PERSONAL PORTFOLIO

Hanwen Gu

ABOUT ME

Hanwen Gu

Age : 23

- Beijing Forestry University

  Digital Media Technology

  09/2019 – 06/2023

- New York University

  Integrated Design & Media

  09/2023 – Present

CONTENT

1 UX/UI project
ICON/UX/UI DESIGN

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WebGL/P5.js

3 3ds Max project
MODDELING

4 OpenCV project
IMAGE PROCESSING

5 Unity project
AR/GAME

2024

UX/UI project

ICON/UX/UI DESIGN

2023

Subway Navigation

Design concept

Massimo Vignelli designed the current modernized, unified subway signage for New York City in 1967. With more and more lines are built, the complicity, clarity, and readability become the core issues in subway navigation system.

Subway Navigation

By Commuters For Commuters

Persona.

Alexander

Data Analyst

Age 25

NYC, relocated from BOS

Adventurous, energetic, confident.

Apps.

Google Maps

Transit

Lives near 34st-Herald Square, goes to work at World Trade Center three days a week by NYC subway. Doesn't own a car. Loves to experience various activities including outdoor activities.

Challenges.

- Familiar with regular route, but struggles in unfamiliar stations.
- Often boards trains going in the wrong direction.
- Google Maps train schedules occasionally inaccurate.
- Feels overwhelmed by complex station layouts.
- Relies on luck to find exits as per Google Maps directions.
- Signage cluttered with excessive text; requires stopping to read.
- Encounters misleading and ambiguous signage.

Needs & Goals.

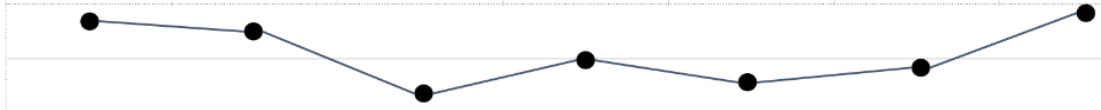
- Aims for quicker travel to his platform.
- Desires in-station directions from Google Maps.
- Seeks clear guidance to correct platform without wrong turns.
- Expects accurate ETA at stations.
- Wishes for crowd management solutions in subway stations.
- Wants clear post-exit direction from subway to destination.

My teammate and I conducted interviews with several commuters we encountered at the World Trade Center. We synthesized the gathered information to create a persona, aiming to understand the common issues related to subway navigation.

Subway Navigation

By Commuters For Commuters

User Journey Map.

Journey Phases	At origin	On the way to subway station	In-station navigation (at origin)	On the train	In-station navigation (at destination)	Post-exit	At destination
Jobs to be done	Determine a path to get to the destination	Get to the right subway station	Find the right subway line to take	Keep track of the current station and get off at the right station	Find the nearest exit to the destination facility (e.g. shopping mall)	Get to the destination	Confirm it is the correct destination
Context & Touchpoints	Search for a path via Google Maps	Follow the Google Maps route to the station	Follow in-station signage	Refer to the real-time screens in the train and listen to the broadcast	Follow in-station signage	Follow the Google Maps route to the destination	
Gains	Recommended list of paths on Google Maps			Clear and accessible screen showing the current and upcoming stations			
Pains	Figure out which is the optimal path (considerations: efficiency & safety)	Some paths are infeasible Inaccurate current position and direction	Complicated signage Difficulty in finding the right line in right direction	Can't hear broadcast Some carriages have no screen	Difficulty in finding the best exit		
Emotion							

NYC Subway.

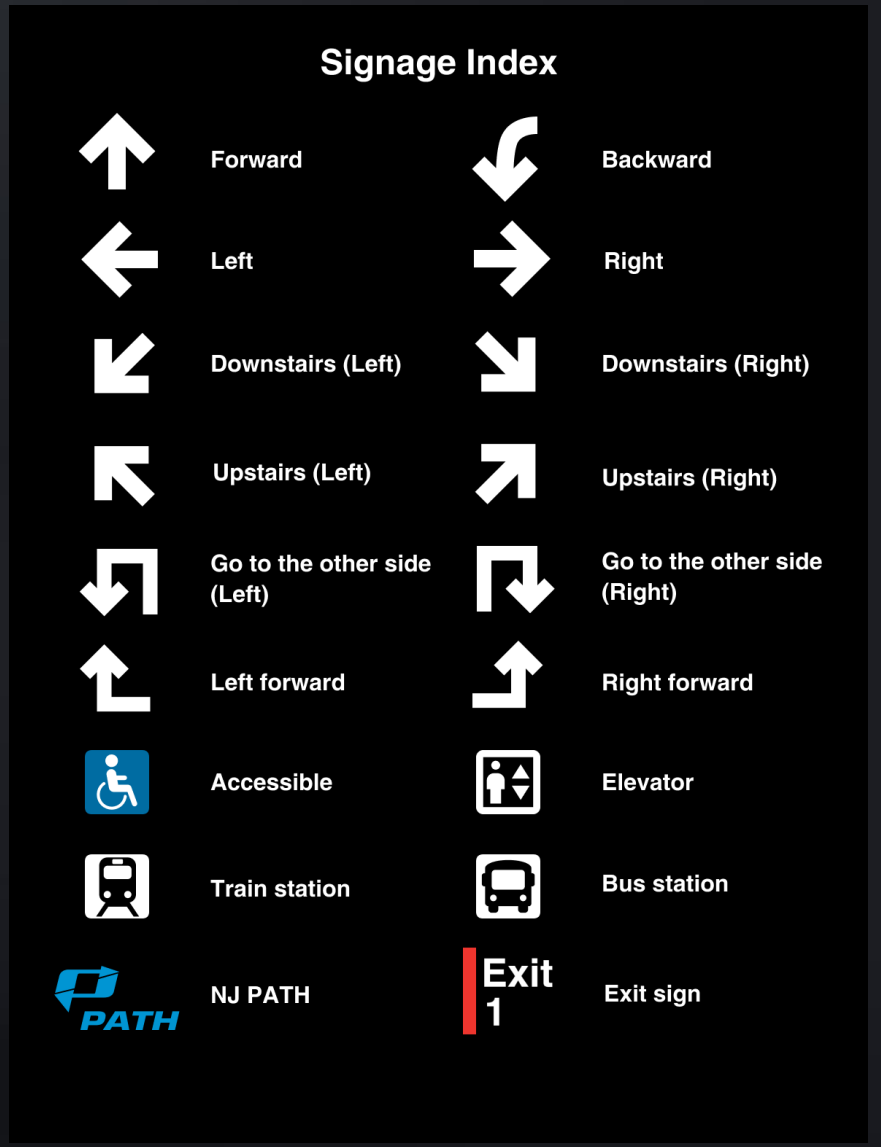
As newcomers to New York City, we amalgamated insights from interviews, observational studies, and our own experiences. The culmination of this effort is the user journey map, designed to reveal the pain points within the entire process of subway navigation.

Subway Navigation

New Index

Fit in all complex structures, and gives intuitive, universal meanings to NYC commuters.

Enhance clarity in the direction index to minimize the possibility of misleading information.



Subway Navigation

Original Version

The complex structure of the subway station has the potential to confuse commuters with the two direction signs. During A/B testing, some participants misinterpreted the bypass sign, assuming it meant a U-turn or going backwards.

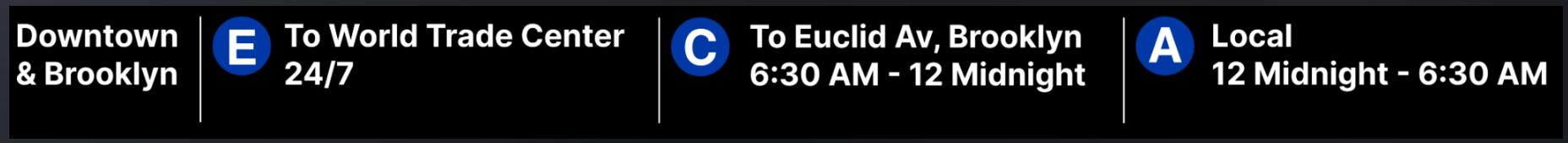
Redesigned Version

The redesigned version provides clearer directional guidance, and we have added numbers to each exit for easier identification, facilitating commuters in locating the corresponding exit based on the assigned numbers.

Subway Navigation

Original Version

The redundancy of information and the ambiguous declaration of the time period are areas that need improvement.



Redesigned Version

Opt for a straightforward destination and time format. Minimize the reading time and word count on the sign.

CUBE

LOGO’s Content

The logo echoes the English translation of the project name, Cool Book and Cube. Cool represents the lifestyle of urban youth, while Book is a book, and the cube in the logo is also composed of four letters, c, u, b and e, to build a space of self belonging to urban youth with good taste.

LOGO’s Implication

The cube symbolizes the space of harmony, through which urban youth with similar interests gather to express their views and make friends. The cube also represents each user, and the accumulation of many cube forms a huge community set, making the whole community more inclusive.

LOGO’s Color

The logo color is chosen from two different blues and a gradient of blue and white. The blue symbolizes reason and profundity, representing each individual's unique opinion on artworks, and with the cube also represents the unity of opposites formed by the diversity of people's opinions.

CUBE

Discovery Page

Community Page

Rating Page

Profile Page

Web project

WebGL/P5.js

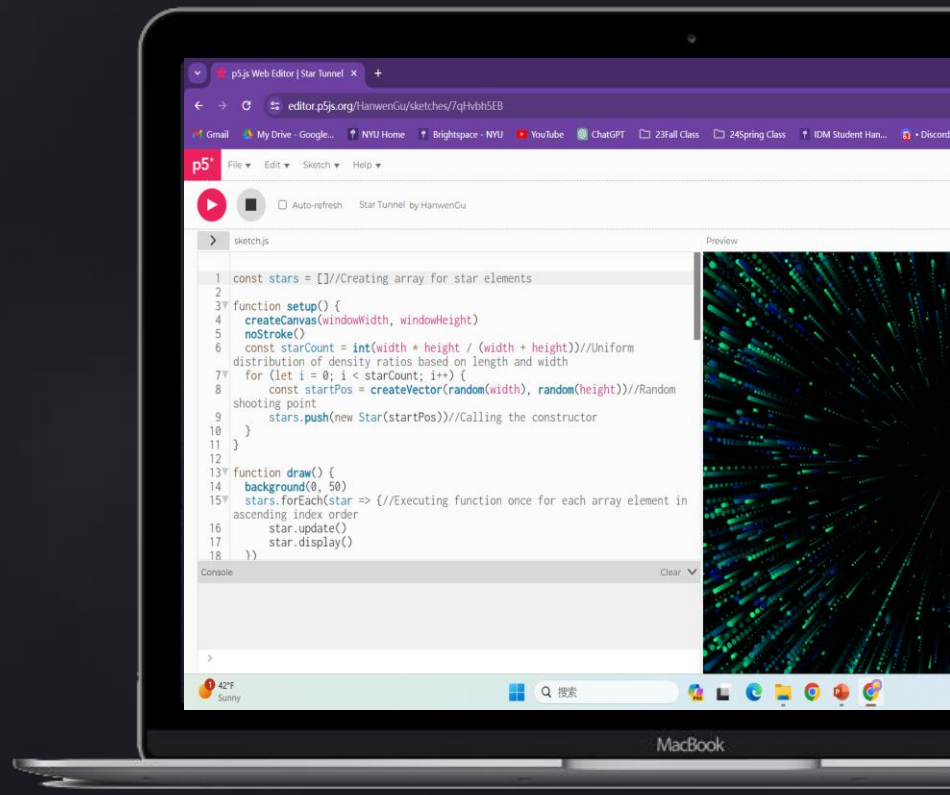
2023

P5.js project

Star Tunnel:
https://editor.p5js.org/HanwenGu/sketches/7qHvbh5EB

Design concept

The project creates a mesmerizing effect where numerous stars emerge from the center of the screen, gracefully gliding in a straight line towards the screen's edge, leaving behind a dazzling trail. It simulates the sensation of traversing through a celestial tunnel adorned with twinkling stars. Additionally, you can interact with the scene by using the mouse to generate new trajectories for the stars, enhancing the immersive experience.

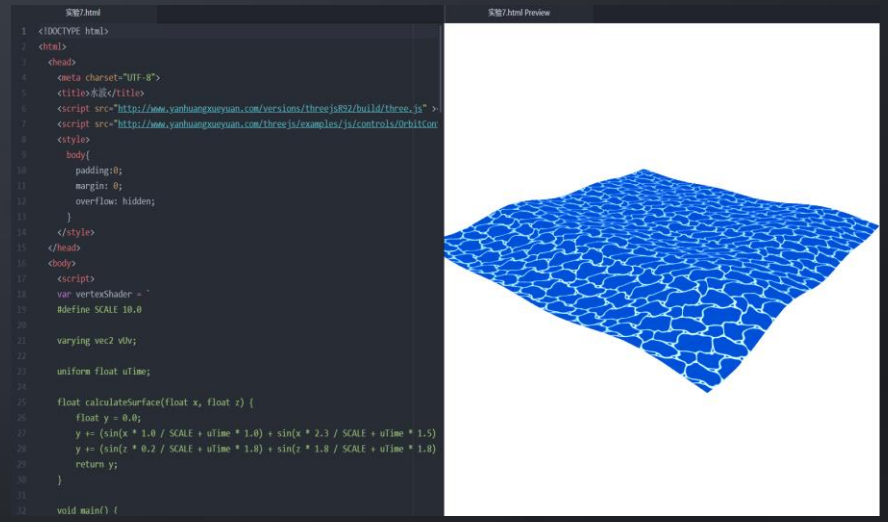


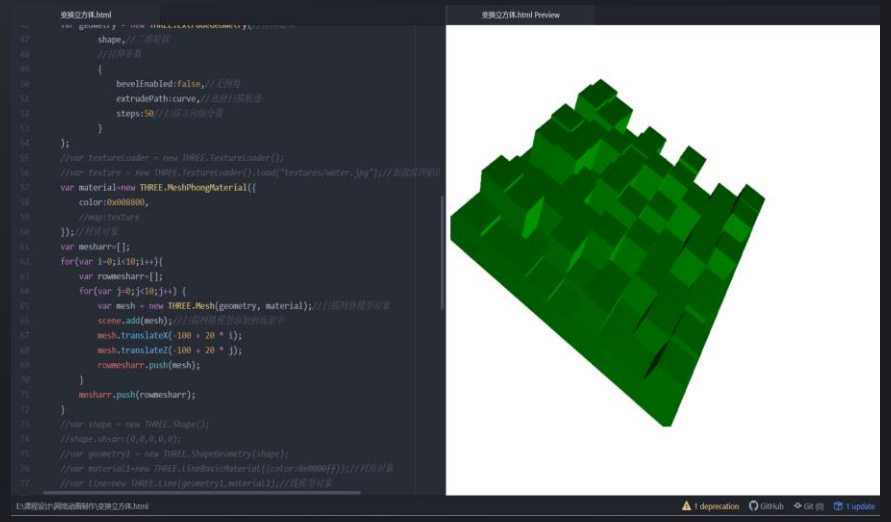
WebGL project

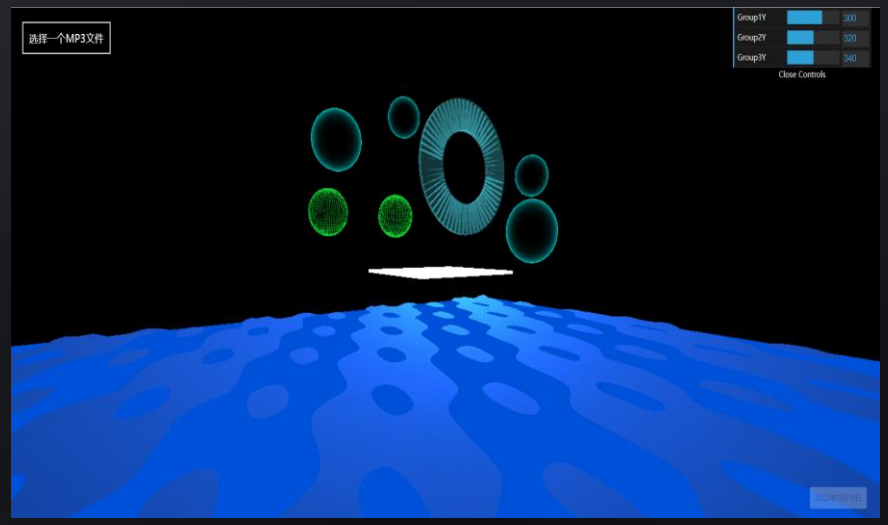
Design concept

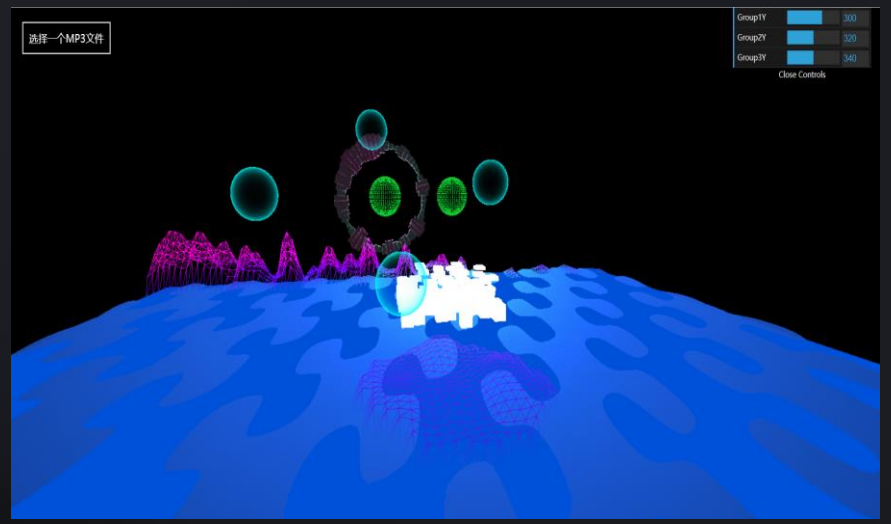
The main content of the work is to import its own audio, through the audio data to make the objects in the scene according to the corresponding frequency of vibration, color change, zoom in and out, ripple, undulation and other functions. Then I adjust the position and rate, perspective, background, etc. to create a feeling of emptiness. The main use of atom for writing, WebGL, Three.js and other implementation, the use of more shaders to achieve a more ideal dream effect.

WebGL project









3ds Max project

MODELING

2022

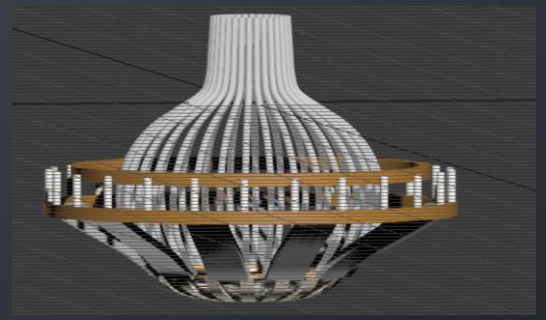
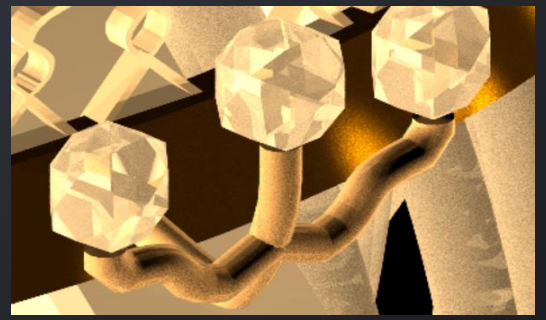
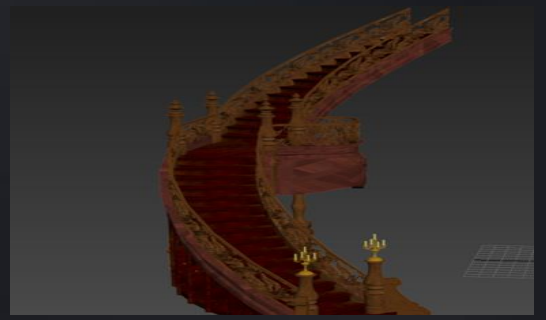
3ds Max project

Design concept

The original scene is from the castle of Resident Evil 8. After observing the floor plan and the detail drawings from many angles, I decided to restore this scene and add my own modifications and aesthetics to the scene. I used 3dsMax to restore the main hall of the medieval castle and related decorative homes, etc.

3ds Max project

3ds Max project

OpenCV project

IMAGE PROCESSING

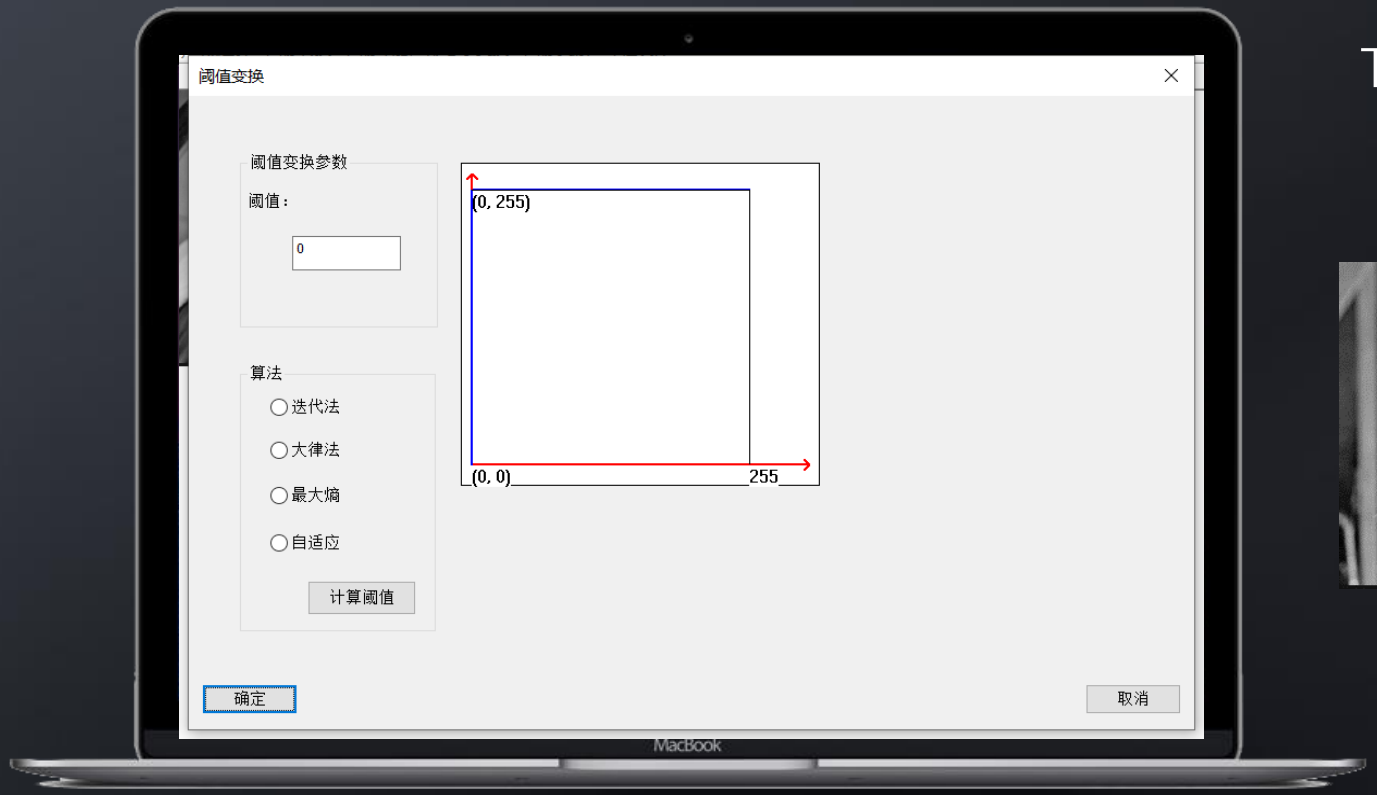
2022

OpenCV project

Design concept

Image processing application written in C++ through the MFC class library, which can perform threshold transformation of grayscale, filter operation, geometric transformation, edge detection, etc. on 8-bit images or 24-bit images

OpenCV project

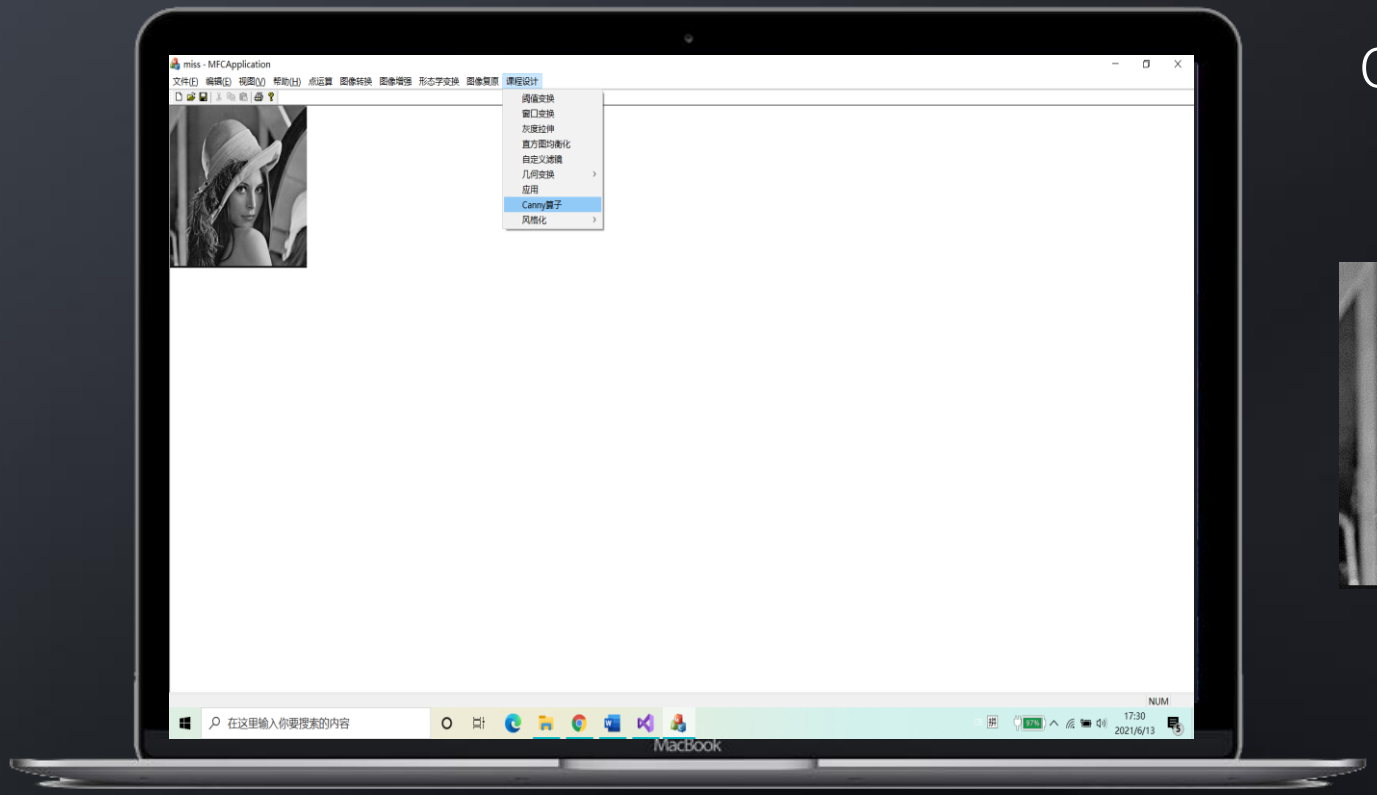


Threshold transformation of grayscale

OpenCV project

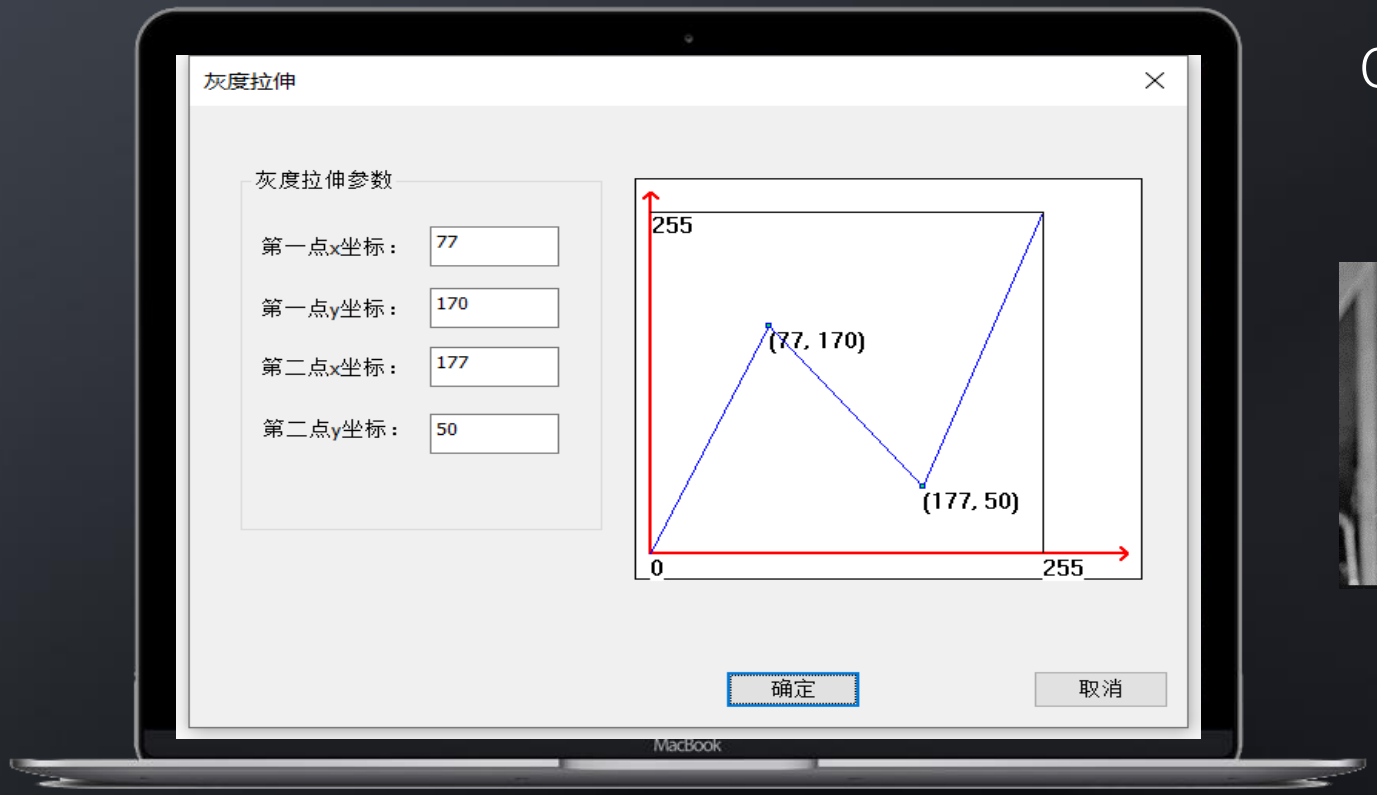
Filter operation

OpenCV project



Canny operator

OpenCV project



Grayscale stretching

Unity project

GAME/AR

2023

Unity project

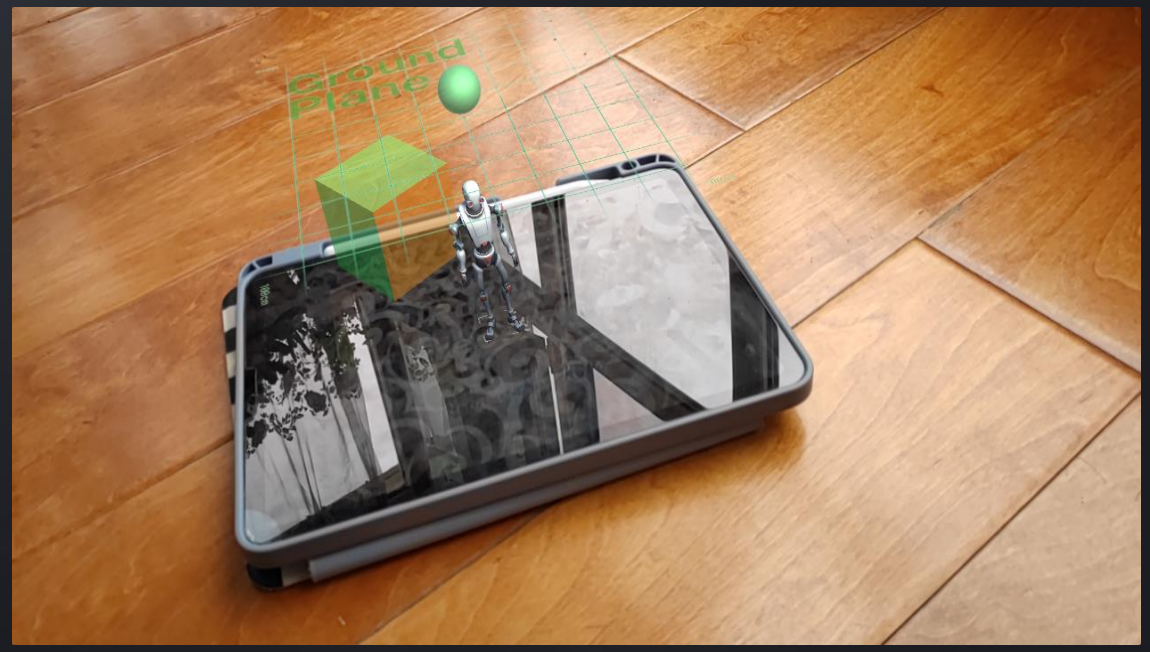
Design concept

“Involve” is inspired by social phenomenon, and revolves around the theme of "involution", trying to lead players to think about how we should treat “involution" through the interaction of plot, leveling and decryption, and exploring with players to break through the "involution". The theme of "involution" is to try to lead players to think about how we should deal with "involution" and explore with them the way to break through the strange circle of "involution". This is the reason for the name "Involve", hoping that everyone can break through the shackles of the "involution" and finally break the chrysalis into a butterfly. I’m the developer for first scenario.

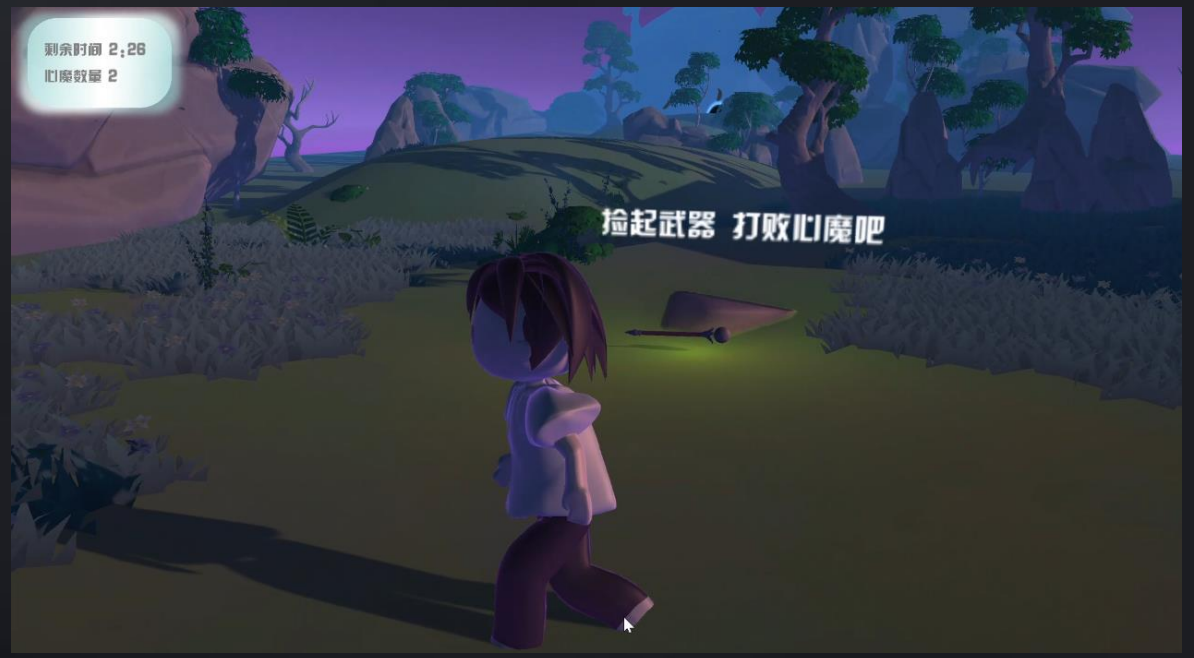
Unity project

Design concept

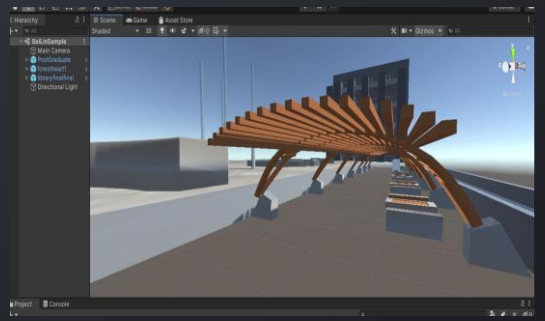
Based on the unity engine platform, the AR development package of Vuforia Engine was imported to realize an AR application, and the Robot Kyle action package was introduced to realize the animation display of AR scenes, configure Java and Android jdk settings and export to Android phones for operation.

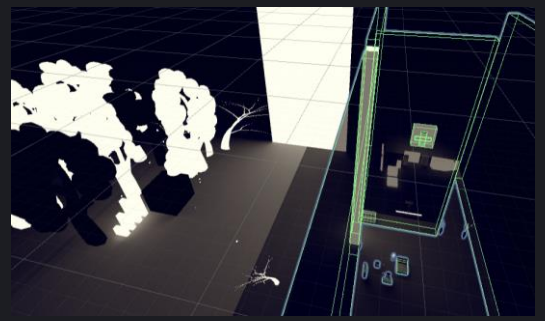


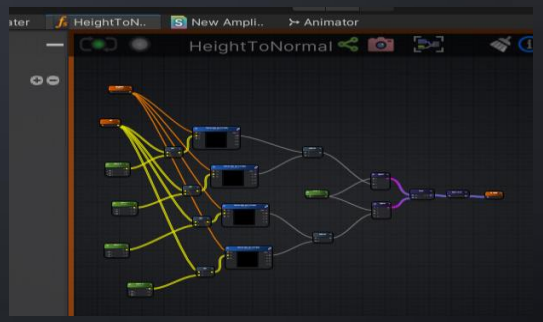
Unity project

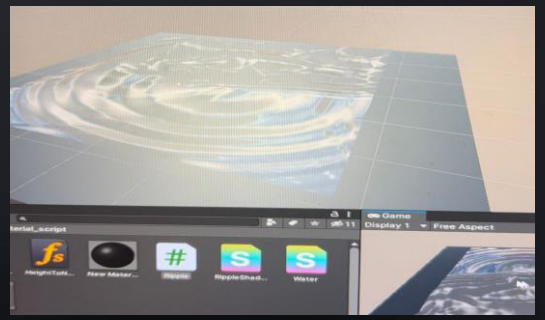


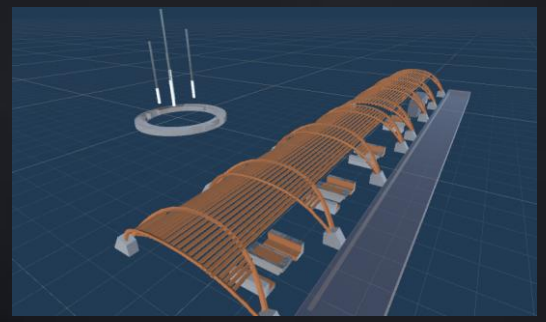
Unity project



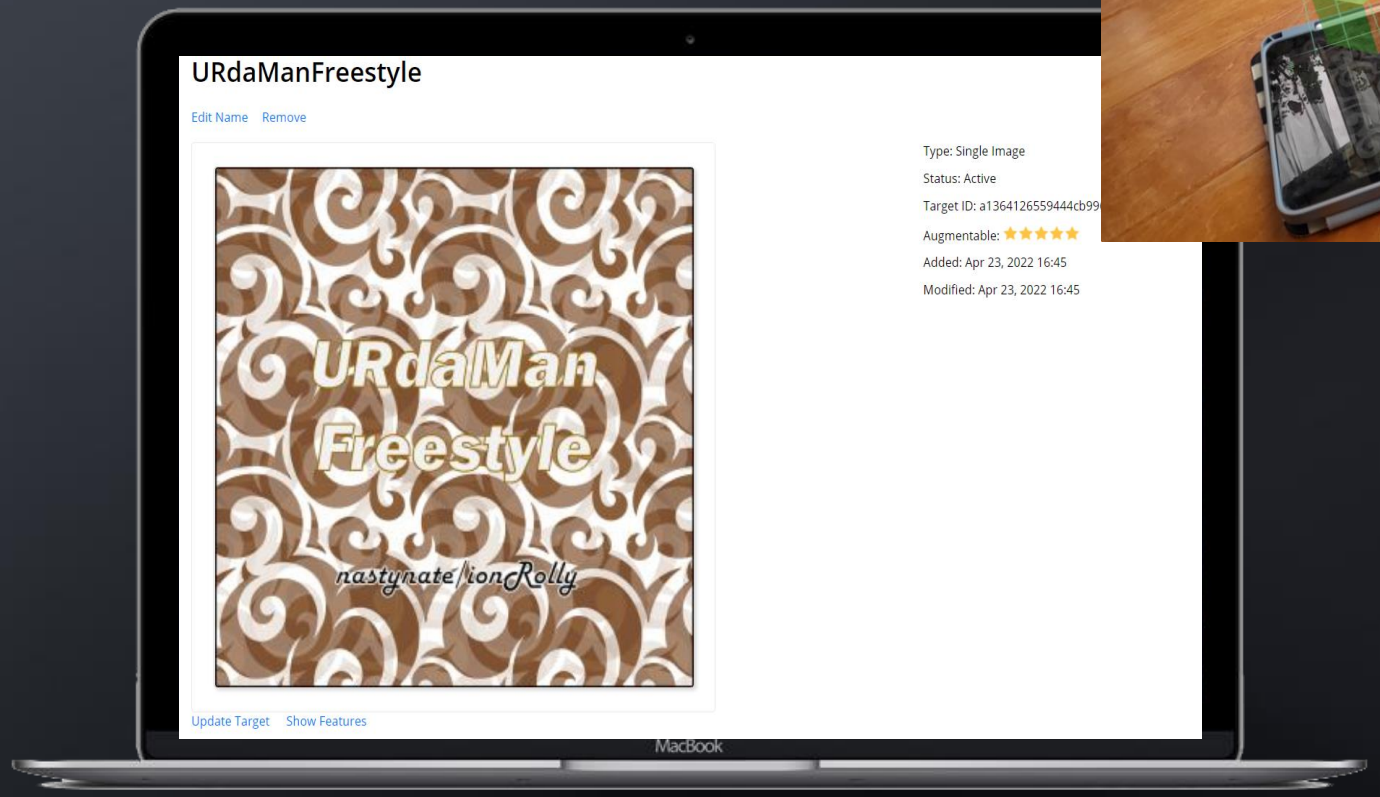


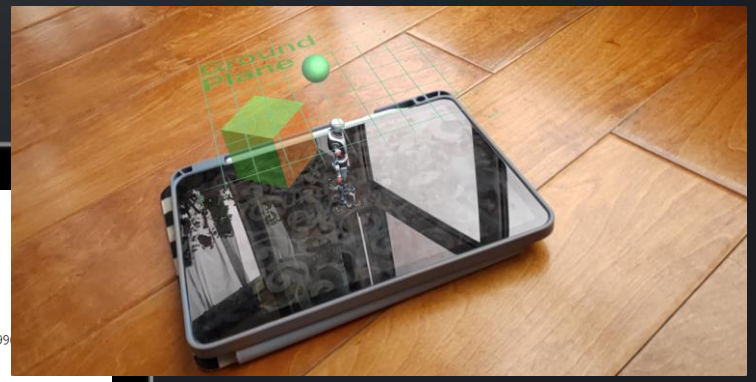


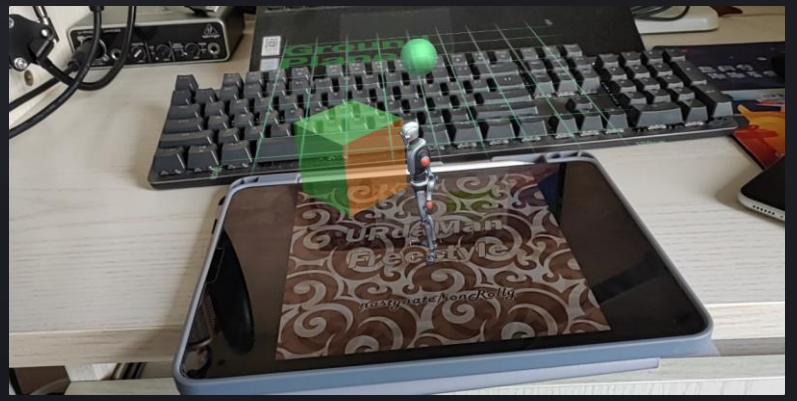




Unity project







The End

THANKS FOR YOUR WATCHING

THANKS

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