a breathing pattern

## INDIVIDUAL PLAY

When the child is in a moment of duress, they can feel the textures and mimic the rhythm of the light with their breathing.

## COOPERATIVE PLAY

When each child holds the cube, tilting or shaking one cube will make another one vibrate; squeezing one will make the other light up accordingly.



Communicates with the other KUBE through tilting and squeezing

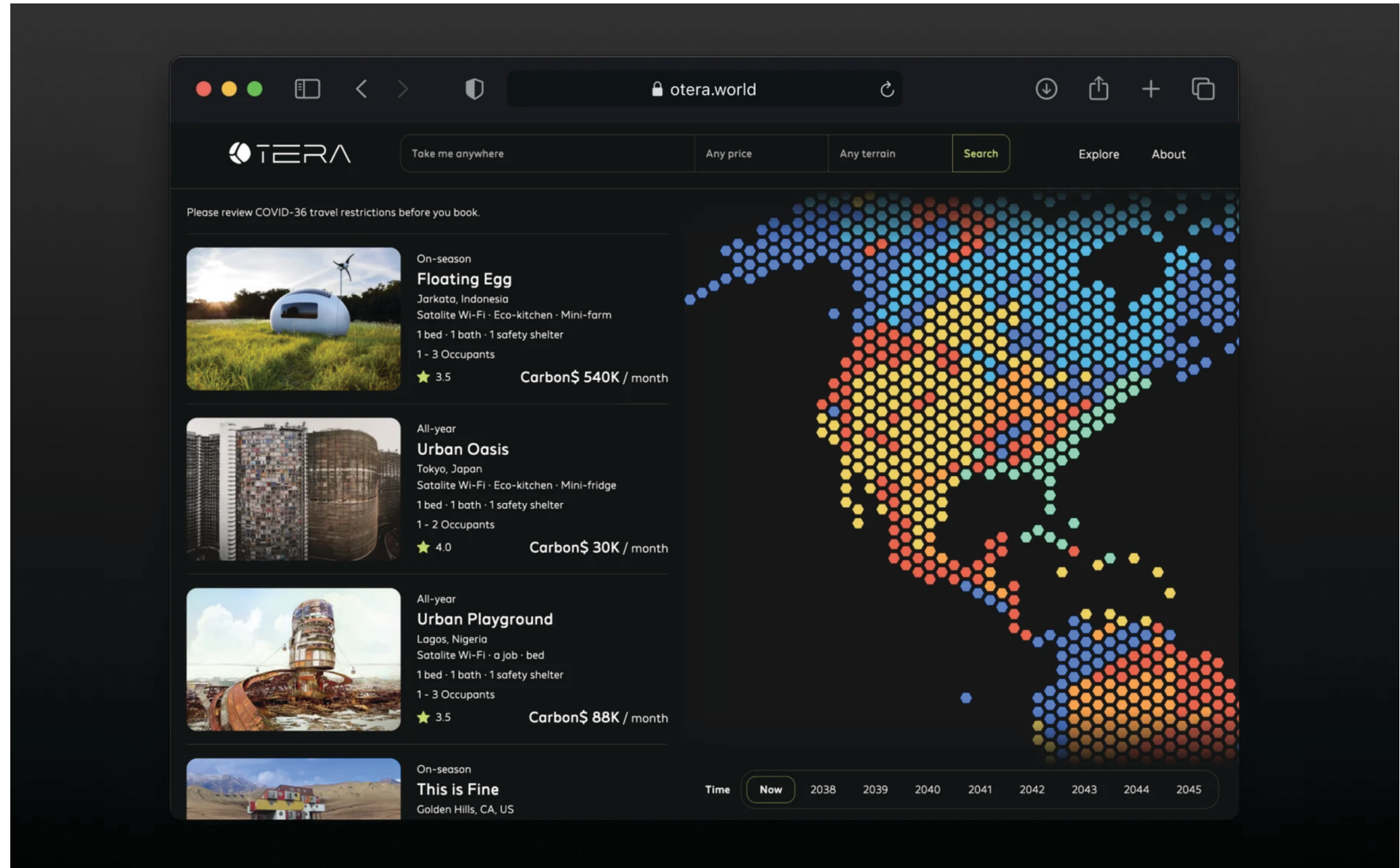


# 02 OTERA

Spring 2022

#Speculative Design  
#Web Design

Berk Dincer  
Billy Kwok  
Celia Diaz  
Qianyi Chen  
Tania O'Neill



# OVERVIEW

**Otera is a fictional marketplace offering accommodation and traveling services for people affected by the climate crisis.**

Through a combination of foresight research and dark humor storytelling, the project aims at creating conversations around the relationship among climate change, living space, and capitalism.



We are Otera and we were Founded in 2032.

Liveability, Community and Sustainability. It is what drives us to the future. Connecting people to climate adaptable living spaces. We value the necessity to help people find living spaces for survival and the ability to transport their livelihoods where ever they must migrate.

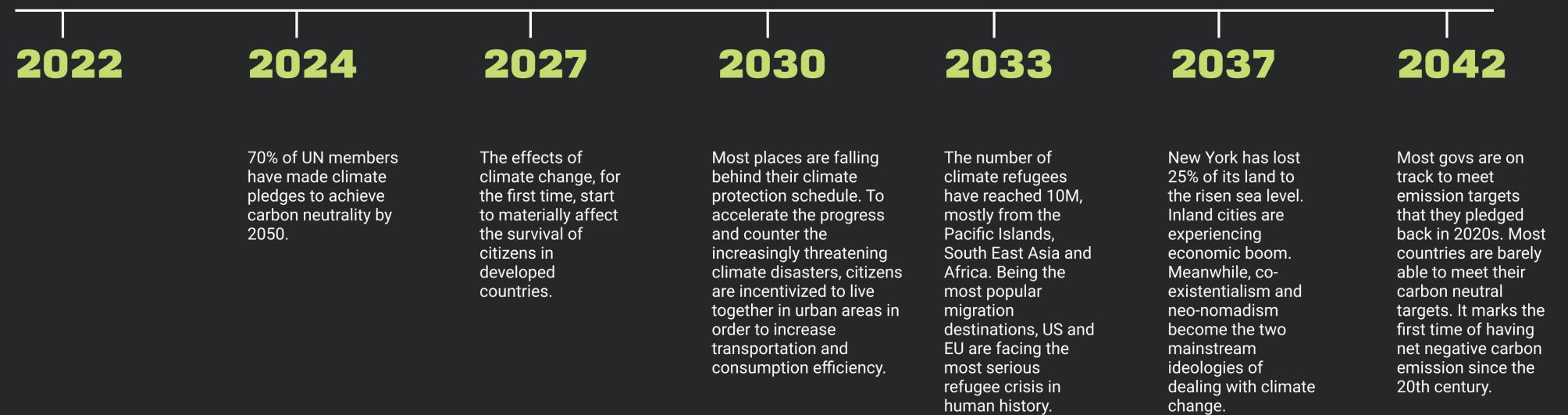


# RESEARCH

Instead of traditional design thinking, the project adopted the Strategic Foresight framework to extrapolate trends and weak signals. The end result is not meant to be a solution to climate change, but an interactive story provoking thoughts on the future trajectory of climate change and its impact on our living space.

# TIMELINE

Present to Future



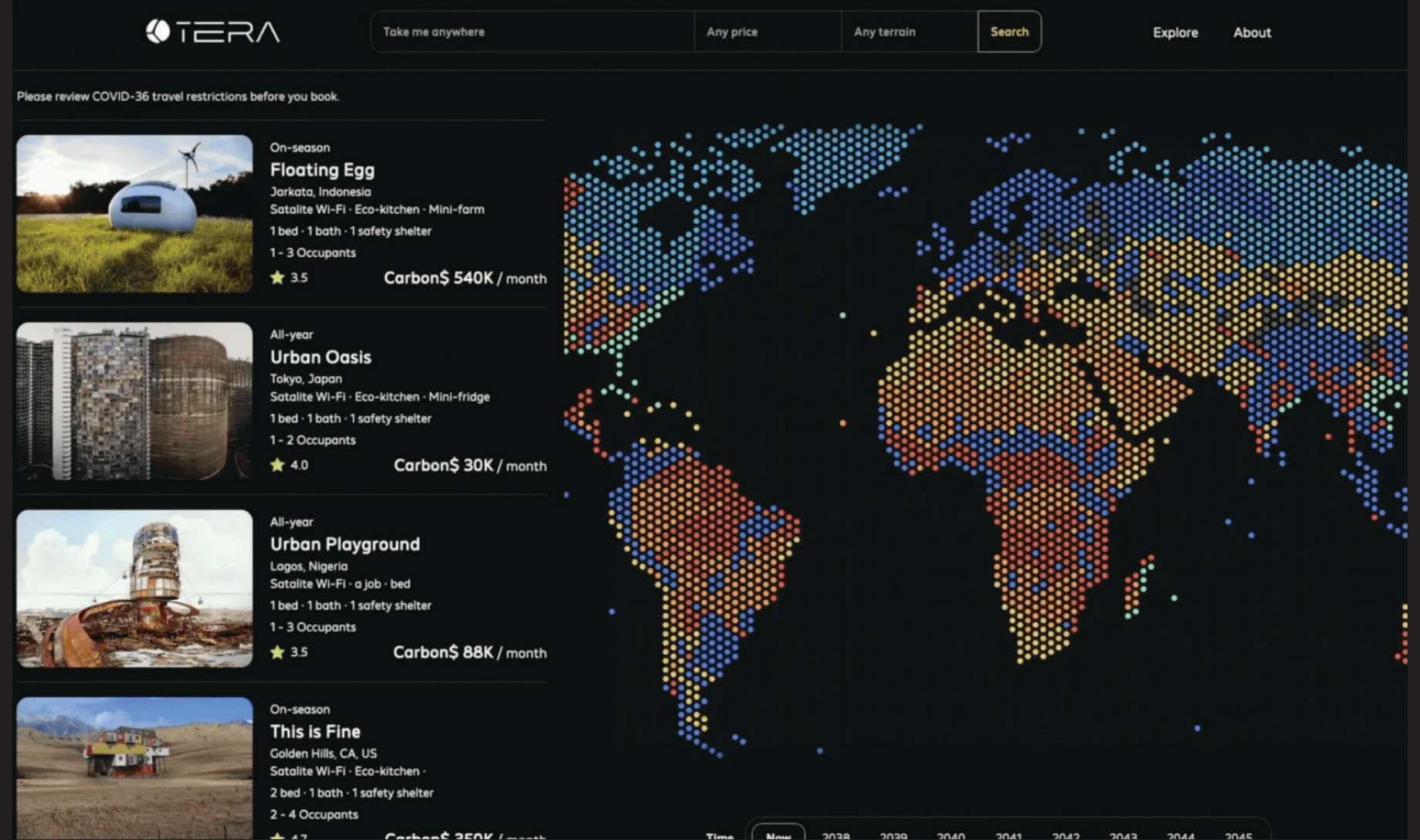
*Timeline - Backtrack the scenario from the envisioned future*

# WEBSITE

The Otera website is an Airbnb-like online marketplace offering housing and travel experiences to customers ranging from climate refugees and resourceful individuals.

Through an interactive and immersive web browsing experience, we aim to make the viewers feel like they are browsing a fully functioning website in the exact future that Otera is in.

Otera supports the “living” of both the rich people who can afford climate-resistant housing and the poor people whose living conditions depend heavily on the extreme weather. Users, including neo-nomads and co-existentialists, can filter the search result by the types of



## Explore the ruined world

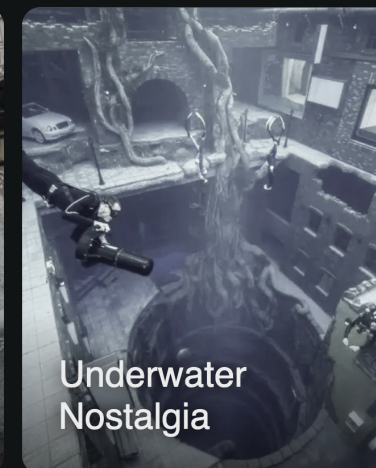
Otera Experience is coming this Fall



Family to the Melted Arctic



Flooded Paradise



Underwater Nostalgia



Post-wildfire Treasure Hunt

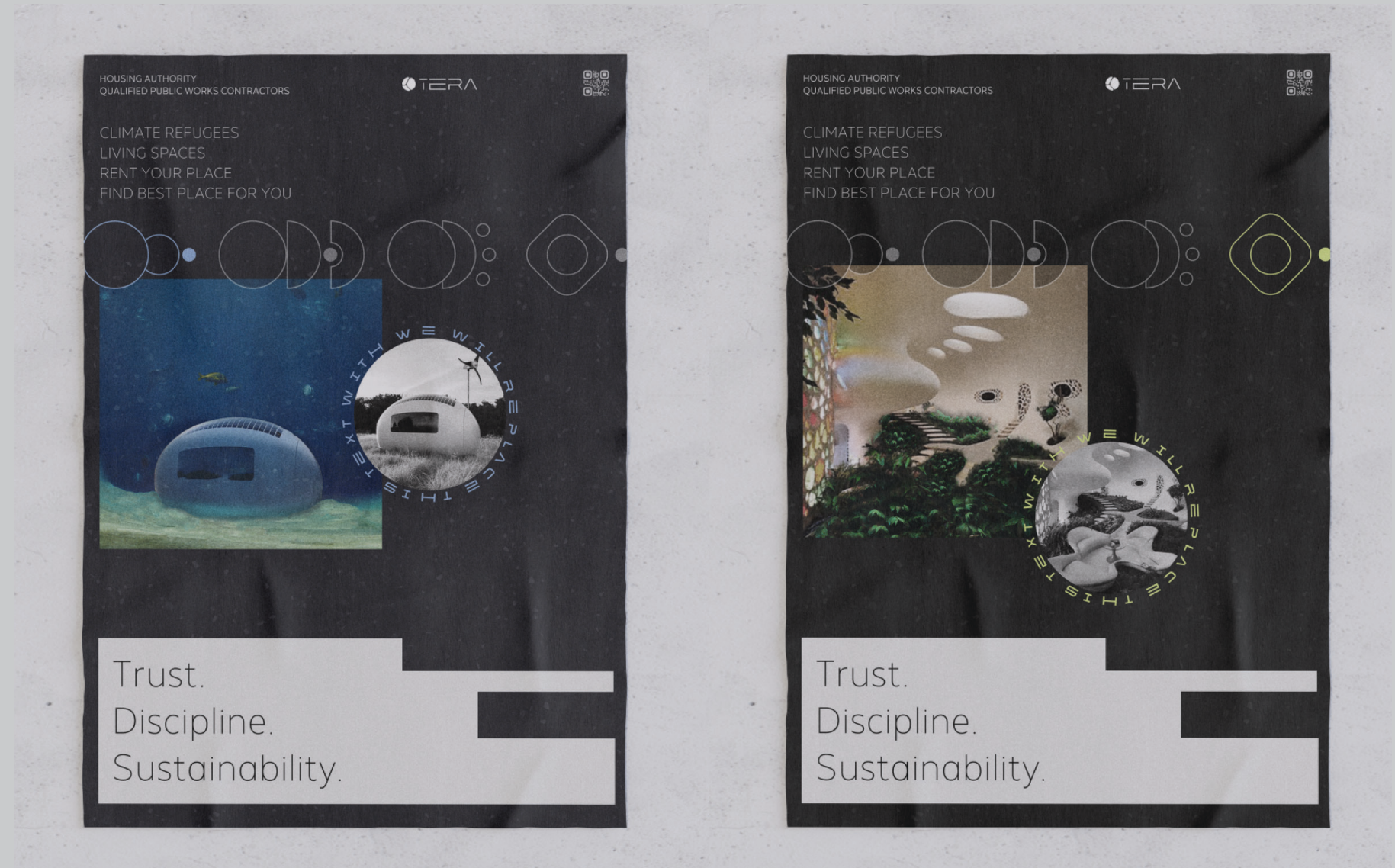
# ARTIFACTS

## POSTER

The posters showcased two examples of seasoning housing, one for flooded regions (left) and another for an area suffering from heat wave (right).

## PAMPHLET

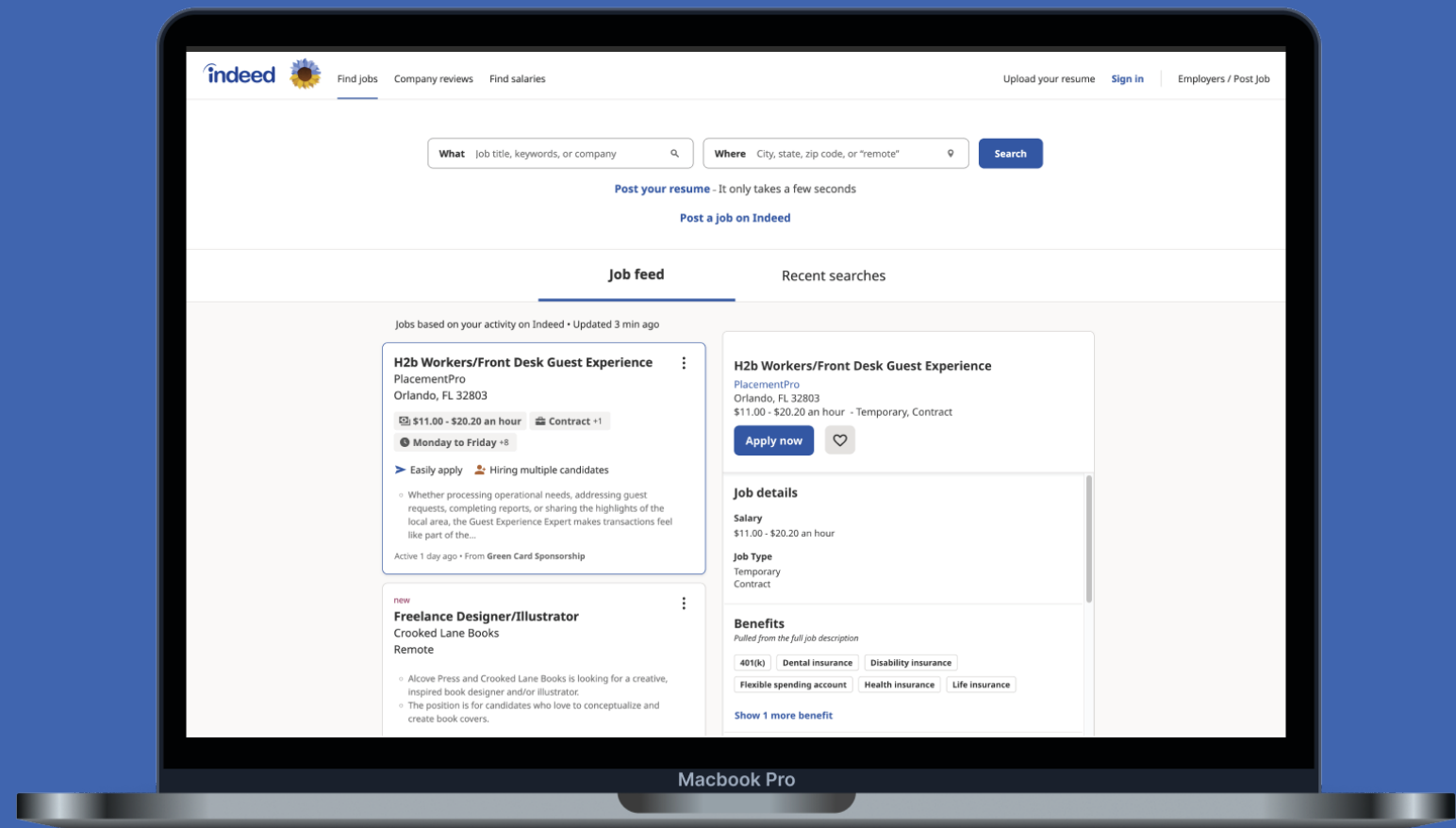
The pamphlet detailed the mission and product offerings of Otera. Significant reduction in originally livable areas allowed Otera to quickly monopolize the global housing market by buying underdeveloped lands predicted to be climate shelters.



# 03 Indeed

Summer 2022 (Internship)

#Product Design  
#User Research



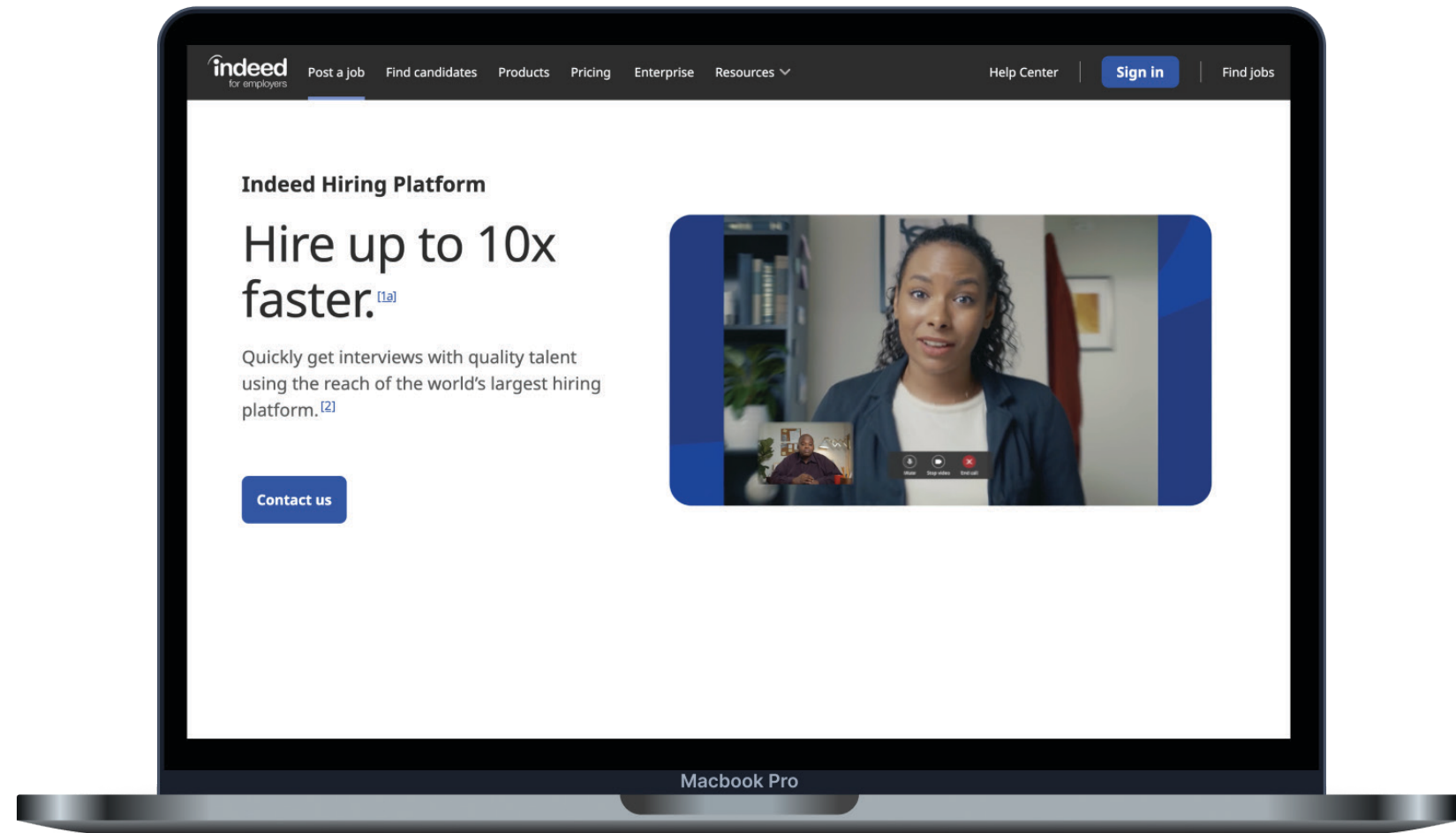
Qianyi Chen  
(Partnered with project team members)

# OVERVIEW

In summer 2022, I interned at Indeed on Indeed Hiring Platform (IHP).

## My work includes:

- Designed and iterated prototypes based on 2 core concepts generated through the research stage to improve the interview creation experience
- Hosted an internal workshop with PM, UX Designers, Content Designers, and Design technologists for problem definition and concept ideation
- Designed and conducted unmoderated user testing in collaboration with UX researchers and proposed small/medium/large level design recommendations for future iterations



# 04 Limino

Fall 2022

*#Mixed Reality*  
*#Interaction Design*



L I M I N O

Qianyi Chen  
Billy Kowk



# OVERVIEW

**Limino is a Mixed Reality project investigating the interactions for dynamically blending virtual and physical worlds in an augmented environment.**

It includes two parts:

- 1) a set of interactions that can be used to unveil partial environments of the physical world in a virtual environment,
- 2) two scenes that demonstrate how these interactions can be triggered based on the context.



# RESEARCH

## Enhancement

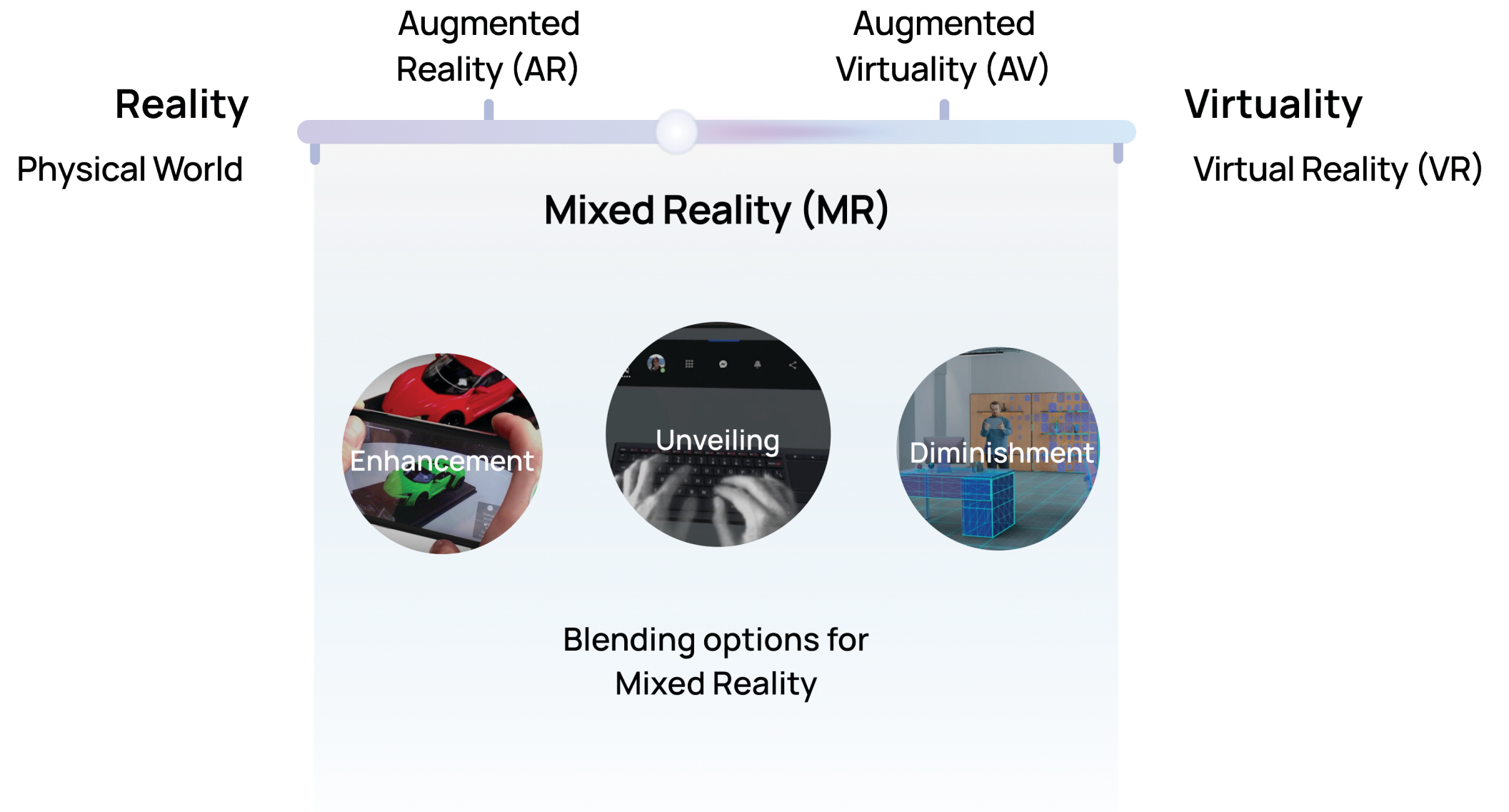
Overlaying physical elements with virtual modifications to improve their forms or functions.

## Diminishment

Weakening or obstructing physical elements to reduce their significance or replace their functionalities.

## Unveiling

Undoing the previously applied enhancement or diminishment to reveal the concealed physical appearance of real-world objects and environments.



# INTERACTION

## (1) FADING

**Global Fading** decreases the opacity of all virtual content.  
**Object Fading** decreases the opacity of particular virtual objects or digital twins.

## (2) PIERCING

**Passthrough Surface** displays the passthrough image on a surface created by the projection from the controllers.  
**Passthrough Strokes** uses one controller to paint a stroke of reality on top of the virtual environment and another to erase the strokes and restore the virtual content.

## (3) CASTING

**Flashlight** casts passthrough shadows by tracking the hand (controller) movement.  
**Headlight** casts passthrough shadows by tracking the head (headset) movement.

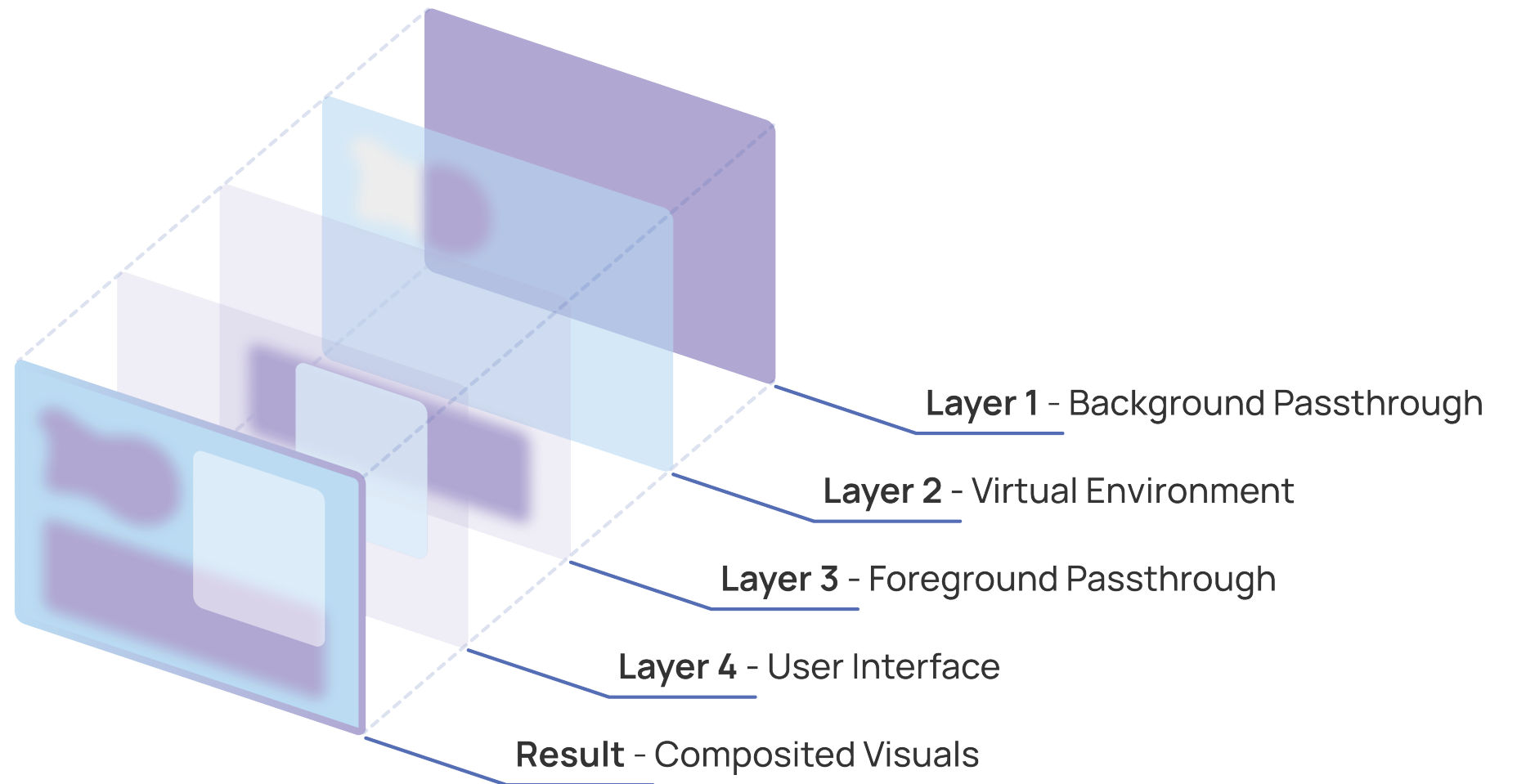


# PROTOTYPE

Our final prototype is demonstrated through a high-fidelity MR application prototype running on Meta Quest 2 and Quest Pro.

The MR workspace is a customizable 3D environment that blends physical and virtual worlds. The intermixing of the two worlds is achieved by compositing different layers together.

The position and opacity of the content in each layer contribute to the overall blending of the scene. These layers can be conceptually categorized into four types based on their rendering priority in the depth buffer.



# CONTEXT AWARENESS

We selected three use cases to study - item searching, break time, and bystander interruption. These use cases cover activities ranging from work to casual entertainment and different levels of immersion.

We focus on two types of awareness:

## ACTIVITY AWARENESS

The awareness of the current user activity. It captures the active change from the user side when the user switches to a different task.

## ENVIRONMENTAL AWARENESS

The awareness of changes happening in the current space. It captures the changes happening in the environment outside the HMD.

