

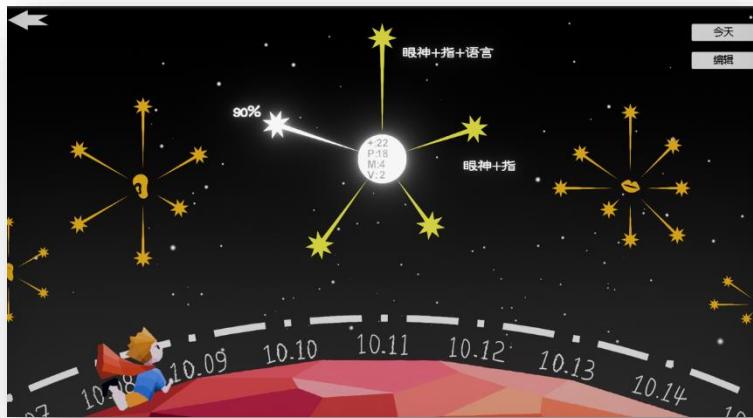
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Xiamen University
Digital Media Technology



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Personal homepage : <https://huriclee.com/>



Overview



Content

Game making

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Interactive design

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Visualization

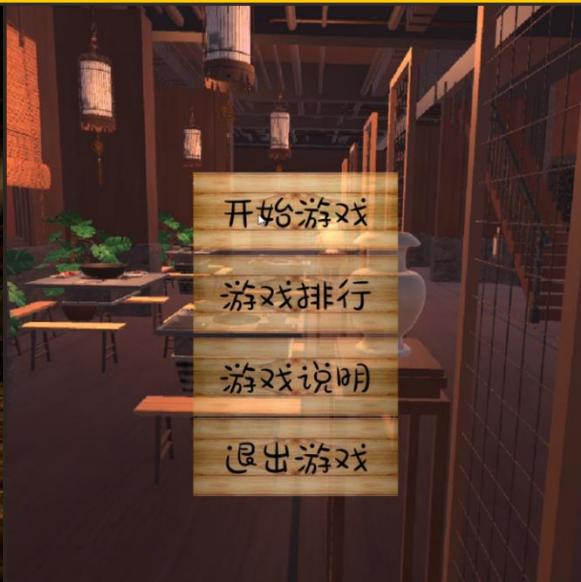
Page.49-53

Animation

Page.54-59



Game Making



ZERO

MMORPG

A variety of weapons

Random toxic circles

Innovative mechanism

MAINLAND OF PETS

ARPG

Collection of pets

Achievement system

Rich gaming experience

HORROR CASTLE

TAKAGISM

Immersion of thrill

Escape room

Easter eggs
mind twisting levels

GUAGUA HOTPOT

CASUAL

teach with Hotpot

Timed mode

Stage mode

ZERO

Design Tool : UNITY

Game Genre: MMORPG

Introduction

This is a multi-player competitive online game that introduces a new game style, "Poison Circle". The game has rich skills, vast and varied maps, and diverse game modes.

Video link:<https://www.youtube.com/watch?v=UUxe6nRtmn8>

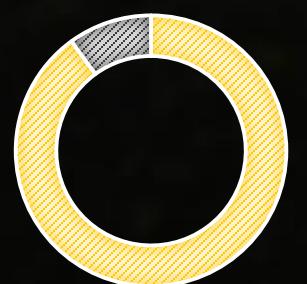
Technical document: <https://github.com/HuricLee/HuricLee.github.io/raw/main/technical%20documentation.docx>

Contribution

PLANNING



PROGRAMMING



- I
- other members

Responsibility

In this project, I participated in the overall planning, responsible for the design of some weapon skills, the design of UI, and the implementation of the whole program

GAME: ZERO

Toxic circle



Main Features

1.Put the toxic circles

Different from the traditional survival game which has an electric circle generated once the game is started, my game creates the circle randomly in every game, and in a certain period of time the circle continues to expand the scope, then it vanished before another circle transpires.



GAME: ZERO



Main Features

2. Weapon switch

When the game starts, the player can acquire weapons through random chests in the map. Each weapon carries 3 basic skills.

3. Various skills

In addition to the basic skills that come with the weapons, players can also pick them up and gain general skills. Each player can equip up to 2 general abilities at a time. Each versatile ability has only one cast chance.

GAME: ZERO

Design Elements

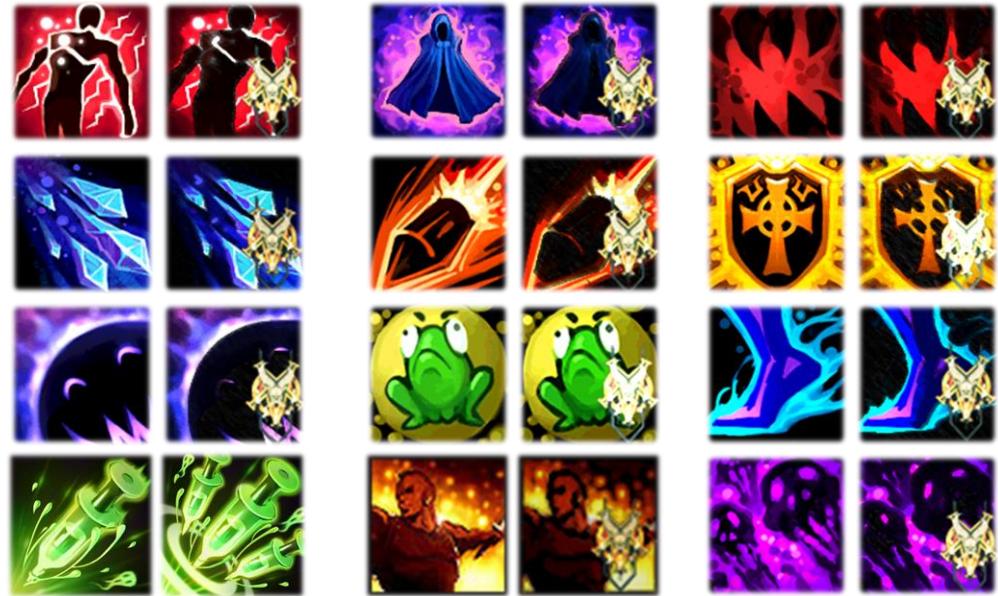


Various Skills

Various Skills

18 weapon kills

In this game, we designed a total of six weapons, each with three skills. I was responsible for the technical part and realized all the skills through Ctrip, dictionary queue and other methods. Meanwhile, most of the skills were designed by myself. Through learning the basic knowledge of partial system and shader in Unity, I have completed the production of all weapon skills.



24 generic kills

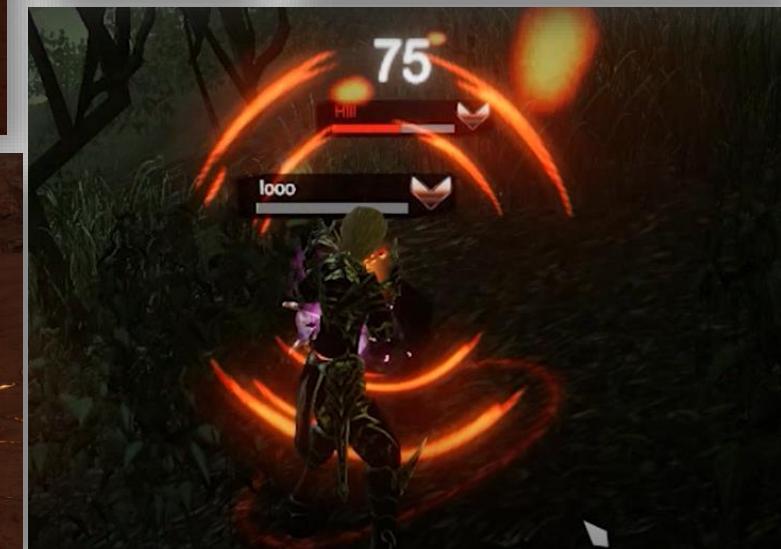
Generic skills are acquired by picking up a box of generic skills after entering the game. Each common skill is divided into normal and intensified versions. In this part, I realized and distinguished the general and intensified effects through the conditional judgment of the label.

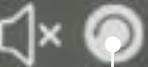
GAME: ZERO

Design Elements

some Effects of Skills

some Effects of Skills





GAME: ZERO

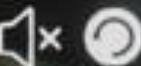
Interfaces

The background scene can be changed by clicking this button



This interface is the user's login interface

Altogether 18 scenes



GAME: ZERO Interfaces

房间列表

加入房间

创建房间

• create room

• join room

• search room

MIAO

等级 40

EXP

0.07600006

击杀

0

嘴强王者

死亡

2

荣誉

39964



> 详细战绩

game record

This area displays all the rooms created

乱斗模式		MIAO	
场次	2174	平均名次	100%
平均分数	2	最高分数	48
生存模式		MIAO	
场次	0	平均时长	0
平均分数	0	最高分数	0
战场模式		MIAO	
场次	0	平均名次	0
平均分数	0	最高分数	0
详细战绩			

This screen is the game lobby, and this screen also shows the player's achievements



NAME: MIAO

HP: 1000/1000

ATTCK: 50

GameTime 26:13

CircleCountdown 01:19

FPS 60

GAME: ZERO

Interfaces

Mini map
Enlarged by "M"

The count of bullets(only shows with the laser gun)

Skill frame



设置
离开

GAME: ZERO

Interfaces



Attribute panel
Open by pressing 'Y'



Skill backpack
Open by pressing 'B'

排名	玩家	总分	击杀	死亡	道具得分	武器得分
1	rtr	52	3	1	22	8
2	zyj	22	1	2	24	4
3	looo	12	0	0	8	4
4	Halo	4	0	0	2	2
5	456789	0	0	0	0	0
6	Elio	0	0	0	0	0

武器已更换为流香

A small green progress bar at the bottom indicates a timer or cooldown.

Ranking list
Open by pressing '~'

GAME: ZERO

Technical Implementation

Network

multiplayer online based on Photon
data storage based on Aliyun OSS service

Systems

Backpack System
Props Generating
Skills
Synchronization
...

Effects

Partial system
Shader
PS
...



Mainland of Pets

Made by Unity
ARPG

Responsibility
Main Designer and Chief Programmer

Introduction

Mainland of Pets is a free adventure side game featuring fresh and magnificent scenes. Players can move freely and fight freely in the game to complete their exploration of this mysterious land, get the pet, unlock achievements and uncover the mystery of the land of cute pets.

Video link: <https://www.youtube.com/watch?v=duGX14r4Yq0>

Technical document: <https://github.com/HuricLee/HuricLee.github.io/raw/main/Mainland%20of%20pets.docx>

Contribution

PLANNING



PROGRAMMING



I

other members

Main Features

- Various pets
- Dreamlike scene
- loads of achievements
- Hidden treasured pets
-

GAME: Mainland of Pets

Design elements

In this game, we designed five different styles of scenes.
In addition to modeling in line with the scene, I mainly implemented the stylized scene through Unity's Post Processing plug-in

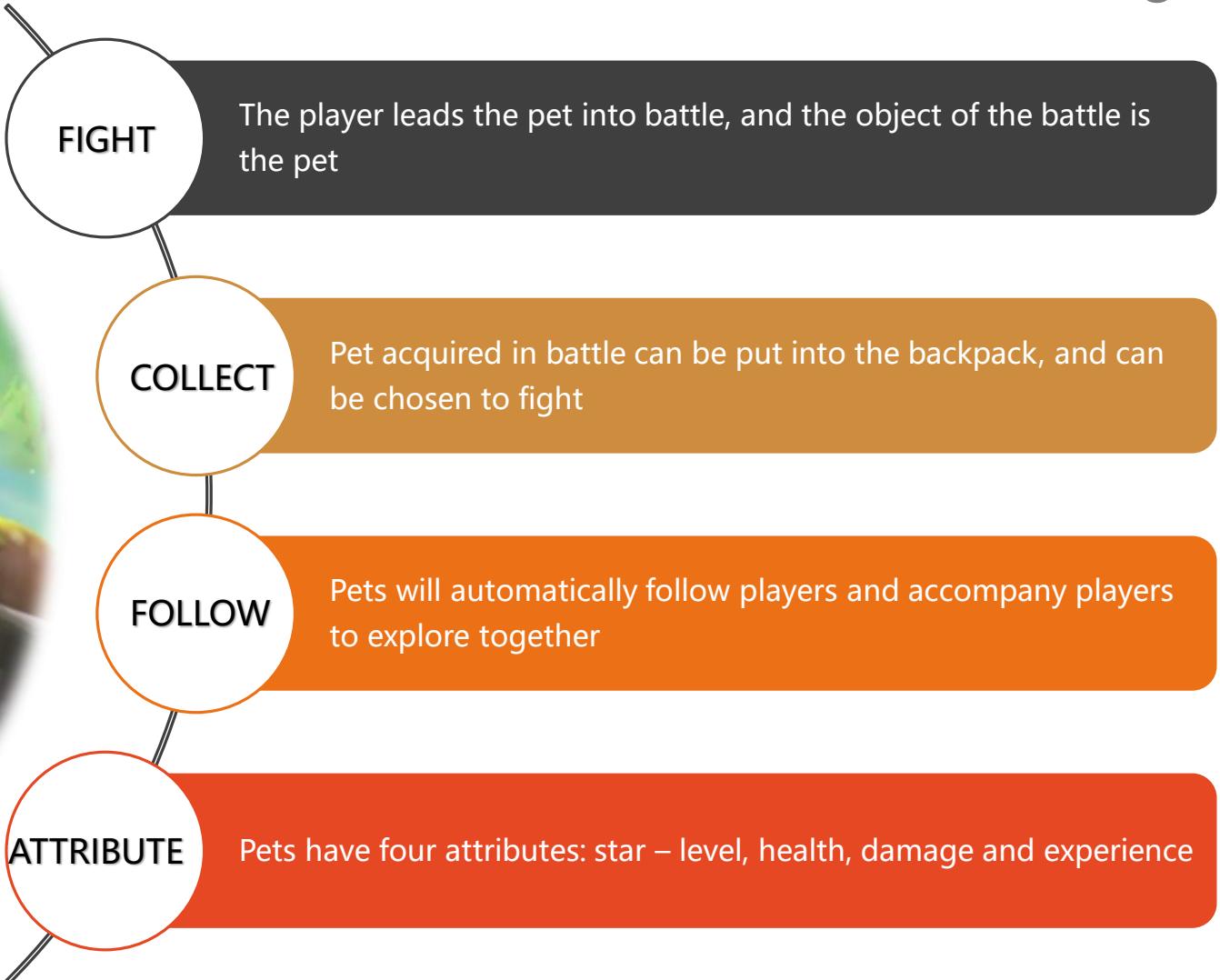


30+ pets to explore



GAME: Mainland of Pets

Game Settings



GAME: Mainland of Pets

Features



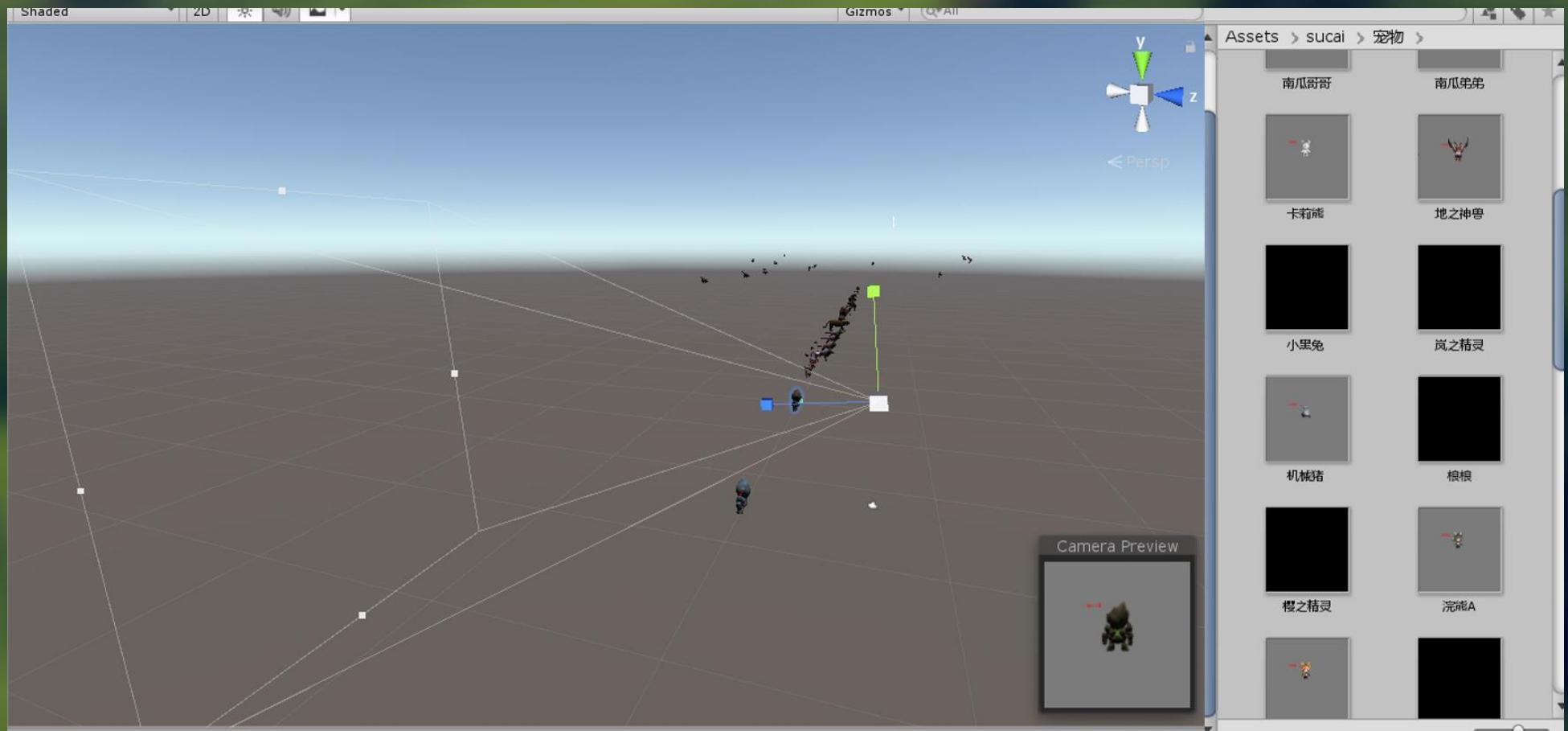
The main feature of this game is the 3D UI, and all the pets on the interface are 3D dynamic. The reason for this design is that considering the needs of game players, if the pet game players can observe the dynamic pets all the time, the game experience will be greatly improved.

GAME: Mainland of Pets

Features

3D UI

made through Unity's Render Texture and camera



GAME: Mainland of Pets

Features

- The two main points of our game are exploration and collection. The map system saves the pets that the player has acquired. Collecting the pets and lighting up the map is part of the gameplay

Illustrated Pets Handbook



- When the player hits certain conditions, the corresponding achievements will be triggered, meanwhile, the player will be rewarded. If all achievements have been achieved, then congratulations, the game has been finished

Achievement System

2 Special Systems



Horror Castle

Takagism

Responsibility

project leader and
chief programmer

Introduction

At the beginning of the game, the character who loves decryption reasoning game in a desolate strange castle wakes up, finding that all things of his are missing. The player needs to find all the clues, uncover layers of fog, and escape the castle

Video link: <https://www.youtube.com/watch?v=wOIDyS1xVQ8&feature=youtu.be>

Technical document: <https://github.com/HuricLee/HuricLee.github.io/raw/main/Planning%20Book-Horror%20Castle.docx>

Contribution

PLANNING



PROGRAMMING



I

other
members

GAME: Horror Castle



Level design with varying difficulty

The game is a total of eight levels, each level of the plot is linked, the difficulty also has a stepwise change

Realistic visual experience

This game is a 3D game, more three-dimensional and realistic than the general 2D chamber escape. And the first perspective of the game enhances the player's sense of presence



Variety of gameplay design

In addition to the general intelligence of decryption crack password, the game is also embedded in the puzzle and other small games, which are different kinds of access to password and decryption

Game playability



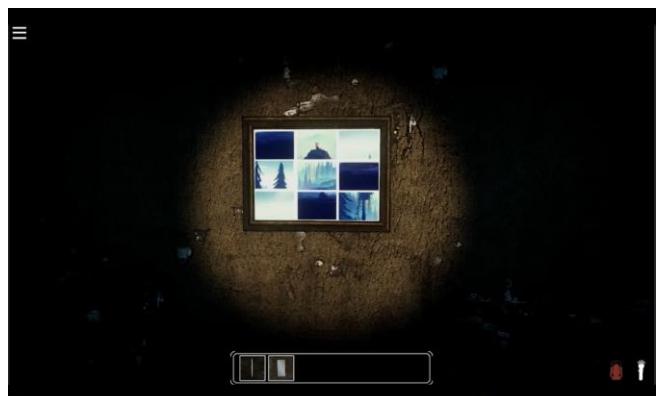
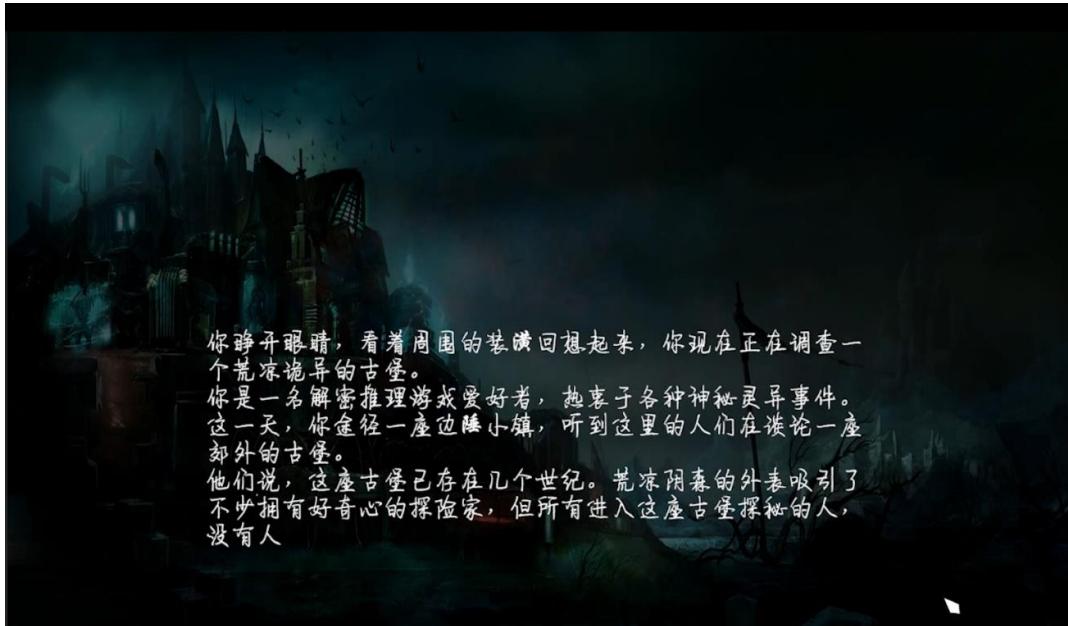
GAME: Horror Castle

Levels

The game has a total of eight levels. In my level design, each level is not independent. Some levels will be related to the later levels, which improves the difficulty and experience of the game to a certain extent



GAME: Horror Castle



GUAGUA HOTPOT

Simulated business & strategy

Responsibility

level planner and chief programmer

Introduction

For the sake of the program work and the final exam, the hero Guagua was depressed due to various busyness and pressure, so he traded low happiness value for food, and got high happiness value through the bonus of hotpot. Through such story plot, we launched the four levels in the challenge mode

Video link: <https://www.youtube.com/watch?v=GApxevZPKU&feature=youtu.be>



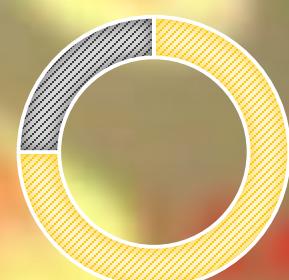
Logo

Contribution

PLANNING



PROGRAMMING



I

other
members

GAME: Guagua Hotpot

Inspiration

Hot pot is a very popular dish in China. As a Chongqing native, I came up with the idea of putting hot pot into the game.

Therefore, I design the process of eating hot pot as the process of the game, and whether the ingredients are properly cooked is the evaluation standard of the game

Obviously, the mechanics of the game and the setting design of the game are **original**



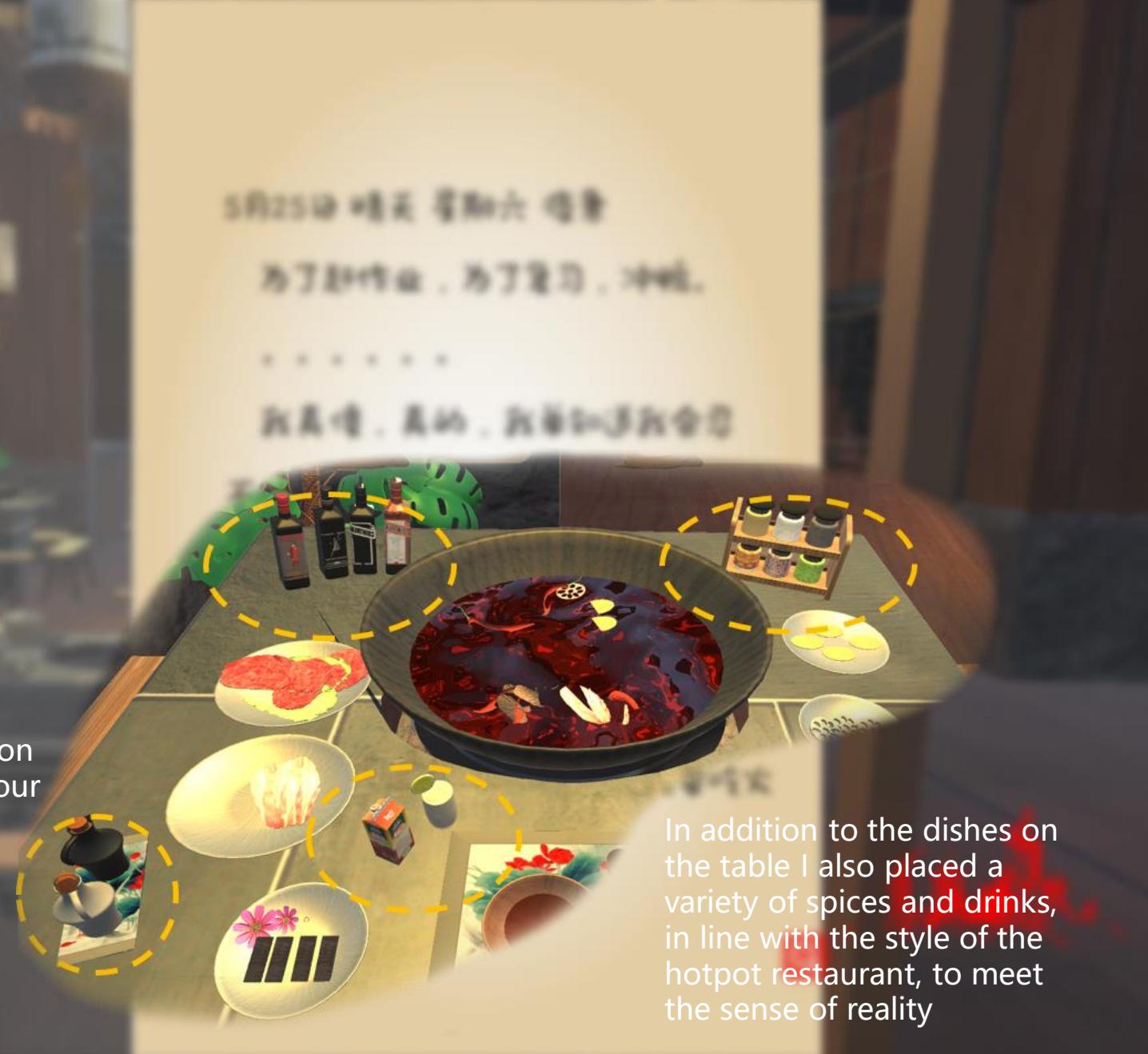
GAME: Guagua Hotpot

Design

The loading bar also uses the element of chili, so that players can quickly integrate into the atmosphere of eating hot pot.



The opening animation corresponds to the four levels in Challenge Mode

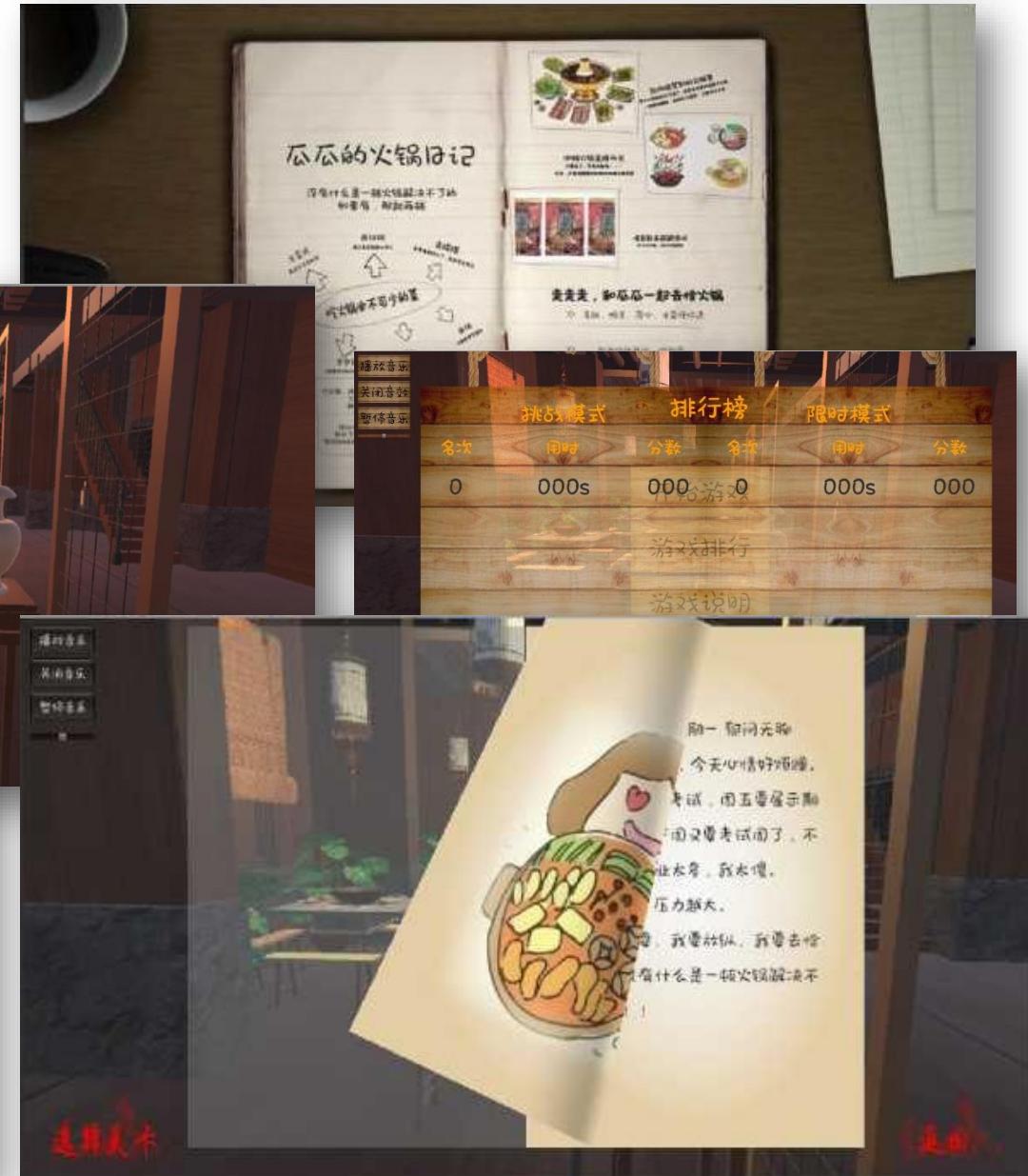


In addition to the dishes on the table I also placed a variety of spices and drinks, in line with the style of the hotpot restaurant, to meet the sense of reality

GAME: Guagua Hotpot

Gameplay

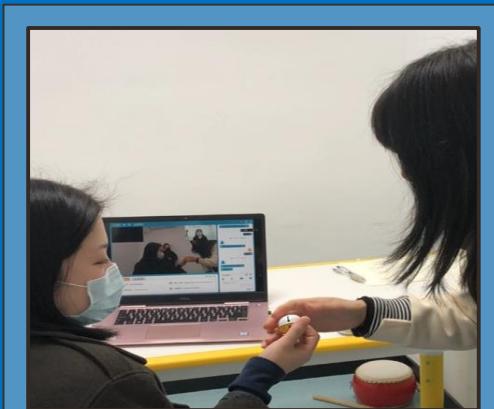
Each level of the game is given the initial happiness value and the target happiness value. Reach the target happiness value can pass the level. Players can purchase the corresponding hotpot ingredients by consuming the happiness value. In the time-limited mode, there is no target happiness value, so players can arrange the use of ingredients to get a higher happiness value.



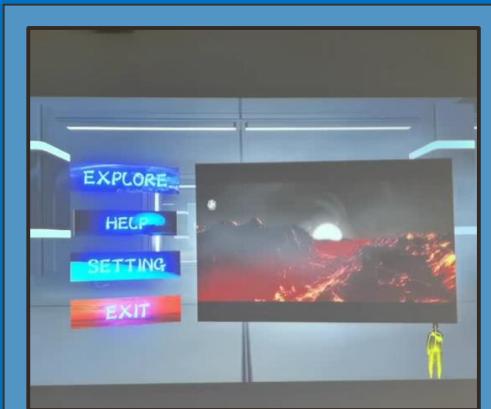
Interactive Design



Intelligent robot for
autistic children



Online and offline
interactive course
platform



Interactive Space
Museum



Interactive movie game

ROABA

—Intelligent companion social assistance robot for autistic children

Responsibility

In this program, I am the technical director. The OSS storage service and ECS server service of Ali Cloud were used to build the server, and the entire robot interaction program was realized by Unity

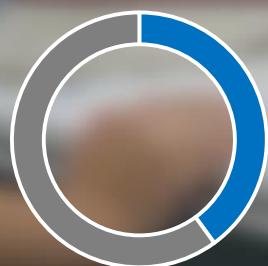
Video link: <https://youtu.be/4955pACYT9Y>

I have applied for software works for this work, therefore there is no link of the technical document attached

Contribution

planning

programming



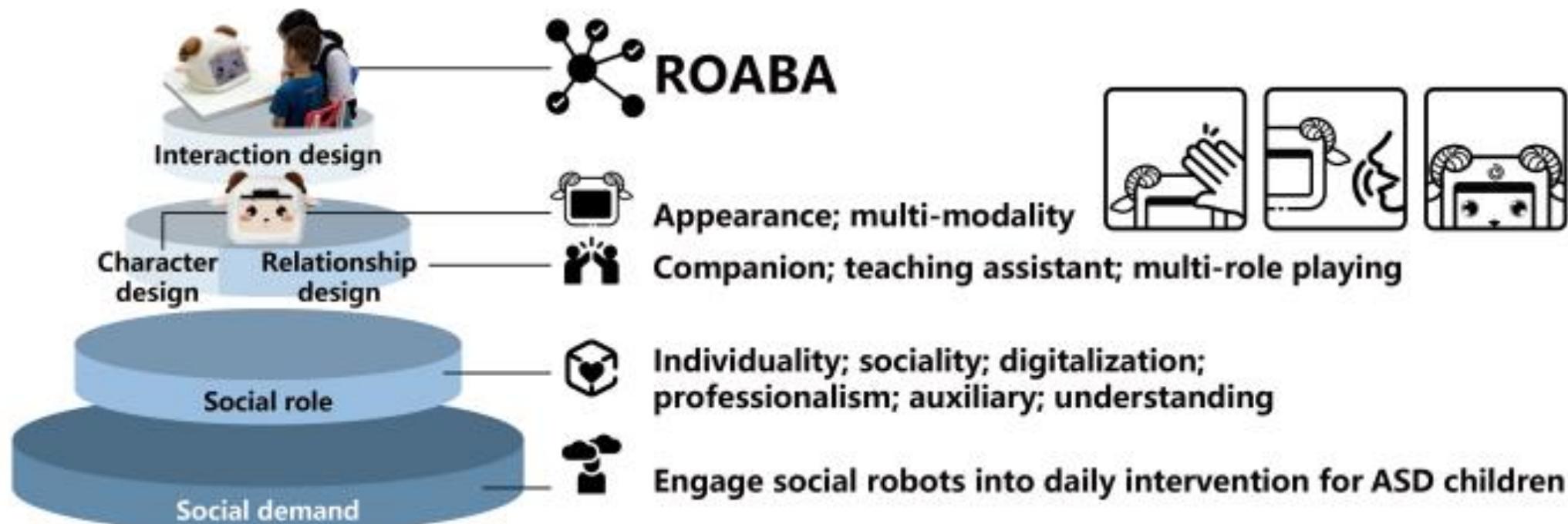
I

other
members

Interactive Design: ROABA

Introduction

ROABA, a novel intervention model for a social robot to engage children with autism using ABA as a therapy framework. We conducted experiments with ASD children and professional therapists. Then, based on the data collected, we performed detailed analysis of the process and evaluated the effectiveness of the ROABA model

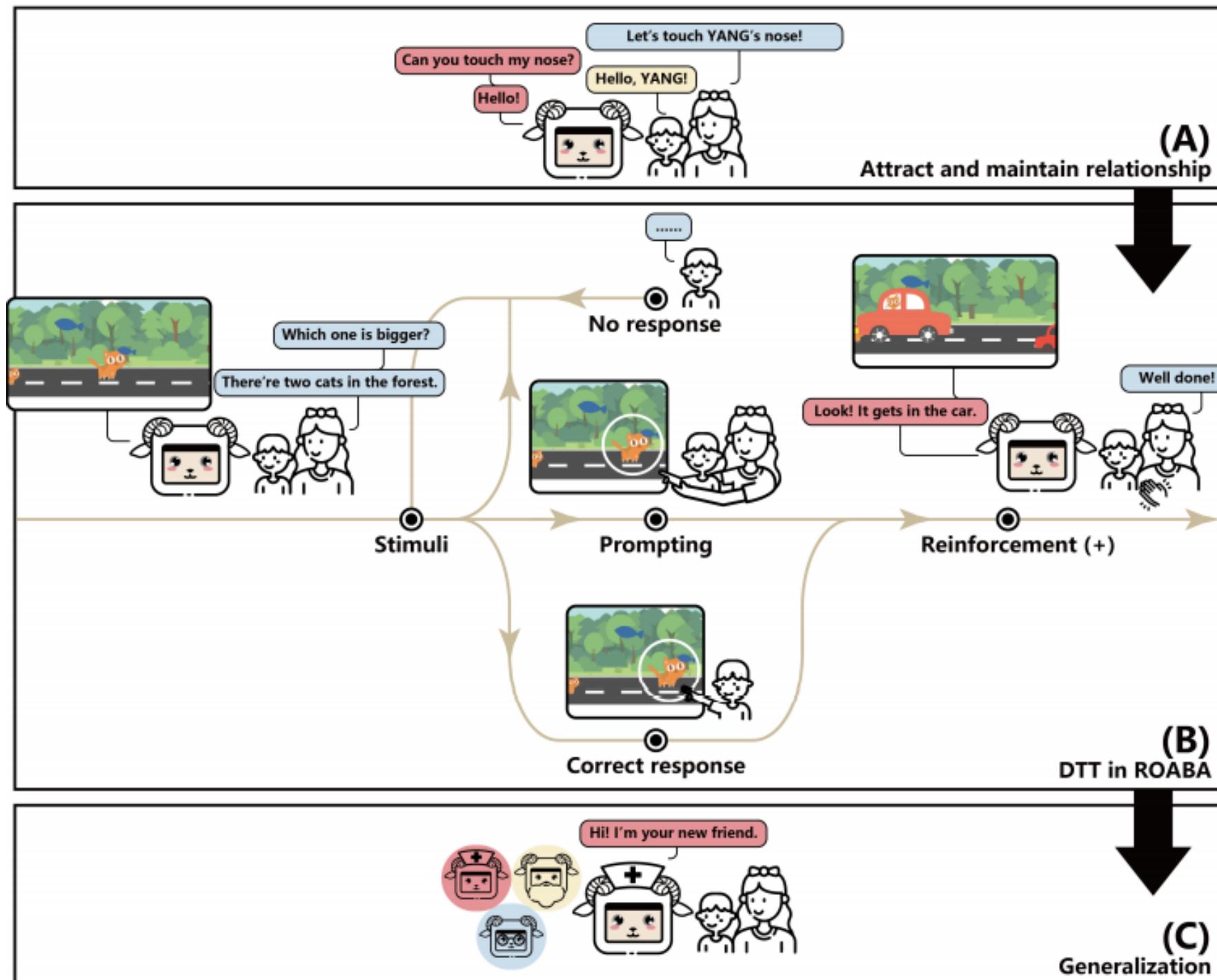


Interactive Design: ROABA

Interactive Model

The first step to build the social connection is to attract the children's attention, which can be achieved through the social robot's appearance and audiovisual display. Since the robot has an appearance that children like and are familiar with, when children spot the robot and get close to it, they are attracted to it.

Then, during behavioral intervention, in case that the children do not focus on the training content, we design exaggerated and stimulating voices, images, and actions of the robot to turn children's attention back to the robot. All these interactions are designed according to communication patterns between children and their friends.



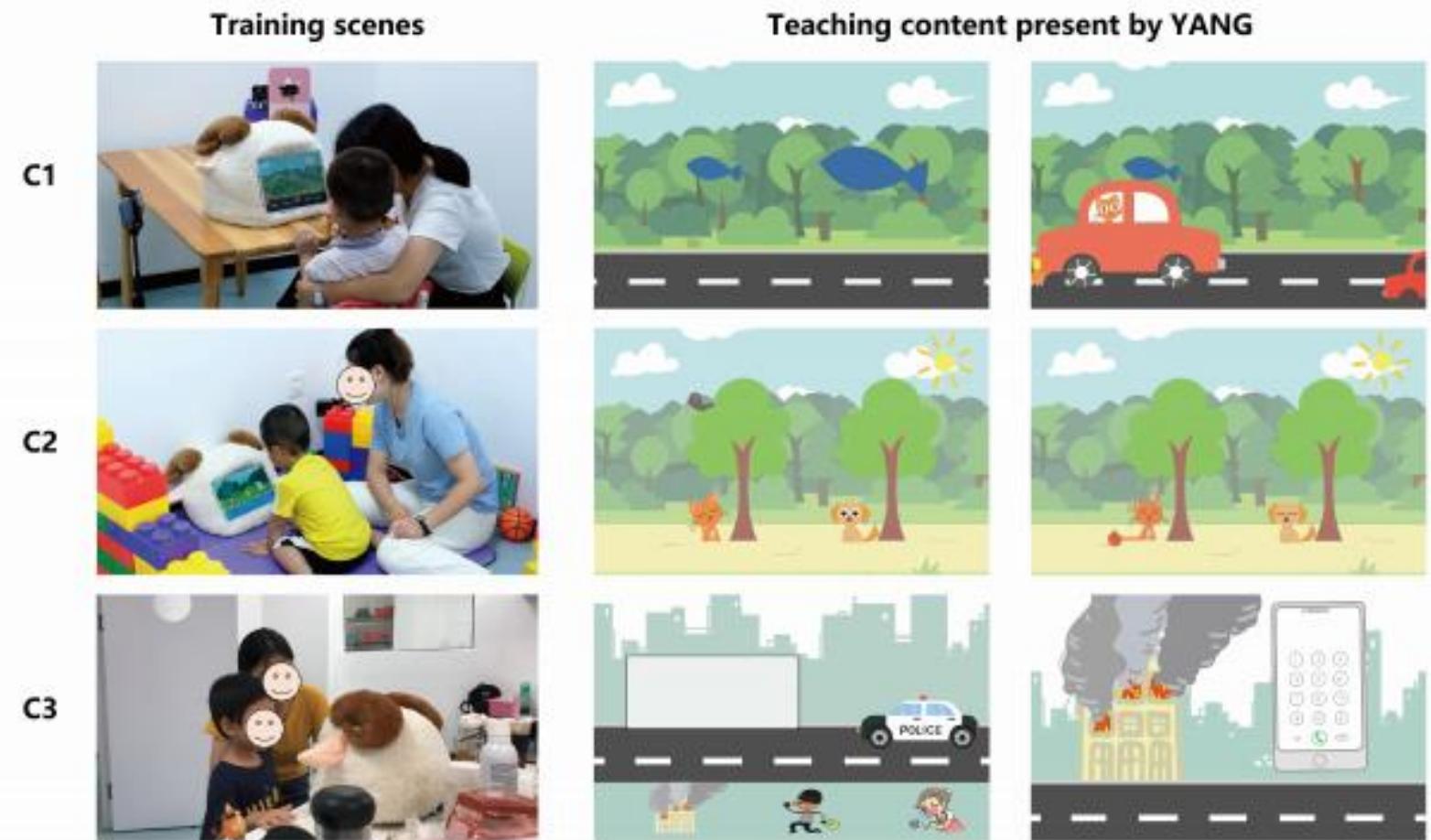
Interactive Design:

ROABA

Experiment —design

- We tested ROABA in an ABA-based rehabilitation training center for children with autism and conducted experiments.

- Test data of three children with different abilities and learning contents were selected for illustration of the testing result of ROABA. We alias these three children as C1, C2, C3 and their therapists as T1, T2, T3



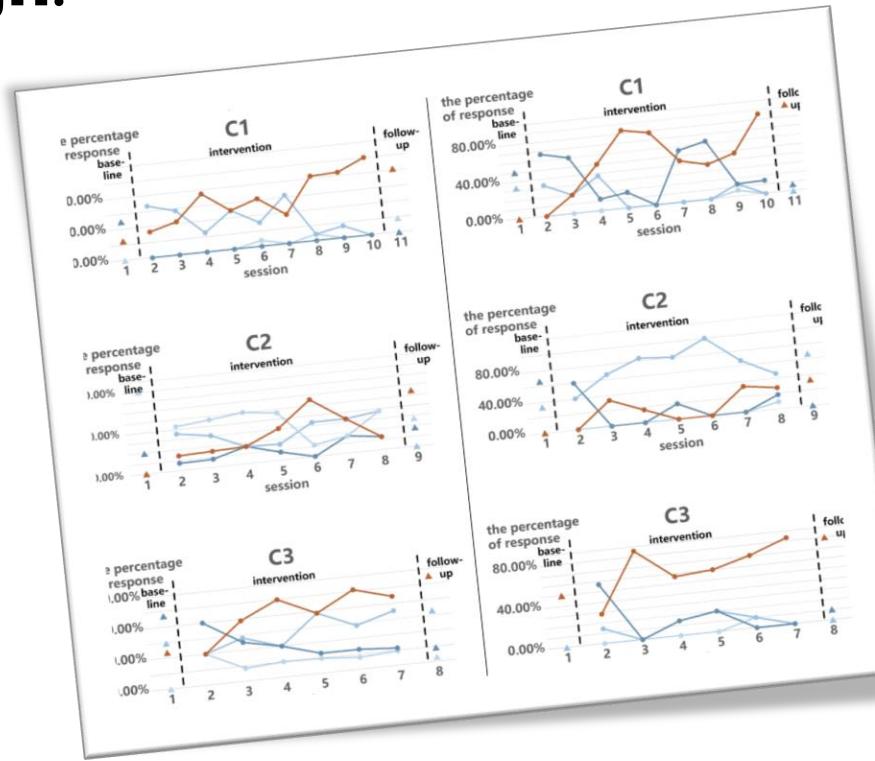
Photos of children interacting with YANG, and screenshots of examples of interaction contents. C1 chose which one is bigger or smaller between two objects in different size, including basic shapes and complex graphics; C2 recognized the sounds of dog and cat; C3 matched the thief with the police car or called the fire truck to put out the fire.

Interactive Design:

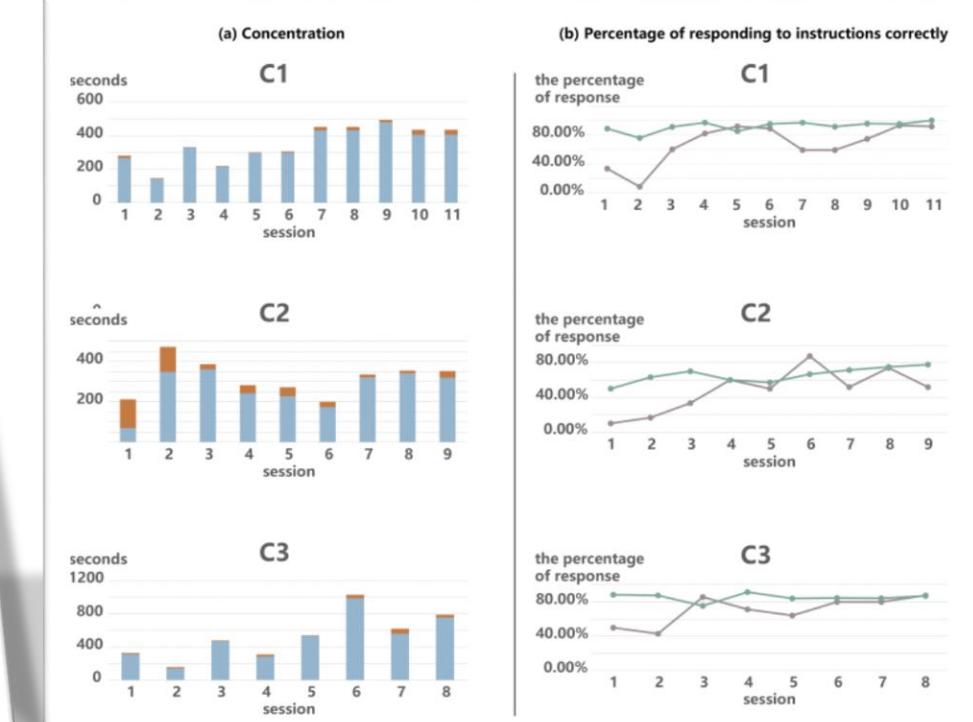
ROABA

Experiment

—results



- A: able to make the correct response right after the instruction was given; within 2 seconds; without prompting;
- B: able to make the correct response; more than 2 seconds; without prompting;
- C: able to make the correct response; with prompting;
- D: otherwise.



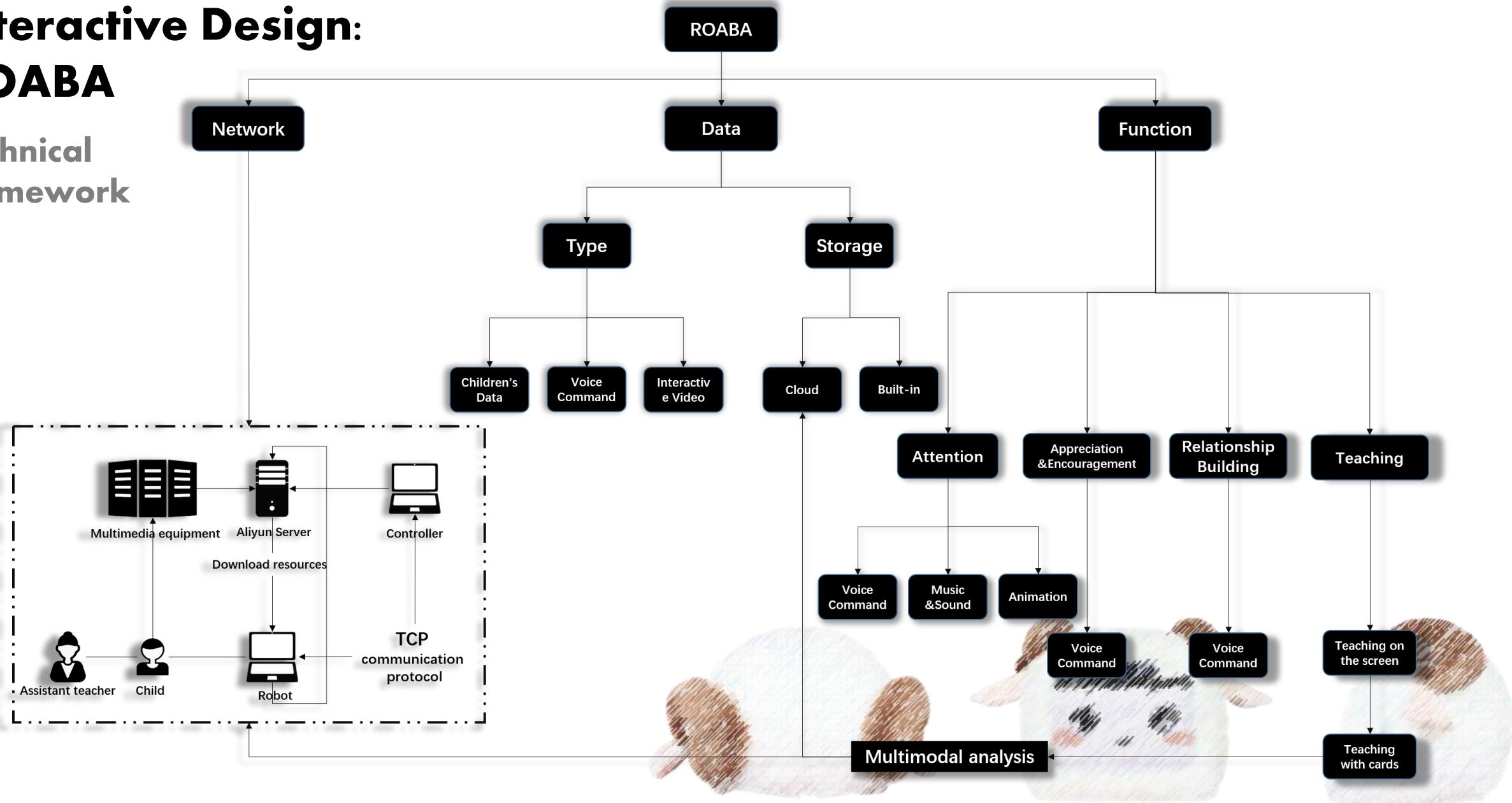
- A: the percentage of responding to instruction of YANG
- B: the percentage of responding to instruction of the therapist

It is certain that the robot-child-therapist model of ROABA **improved** skills, social interaction and involvement.

- Firstly, in skill training, ROABA had an effect on the skill improvement for different children.
- Although more components were involved in interactions, children's skill learning efficiency didn't change much.
- As the experiment progressed, children showed growing acceptance of YANG as their buddy and the number of effective social interactions with YANG increased.
- Children also showed concern about YANG after the experiment.

Interactive Design: ROABA

Technical framework



Mayspace

—Online Autism Behavior Intervention Teaching Platform for Parents

Introduction and Responsibility

Because of the epidemic, behavioral interventions for autistic children need to be transplanted online. For this purpose, our team designed a new online teaching model combining theory and practice. As a technical personnel, according to the needs, I independently compiled an online teaching software.

This project is still in experiment, so the video is not available at the moment
I have applied for software works for this work as well, thus there is no link of the technical document

Contribution

planning



programming



- I
- other members

Interactive Design: Mayspace

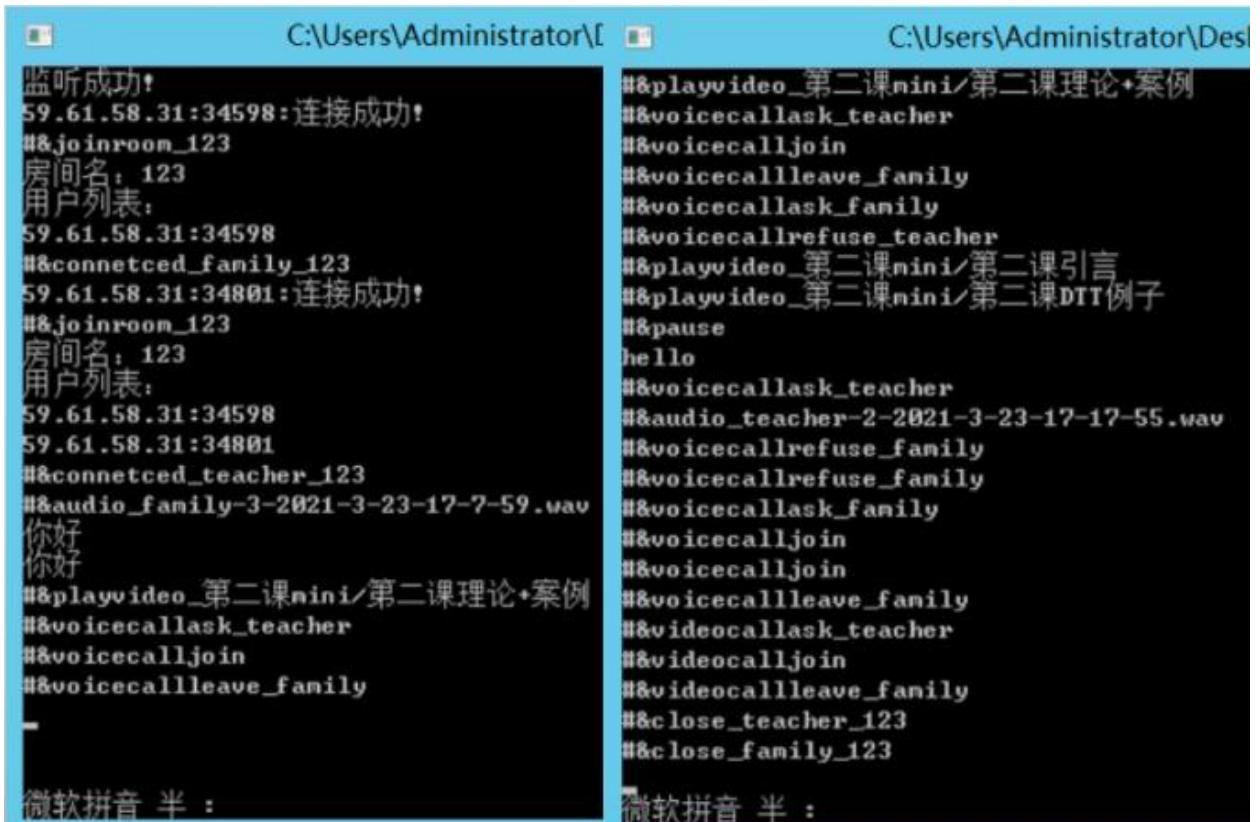
Functions and technologies

• Voice call & Video call

Teachers and parents can make real-time voice calls and real-time video calls, which are realized through the SDK of **Agora**

• Synchronous control

The video of the teacher side and the parent side will be played at the same time. No matter playing, pausing or dragging the progress bar, the operations of both sides will be synchronized. What's more, the other end of the operation will be informed while one side operates.



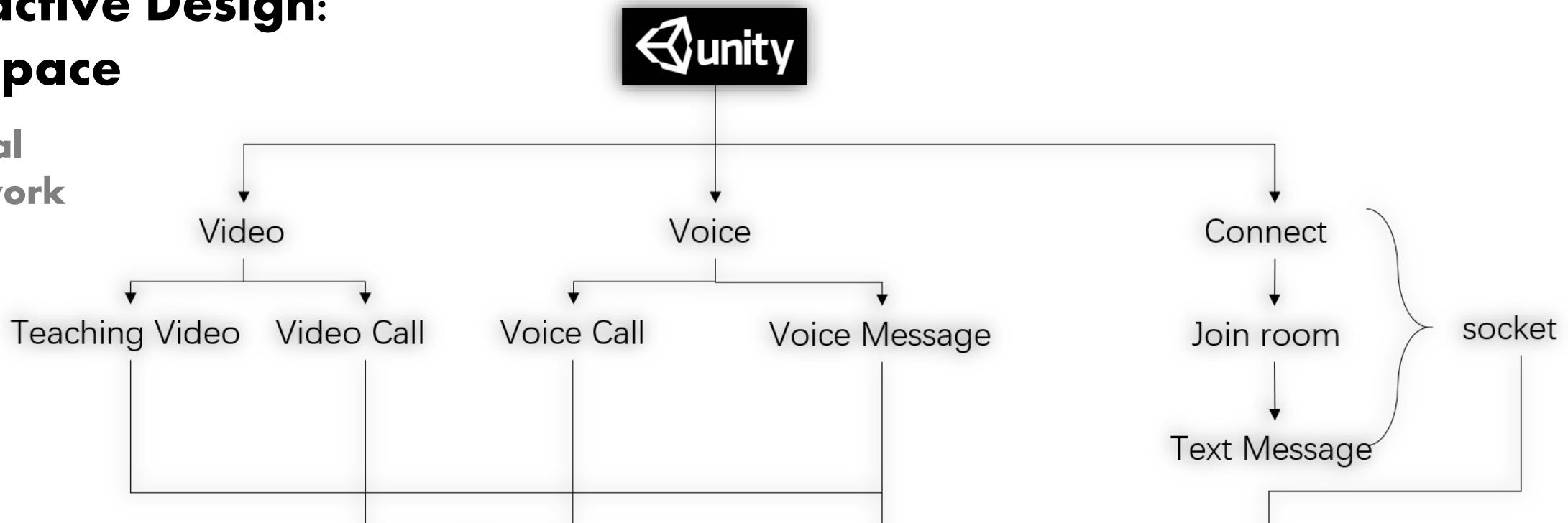
The screenshot shows a terminal window with two panes. The left pane displays a log of server events, and the right pane shows the command used to start the server. The log includes messages like '监听成功!', '连接成功!', and various command-related outputs. The command in the right pane is:

```
C:\Users\Administrator\Desktop>java -jar MayspaceServer.jar
```

The Sever listening

Interactive Design: Mayspace

Technical
framework



Alibaba Cloud |
Worldwide Cloud Services Partner

Interactive Design: Mayspace

Interfaces

In terms of interface design, considering the psychological needs of special people, we have discussed the color matching. The color matching with white background and light blue can make people calm, hoping to provide some psychological comfort to parents.

The whole interface is rounded and flat, with obvious partitions, which well considers the needs and experience of users.



Interactive Design: Mayspace

functions



You can send text or sound recording



Video Call

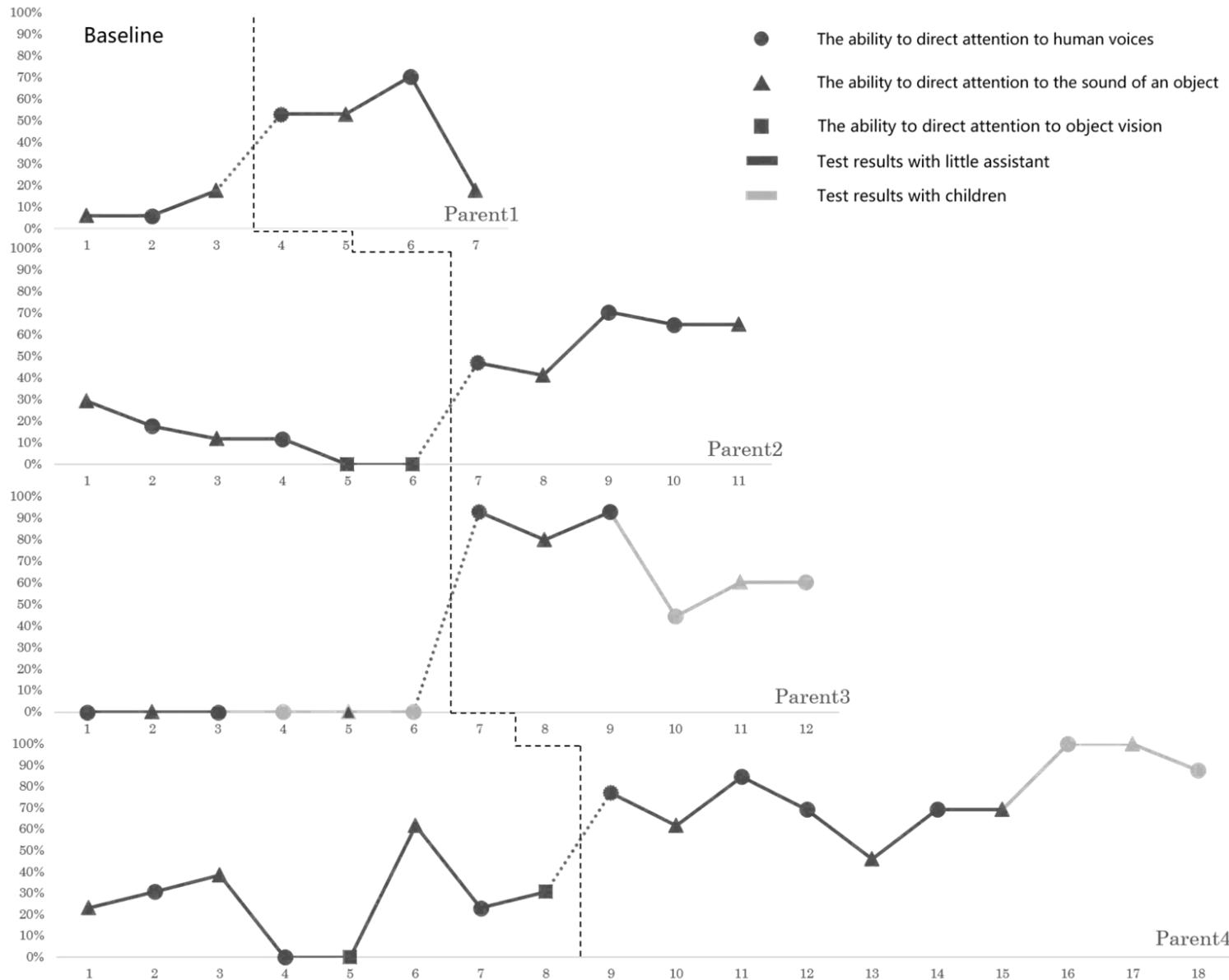
A prompt box to send a video or voice call request



When one end pauses a video or pulls a progress bar, it prompts the other end



Interactive Design: Mayspace



- Our project is still in the experiment, but according to the preliminary experiment, we have obtained considerable data.
- We're exploring how online behavioral coaching can be effective, especially in the autism field, and this software is designed for parents and teachers.
- As the technical leader, I am also the person in charge of planning and experiment. My current paper is also in the process of conception, which is expected to produce valuable research results.

Space Museum

Introduction

The scene simulates the real structure of the universe, and with the help of **Kinect** and **projector**, the user is projected into the universe, giving the user a feeling of exploration in the universe.

The program reads the user's actions, so that the user can move freely in the universe, and can interact with the planet according to the characteristics of the planet, and check the relevant information of the planet.

Video link: <https://youtu.be/GYKXY-8Zzks>

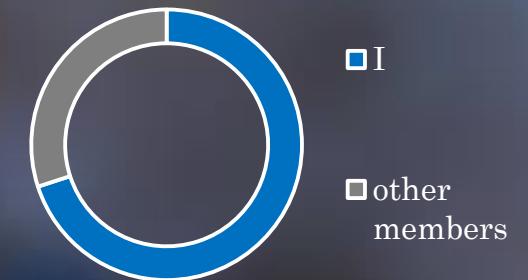
Technical document: <https://github.com/HuricLee/HuricLee.github.io/raw/main/Technical%20Document%20Space%20Museum.docx>

Contribution

planning



programming



I

other
members

Responsibility

In this project, I designed the effect of UI and scene, connected Kinect with Unity, rewrote the interactive gesture, and completed the implementation of the whole program.

Interactive Design: Space Museum

Interfaces and Instructions

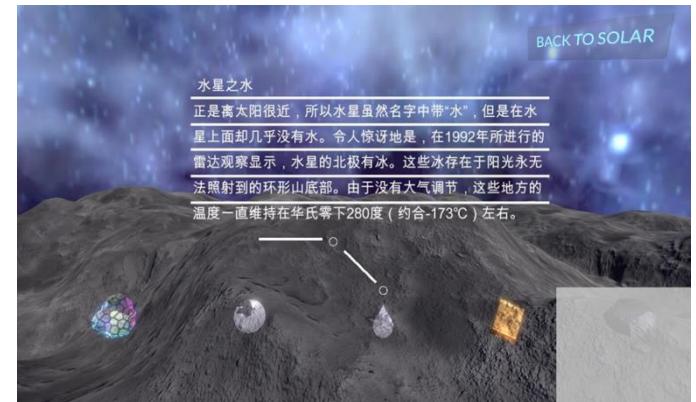


After entering the game, the player can check the general information of each planet by selecting and clicking on each planet in the solar system, and choose whether to enter the planet.

After entering the planet scene, the player can click on each small object to display more detailed information about the planet.

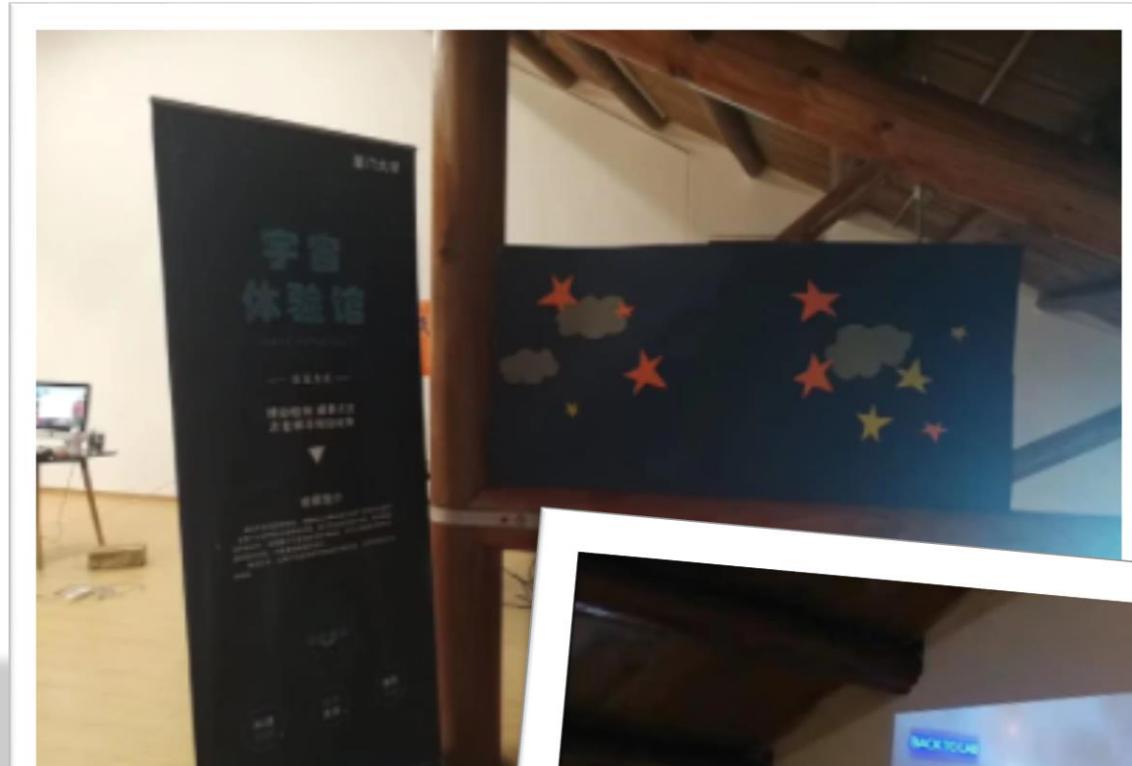
Gestural explanation

- ⌚ - Hand position movement controls the movement of the cursor on the interface
- ✊ - "Make a fist" is sure
- ✋ - Sliding the arm left and right controls the perspective shift of the solar system scene
- 🤚 - Close the planet information panel with a flick of the arm



Interactive Design: Space Museum

The project was **exhibited** in the art district



Phoenix Garden

Interactive video game

Introduction

The game is mainly aimed at people who are interested in the university life, especially the life of Xiamen University students, so that they can understand Xiamen University and its spirit in the game

Video link: <https://youtu.be/gQIEdkTd6MY>

Contribution

planning



programming



I

other members

Responsibility

This work is an interactive game combining film and game. First, I shot the plot, then I edited the video through PR and AE, and finally realized the game logic in Unity

Interactive Design: Phoenix Garden

Interactivity

The audience is no longer the passive recipient of the plot, but the story operator who can control the plot direction.



Highlights

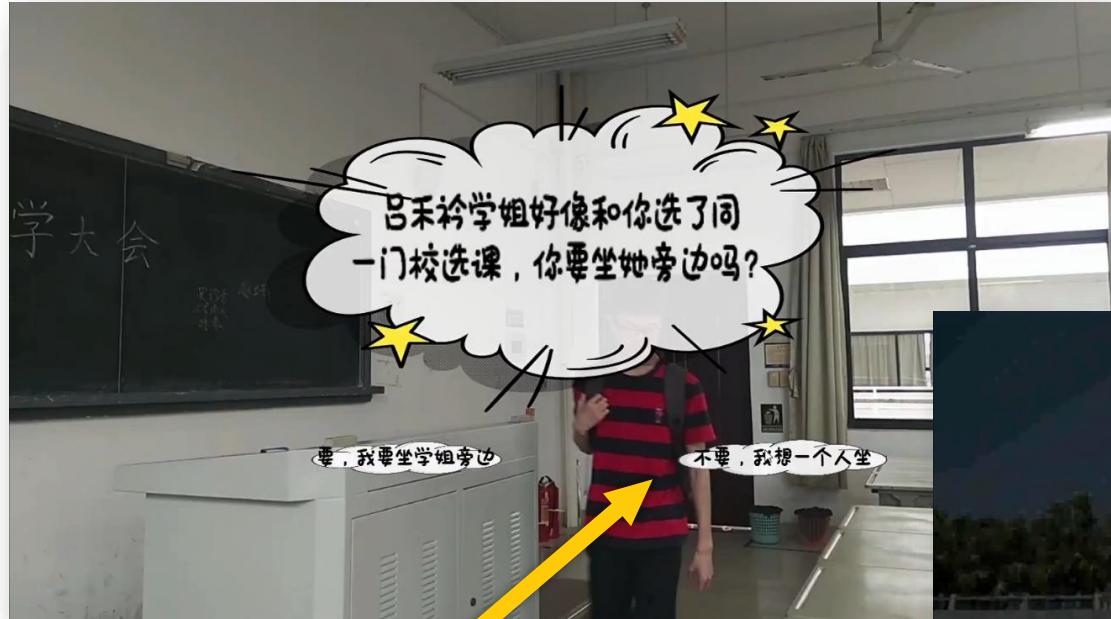
Involve current events with hot topics
The game inserts current events such as tourists doodling at random in the Lotus Tunnel.

Multiple endings

The player's choices affect how the game progresses, leading to different storylines.



Interactive Design: Phoenix Garden



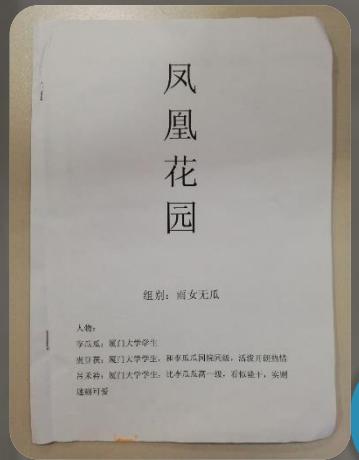
The game is an interactive cinematic game in which players make their own choices for each plot and control the outcome with the **mouse**



Make
your
choice

Make
your
choice

Interactive Design: Phoenix Garden



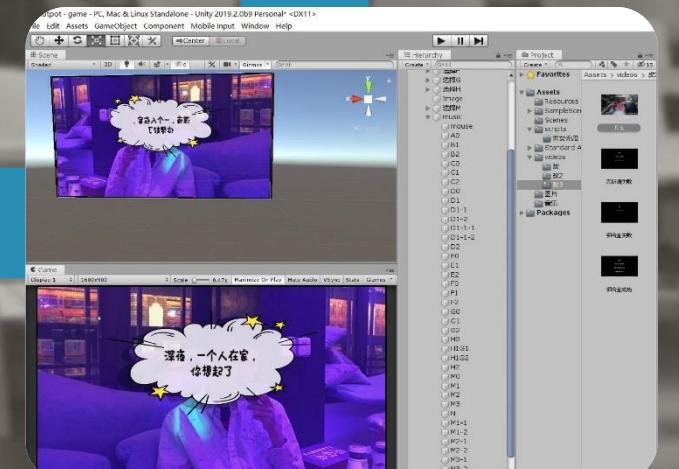
the script

```
file:///Users/zhengzhiqiang/Desktop/gameparts.cs
```

```
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064
065
```

```
    if(flag1)
    {
        if(GUI.Button(new Rect(Screen.width*0.25f, Screen.height*0.7f,Screen.width*0.11f, Screen.width*0.04f), "关羽斯"))
        {
            mouse1true;
            flag1chart1;
            gameM1;
            //gameMusic1;
            choice1false;
        }
        if(GUI.Button(new Rect(Screen.width*0.46f, Screen.height*0.7f,Screen.width*0.11f, Screen.width*0.04f), "黄月英"))
        {
            mouse1true;
            flag1chart2;
            gameM2;
            //gameMusic2;
            choice1false;
        }
        if(GUI.Button(new Rect(Screen.width*0.67f, Screen.height*0.7f,Screen.width*0.11f, Screen.width*0.04f), "吕天祥"))
        {
            mouse1true;
            flag1chart3;
            gameM3;
            //gameMusic3;
            choice1false;
        }
        if(player.enabled=true);
        if(choice1=false)/已经选择
        {
            a.SetActive(false);
            // ph.enabled=false;
            player.enabled=false;
            //gameMusic1.play();
            game.PlayO;
            finalfalse;
        }
    }
```

code



Information Visualization

★ Star Light

Introduction

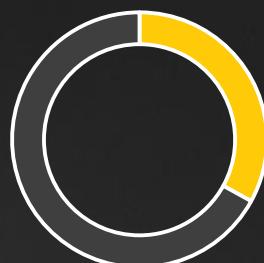
It is widely said that autistic children are "children from the stars". At the same time, vision serves the presentation of information. Therefore, in the process of visual design, I took their psychological needs into account , thus designing visual and interactive effects with stars and stars as the elements

Video link: <https://www.youtube.com/watch?v=FfTkSlp4q8s>

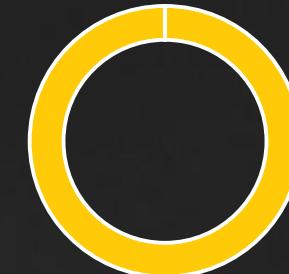


Contribution

planning



programming



- I
- other members

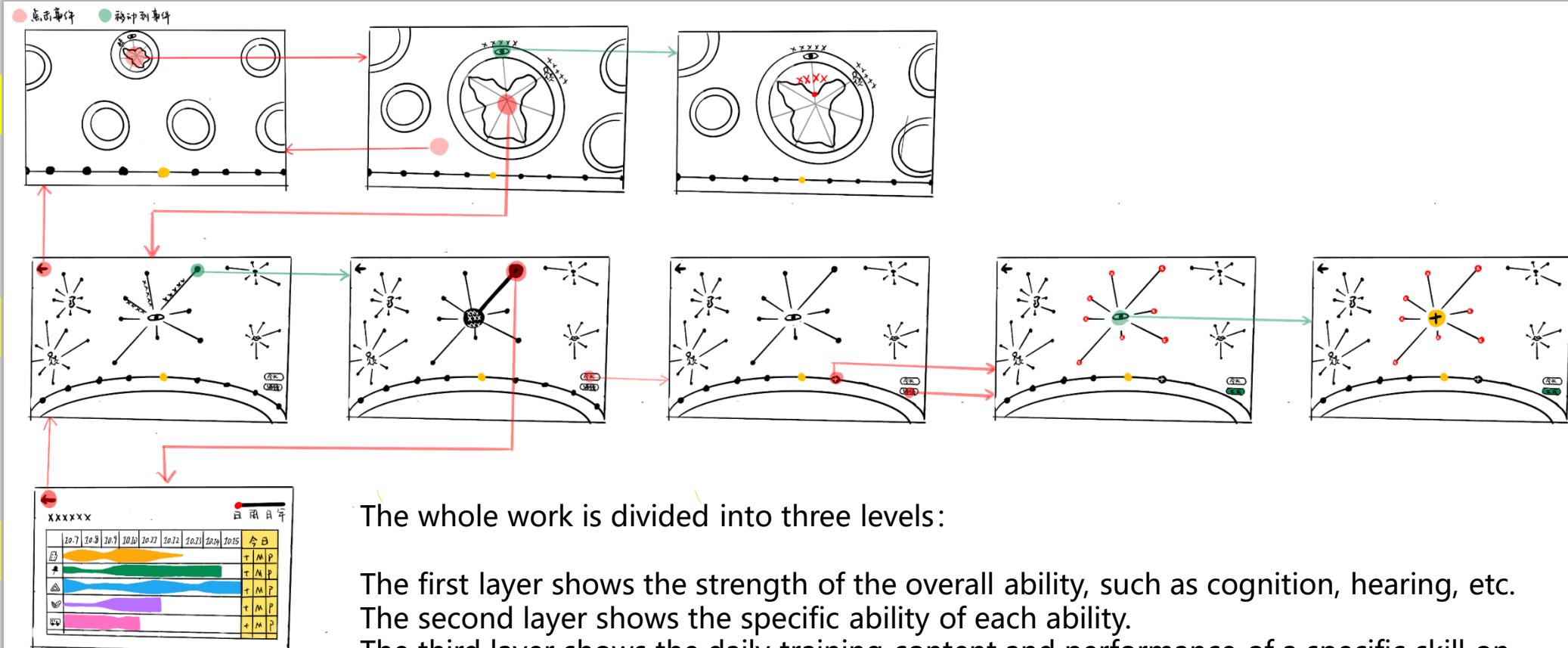
Responsibility

- overall planning
- The whole design of level 3
- part of the element design
- the implementation of the whole program

Information Visualization: Star light

Interactive Prototypes

Level 1



The whole work is divided into three levels:

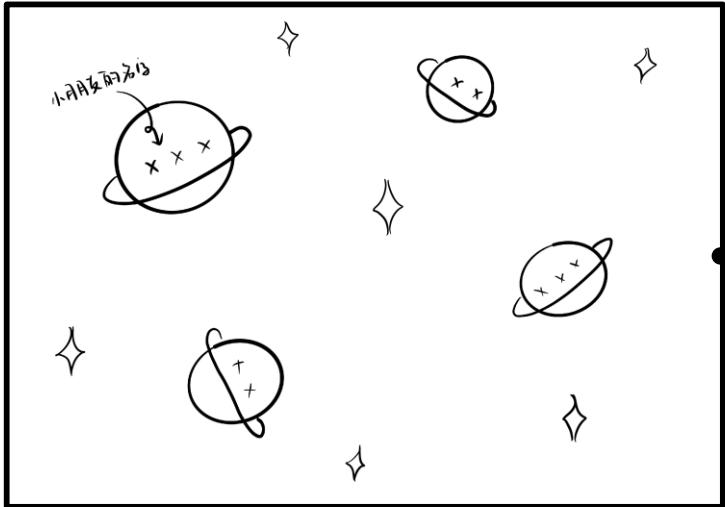
The first layer shows the strength of the overall ability, such as cognition, hearing, etc.

The second layer shows the specific ability of each ability.

The third layer shows the daily training content and performance of a specific skill on the basis of the second layer

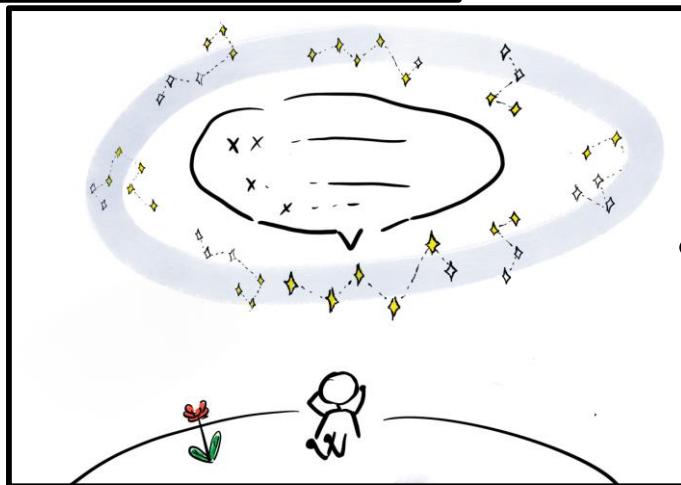
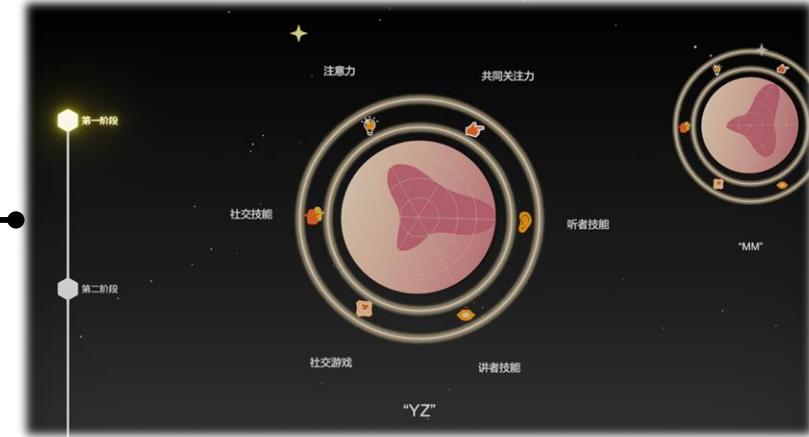
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Prototype Design



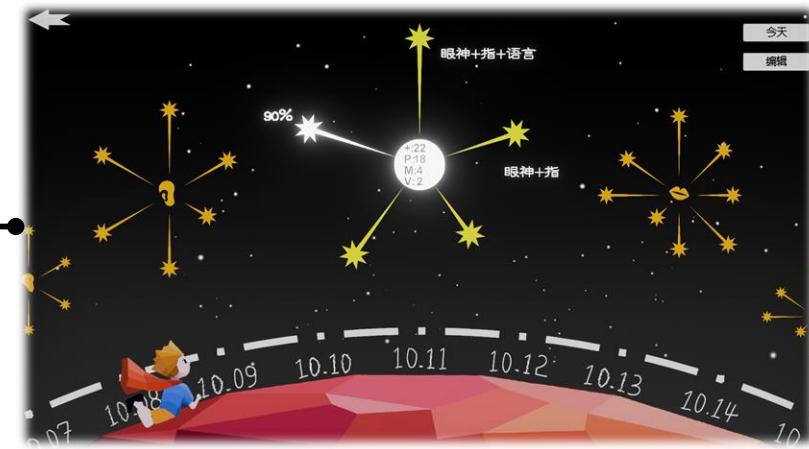
The planet represents each child, the radar chart represents their ability, with the highest ability as the maximum, so that even the children whose abilities are considerably weak, their abilities will be a full state.

In this way can we achieve a certain amount of comfort of the children and the parents.



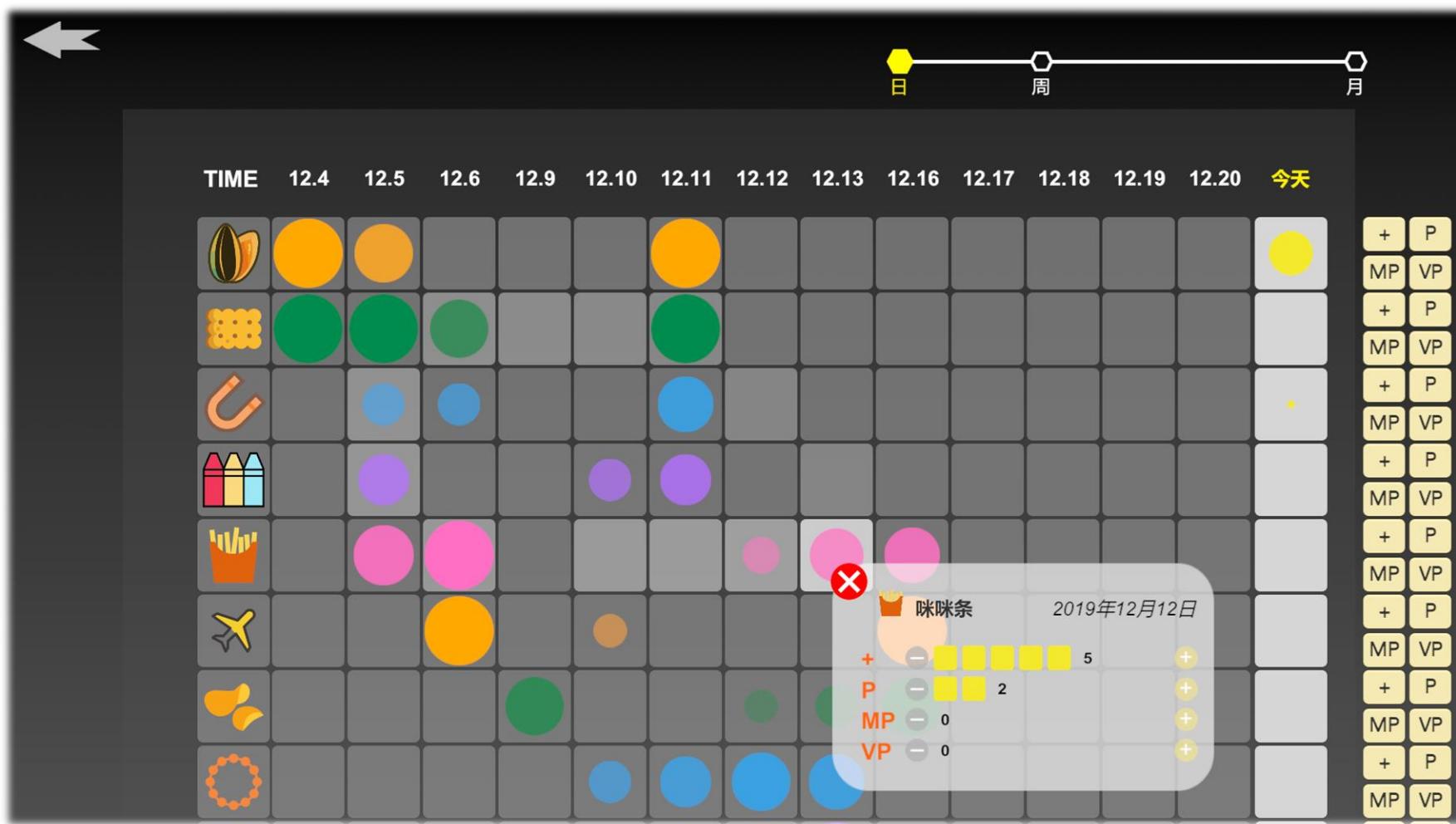
Icons represent specific abilities, such as ears for listening and mouth for speaking.

Each click on a fireworks branch, there will be a lighting effect, whether in vision or in the heart to give a person very "bright" feeling.



Information Visualization: Star light

Data Presentation



Inspiration

In this layer, I use circles of different sizes to represent boring statistical data and distinguish each different item, so that for viewers, the training of each day is clear at a glance and children's conditions can be judged by intensity and so on.

Description

This level records the specific training and performance of each day. The statistical results for the next level come from the fact that this level evaluates the day's performance in terms of the size of the circle.

This content can be freely edited, convenient for teachers or parents to record the child's situation.

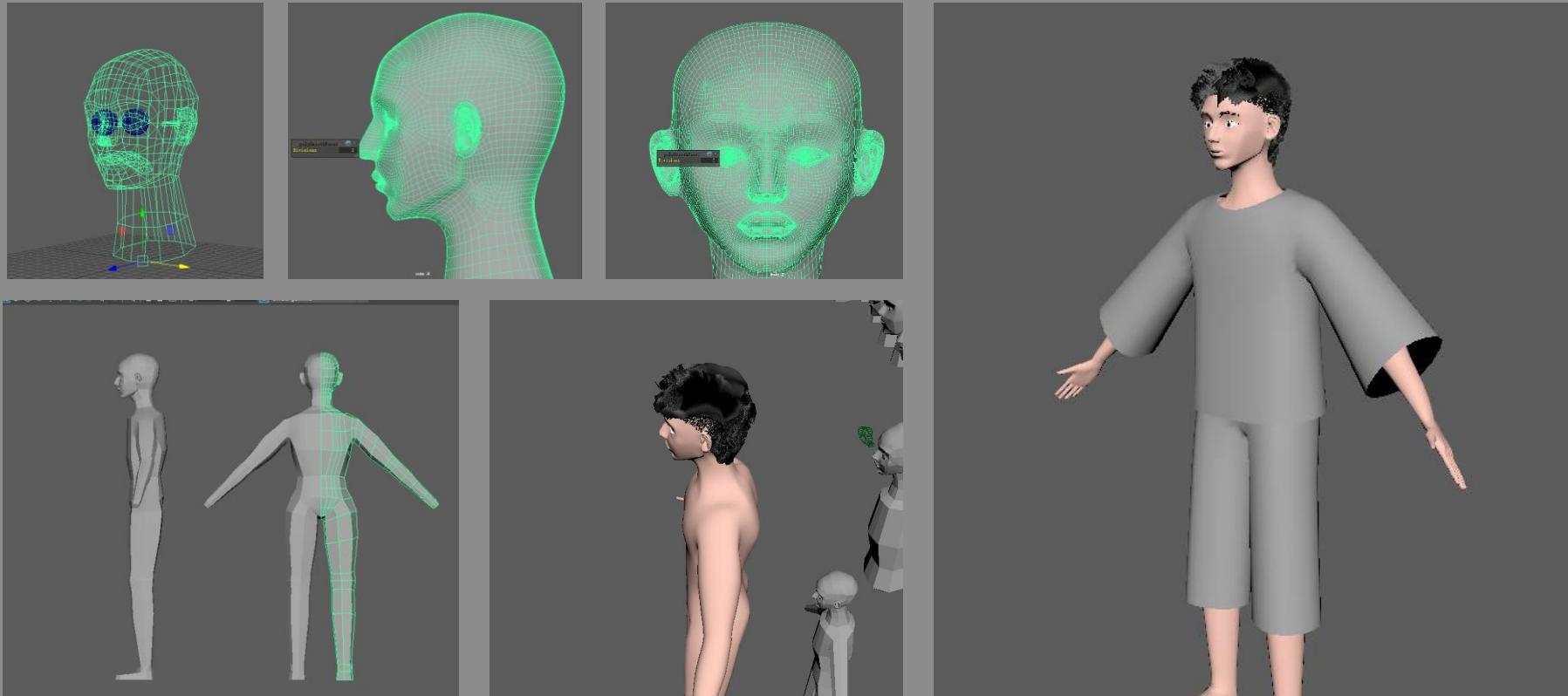
Animation

Modeling



Skill

Through the courses of 3D modeling and 3D animation, I learned the basic modeling methods and learned the production tools such as Maya



I can establish some models and apply them to my own games, which is helpful to the development of the game program

the Crossing

Introduction

This is a short film about love and enmity. The style comes from my and my team members' love for wuxia style works and games.

Together, we discussed and wrote a story about the hero who suddenly woke up and gave up his hatred after meeting his enemy and taking revenge.

There were five people working on it, using Maya

Video link: https://www.youtube.com/watch?v=3XdGOJ-LK_M

Responsibility

I was responsible for all the animation of Lin Mo and the first half of Shang Ren's animation.

I also made some adjustments and renderings to the scene. Responsible for the preliminary integration of all animations and the voice acting of all male characters.

Contribution

planning



modeling



Animation



I

other
members

Animation: the Crossing

Main Characters



Shang Ren

The son of the Shang family, the hero of the story. That night he was looking for a ferry to cross the river



Lin Mo

Yujia's master, posing as a boatman, is always looking for revenge



Plot:

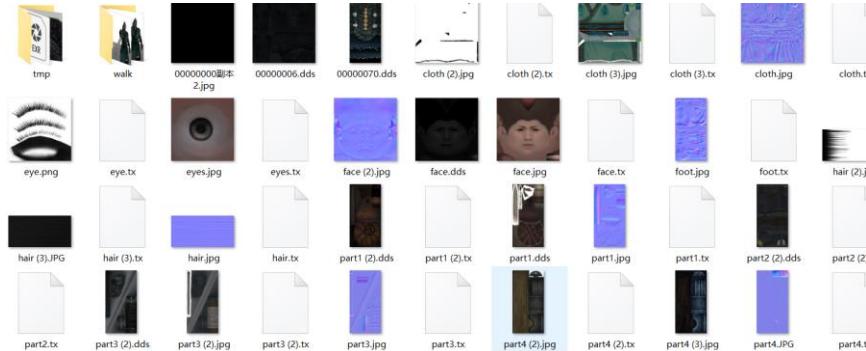
Ten years ago, in order to win the purchase of salt iron, Yu Family in the east city, colludes with Lin Family to maliciously incriminate the north city business family, of whom 45 people are all imprisoned. Fortunately, Shang Ren escapes at that time and survives. The Shang Ren who is outside is informed of the bad news, begin to live anonymously, and learns martial arts for 10 years. The night after 10 years he enters Yu Family, with a sword in hand, slaughtering all of them.

After a few days, at the moonlight night, Shang Ren takes a ferry, and encounters the boatman, Lin Mo who is the master of the little girl of Yu Family. For the sake of revenge, Lin Mo stretch out the pen blade to Shang Ren...

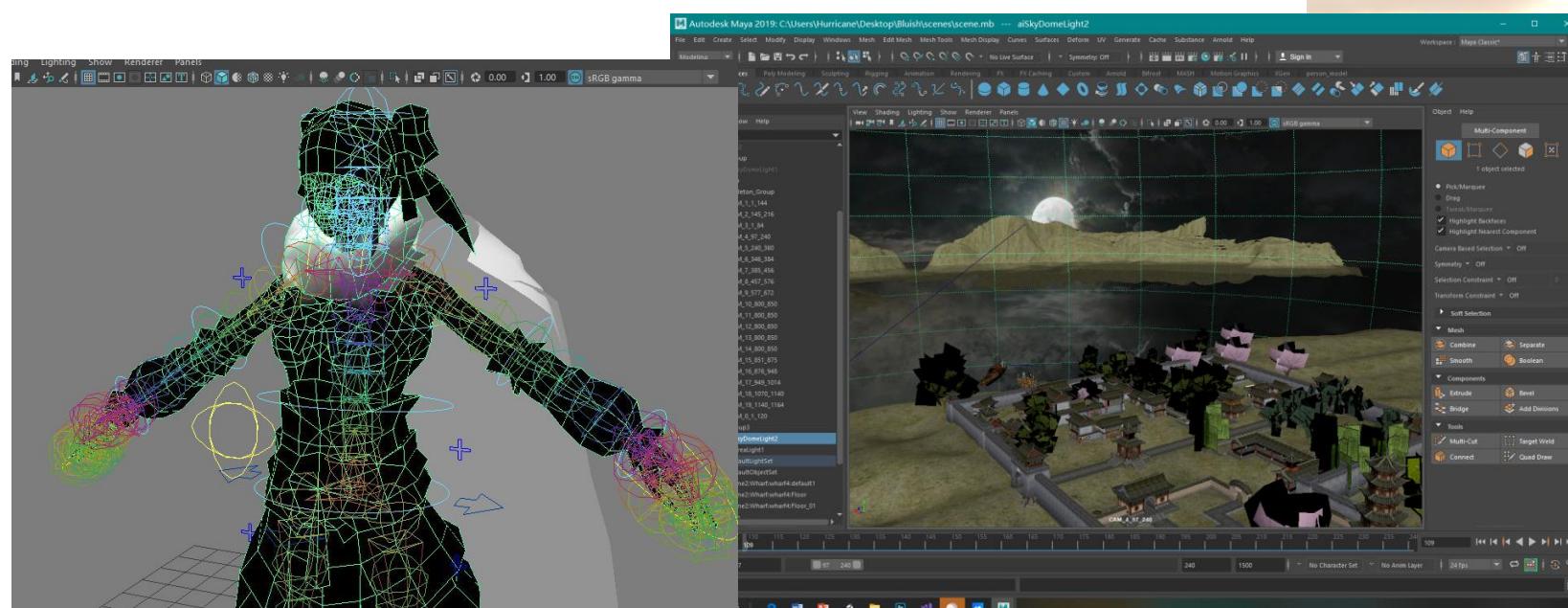
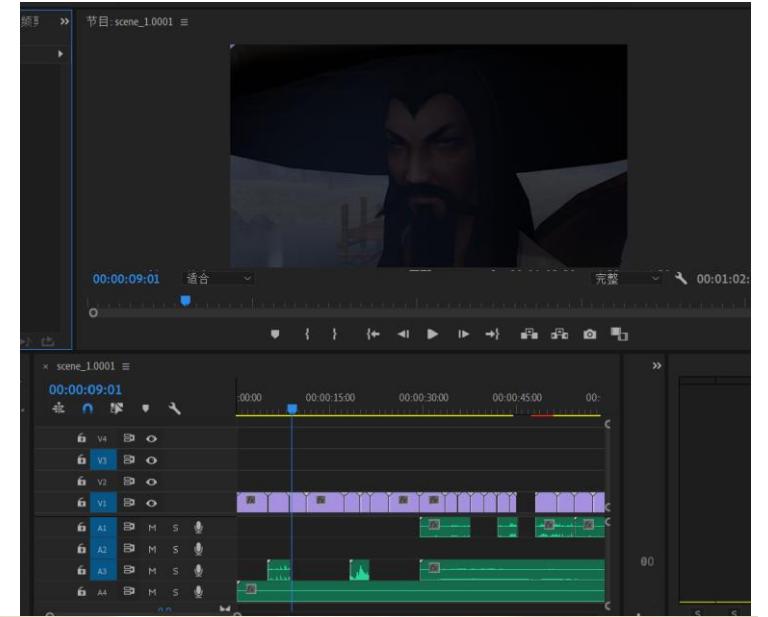


Animation: the Crossing

Making Process



- 不知.mp3
- 船家.mp3
- 倒真是奇事.mp3
- 对不起.mp3
- 何人?.mp3
- 身负家仇，岂敢.mp3
- 十倍价钱，今日早...
- 十年前.mp3
- 我知，听闻那夜.mp3





thank you