ONE PIECE : ZHAOCHENG.ZHANG XINYUE.GOU CHENXI.ZHAO LIEYANGZONG.CHI

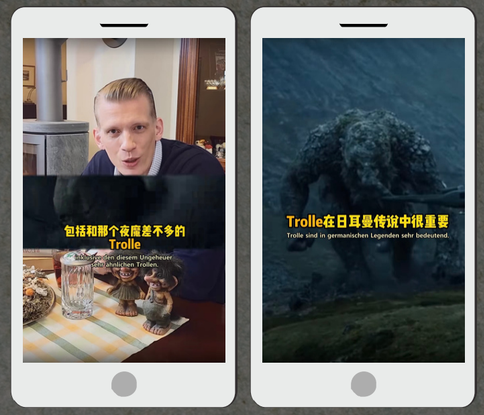


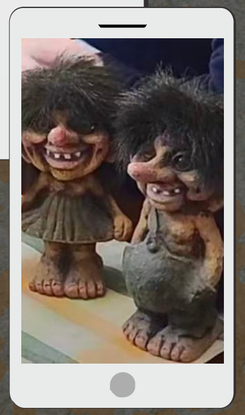
INSPIRATION AND STORY SELECTION

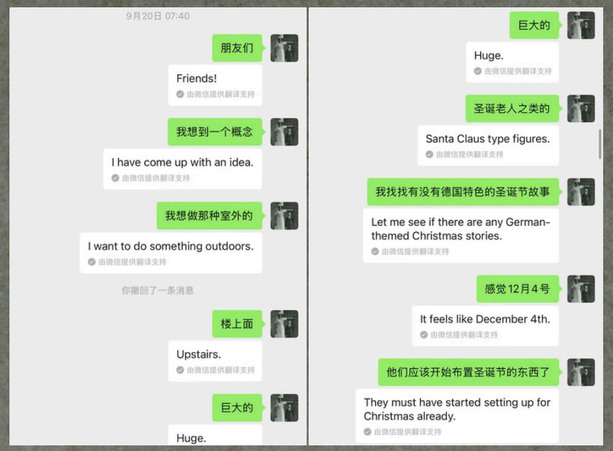
Sep 21th WEEK 2



https://b23.tv/p4g62K2











2. The Giant Monster in the Sunlight

- **Source:** Legends from Norway and Iceland.
- **Content:** A farmer gets lost in the mountains and encounters a giant Troll, nearly getting eaten.
  - The clever farmer stalls for time until sunrise.
  - The moment sunlight appears, the Troll instantly turns to stone, forever remaining on the mountain.
- **Horror Element:** Everything in the mountains at night could be a living monster.
- **Real-world Projection:** Many strange rock formations in Scandinavia are said to be "Trolls petrified by the sun."

4. The Changeling (Der Wechselbalg / Changelings)

- **Source:** Germanic and Nordic legends.
- **Content:** Trolls steal human babies at night, replacing them with their own ugly little monsters in the cradle.
  - The child cries incessantly and looks strange.
  - Parents must use iron or fire to scare the Troll away in order to recover their real child.
- **Horror Element:** The fear of a child being stolen, the appearance of a strange "monster infant."
- **Social Significance:** Used by ancient people to explain infant illnesses or developmental abnormalities.

5. The Forest Boulder Troll

- **Core Plot:** Legend says Trolls turn to stone when exposed to sunlight, so the boulders in the mountains and forests are their remains.
- **Experience Design:**
  - When a user walks to a certain spot, they see a large boulder.
  - As the lighting changes, the stone gradually "comes to life," revealing the form of a Troll.
  - When the "virtual sun" rises, the Troll lets out a roar and slowly stiffens back into stone.
- **Atmosphere:** Mystery + natural myth. The audience feels they are witnessing an ancient legend.

INTRODUCTION TO THE DEVELOPED CONCEPT







To present traditional German folklore to modern audiences through AR and create an immersive experience that blends the virtual and the real, I developed a concept centered on the Troll legend, focusing specifically on its transformation between stone and creature across day and night.

The core idea is to use AR to reveal the elements of the folklore that cannot be represented in books or static displays—such as the moment of transformation, the shift from daylight to nightfall, and the unsettling presence of trolls hidden within the environment. By situating the experience in a contemporary town square and allowing users to witness stones turning into trolls and a baby transforming in the middle of the space, the concept fulfills the goal of delivering a culturally authentic and emotionally impactful interactive narrative.







AR TROLL PROJECT – CULTURAL, SOCIAL, AND EDUCATIONAL VALUE ANALYSIS











1. Cultural Heritage PreservationUsing AR technology to reinterpret ancient German and Norwegian folklore allows traditional stories to become vivid, interactive, and accessible to modern audiences, supporting cultural preservation and revitalization.

2. Folklore and IdentityTrolls, as cultural symbols, carry regional identity and historical memory. The project helps users reconnect with the worldview and traditions embedded in Northern European folklore.

3. Human–Nature RelationshipThe myth 'turning to stone at sunrise and returning at night' reflects ancient interpretations of nature. Bringing this into AR encourages audiences to reflect on humanity's relationship with nature and cultural perceptions of natural phenomena.

4. Social and Ethical EducationThe changeling folklore reveals historical misunderstandings about children with disabilities or atypical behavior. The project encourages reflection on past social biases and promotes empathy and inclusion.

5. Emotional and Psychological LearningTroll stories often involve themes of fear, loneliness, misunderstanding, and identity struggles. The AR experience allows users to explore these emotions, fostering emotional awareness and empathy.

6. Innovation in Digital StorytellingBy combining folklore with AR, the project demonstrates new possibilities in immersive storytelling, bridging traditional narratives with modern technology.

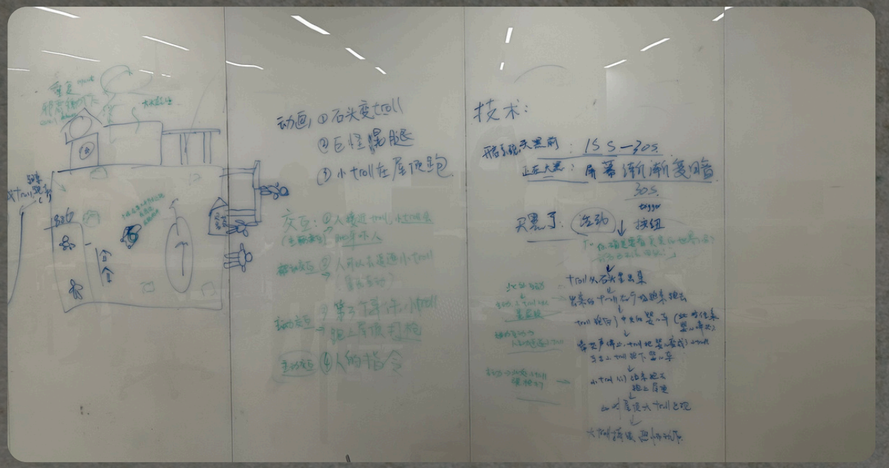
7. Immersive Learning ExperienceUsers don't just observe the story—they step into it. This experiential learning approach enhances engagement, understanding, and retention.

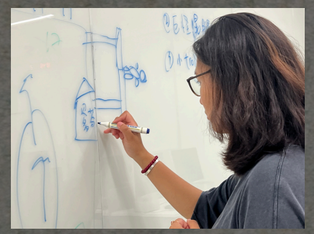
8. SummaryOverall, this AR project transforms German and Norwegian troll folklore into an immersive digital experience, achieving cultural transmission, social reflection, psychological education, and technological innovation.

PLOT

FIRST VERSION

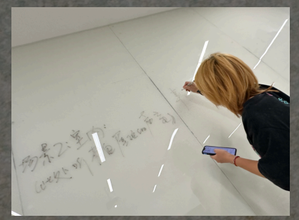
WEEK 4 Oct 7th



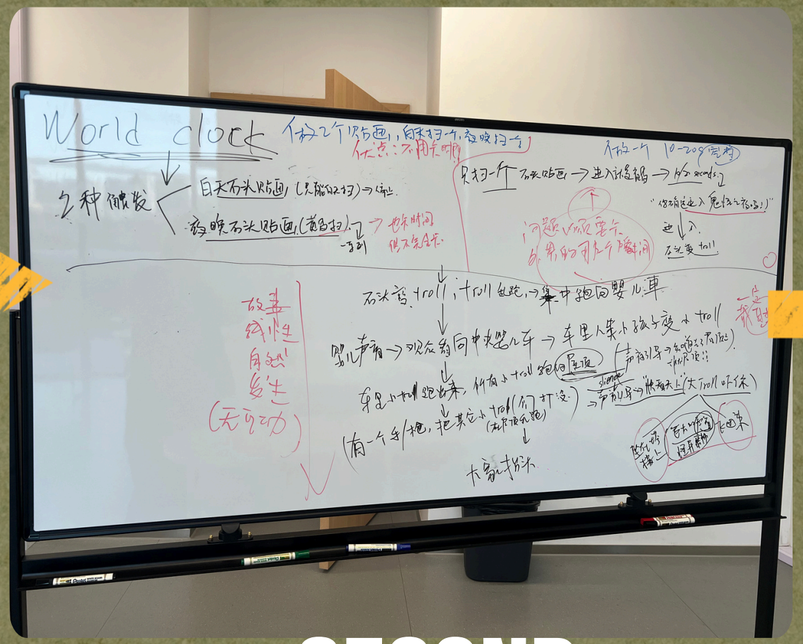








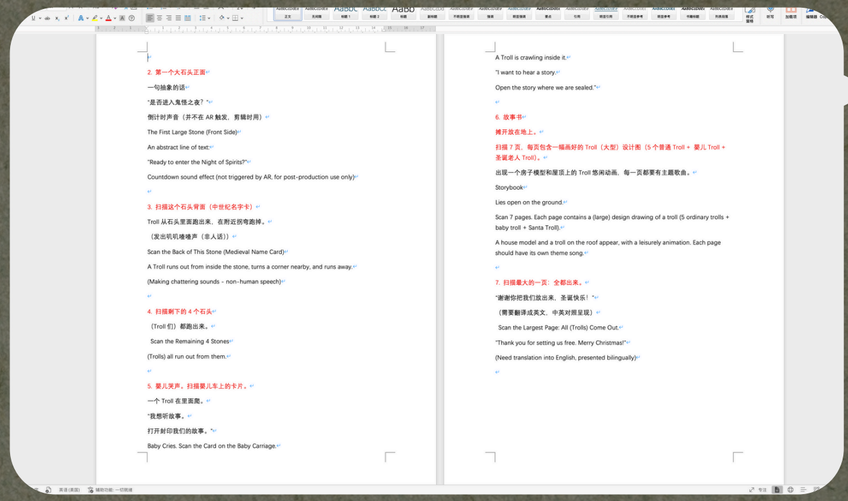
WEEK 6 Oct 23th



SECOND VERSION

LAST VERSION

WEEK 9 Nov 10th



2. 第一个大石头正面

一句独象的话：

"是否进入鬼怪之夜？"

倒计时声音（开不在 AR 触发，剪辑时用）

The First Large Stone (Front Side)

An abstract line of text:

"Ready to enter the Night of Spirits?"

Countdown sound effect (not triggered by AR, for post-production use only)

3. 扫描这个石头背面（中世纪名字卡）

Troll 从石头里面跑出来，在附近绕弯跑掉。

（发出机机喳喳声（非人话））

Scan the Back of This Stone (Medieval Name Card)

A Troll runs out from inside the stone, turns a corner nearby, and runs away.

(Making chattering sounds - non-human speech)

4. 扫描剩下的 4 个石头

（Troll 们）都跑出来。

Scan the Remaining 4 Stones

(Trolls) all run out from them.

5. 婴儿哭声。扫描婴儿车上的卡片。

一个 Troll 在里面爬。

"我想听故事。

打开射印我们的故事。"

Baby Cries. Scan the Card on the Baby Carriage.

A Troll is crawling inside it.

"I want to hear a story.

Open the story where we are sealed."

6. 故事书

摊开放在地上。

扫描 7 页。每页包含一幅画好的 Troll（大型）设计图（5 个普通 Troll + 婴儿 Troll + 圣诞老人 Troll）。

出现一个房子模型和屋顶上的 Troll 悠闲动画。每一页都要有主题歌曲。

Storybook

Lies open on the ground.

Scan 7 pages. Each page contains a (large) design drawing of a troll (5 ordinary trolls + baby troll + Santa Troll).

A house model and a troll on the roof appear, with a leisurely animation. Each page should have its own theme song.

7. 扫描最大的一页：全都出来。

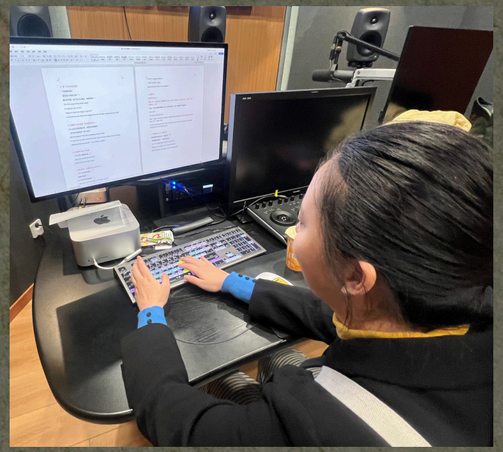
"谢谢你把我们放出来。圣诞快乐！"

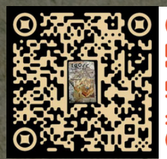
（需要翻译成英文，中英对照呈现）

Scan the Largest Page: All (Trolls) Come Out.

"Thank you for setting us free. Merry Christmas!"

(Need translation into English, presented bilingually)



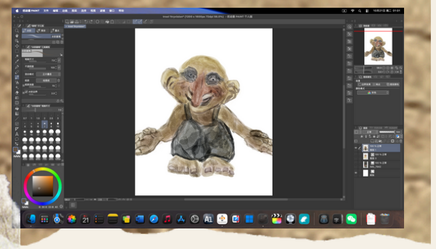


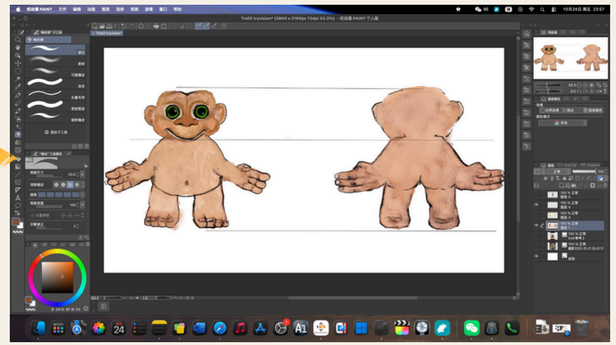


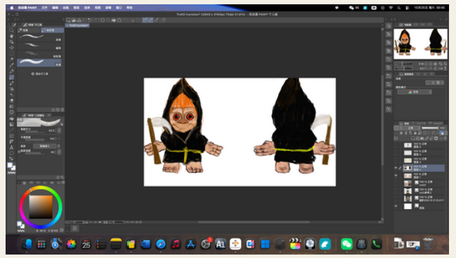
CHARACTER DESIGN

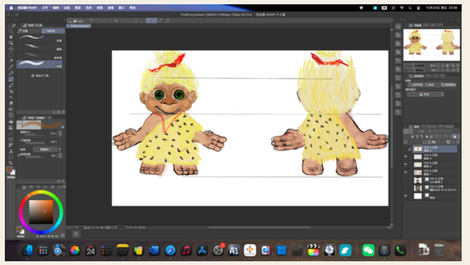
WEEK6 Oct 24th

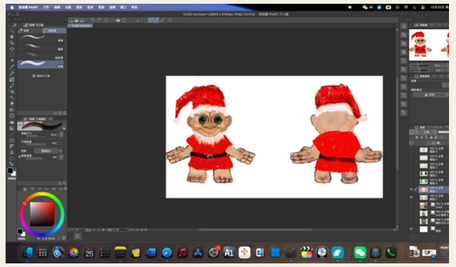


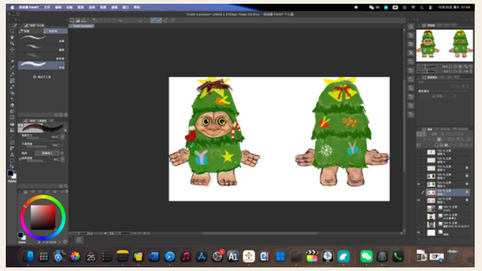


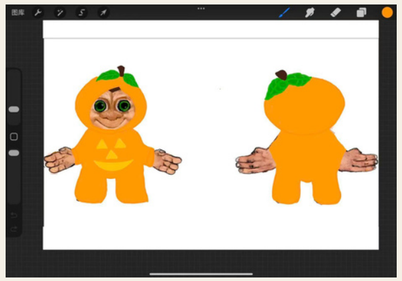


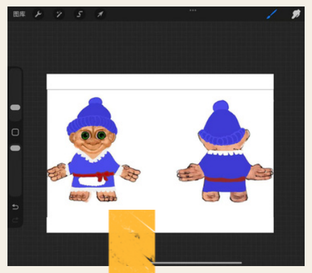


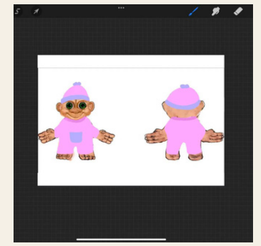




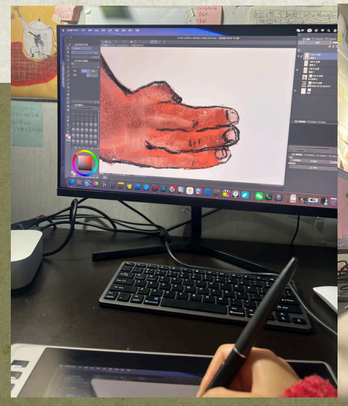








Reference Poses







We created seven different troll designs based on traditional prototypes, developing our own unique versions. The tools we used were CSP and Procreate.

We used AI to generate side views based on our front and back design drawings, making them more convenient for creating the 3D models.

WEEK6 Oct 24th



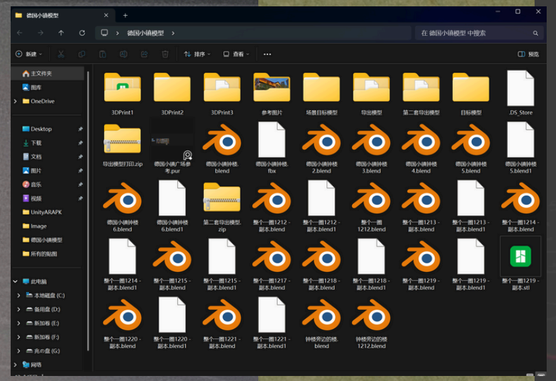
3D CHARACTER MODEL

Nov 25th WEEK11

We first tried using AI to generate 3D models,
but the results were not satisfactory







We created 6 different troll designs, each based on our original concept and developed into our own unique versions.



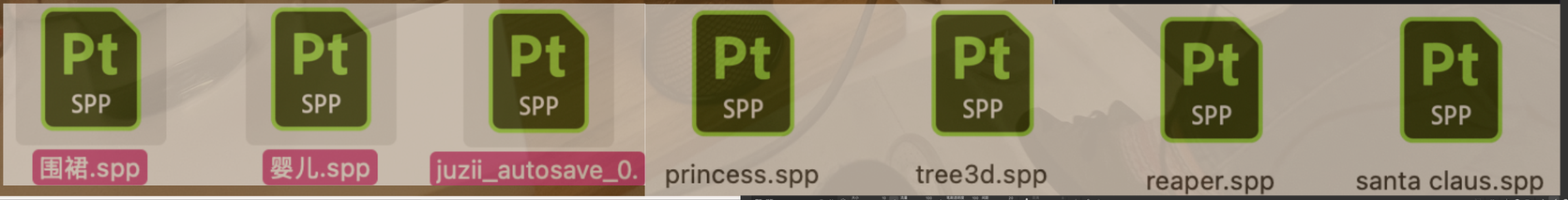
TEXTURES

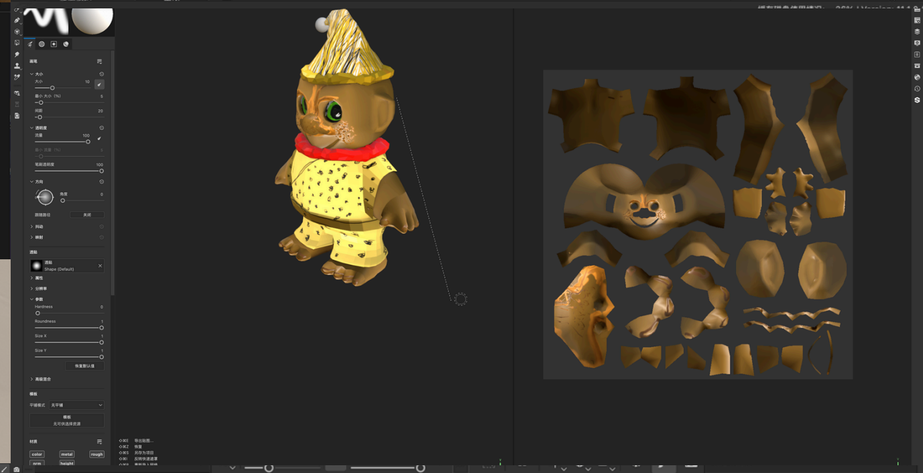
WEEK12

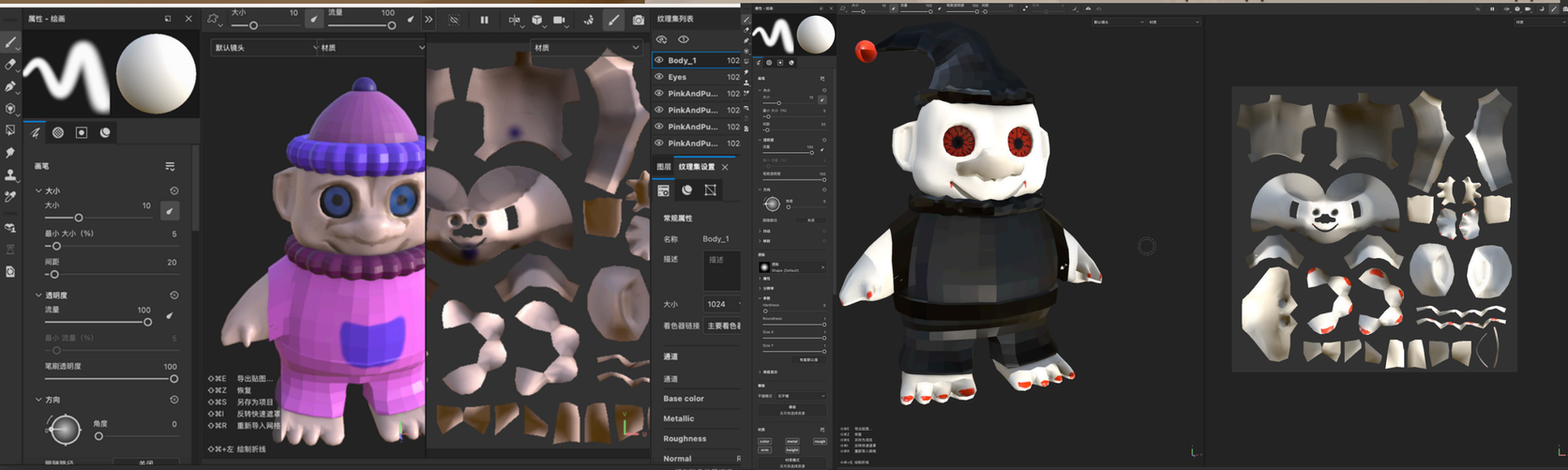
Nov 25th

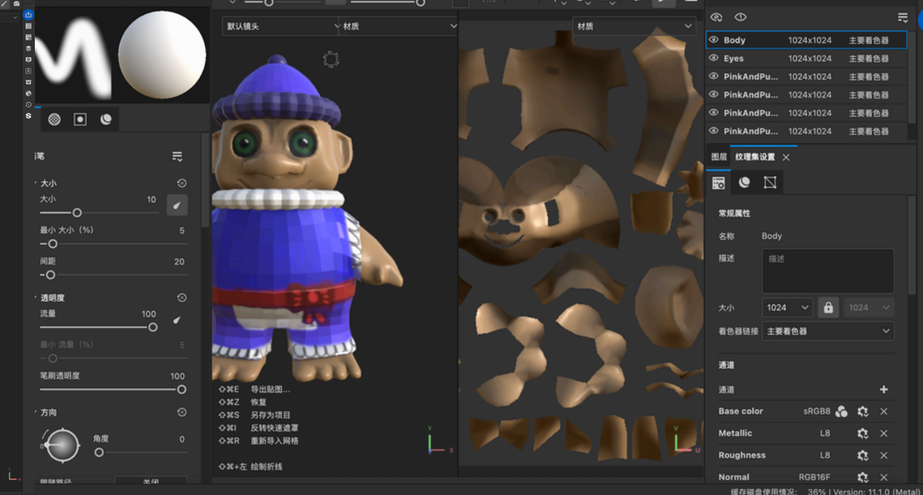












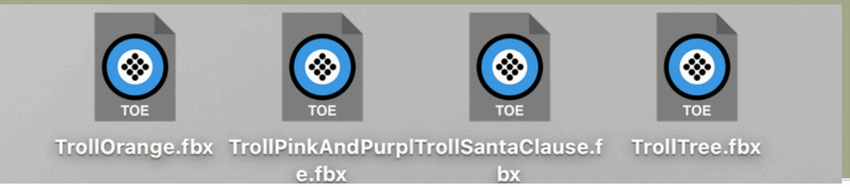
MATCHING ANIMATIONS

Nov 6th

WEEK 8

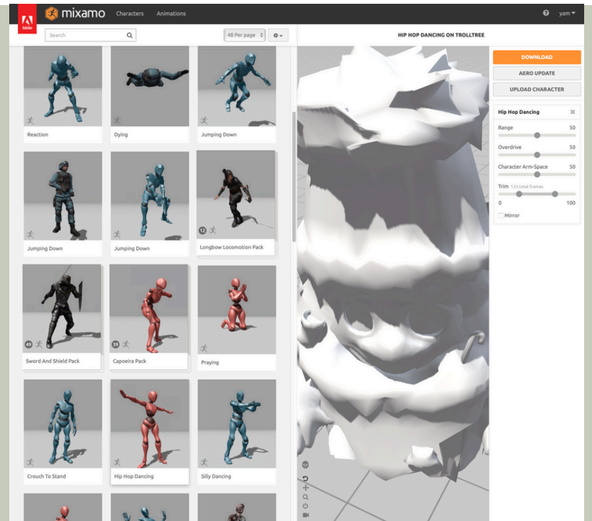
We searched for animations on the Mixamo website for the 3D models, assigning 3-4 animations per model: one for inside the stone, one for the book, and one for the final page.

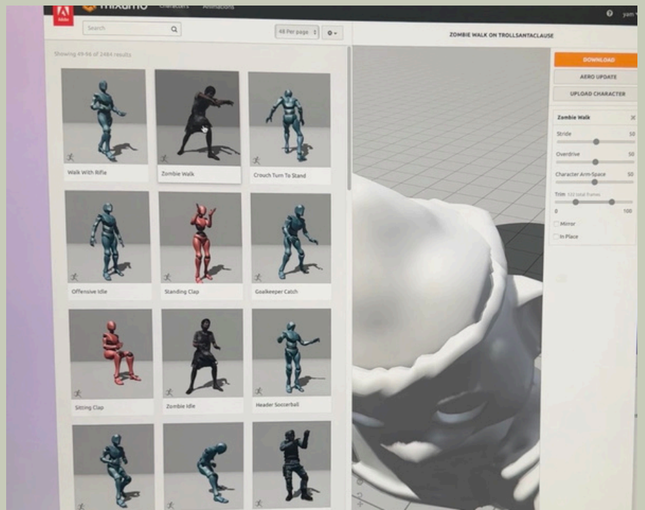


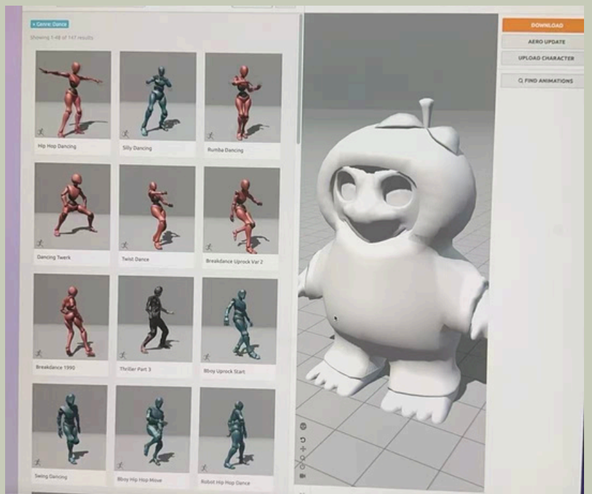


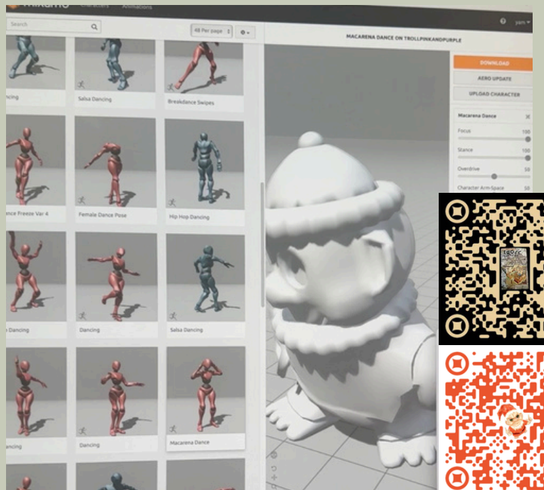


Nov 27th WEEK 11



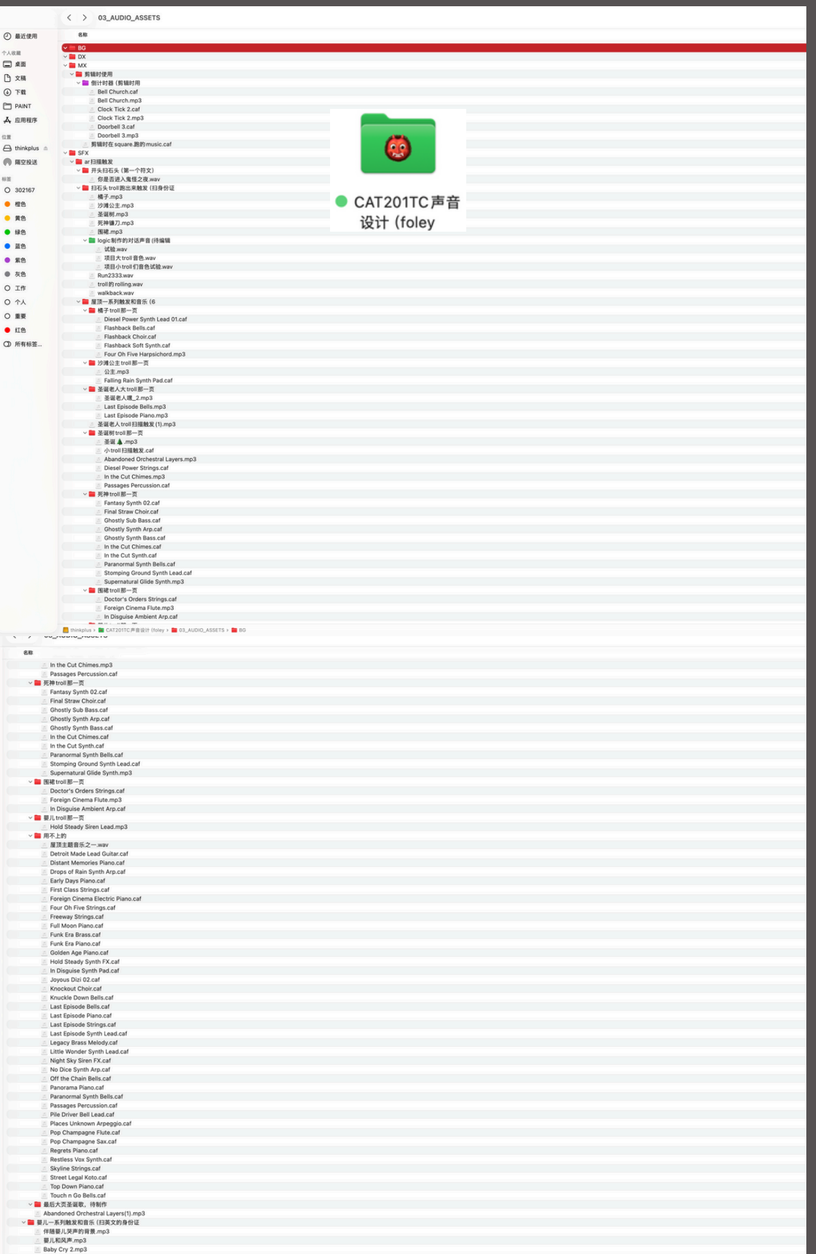






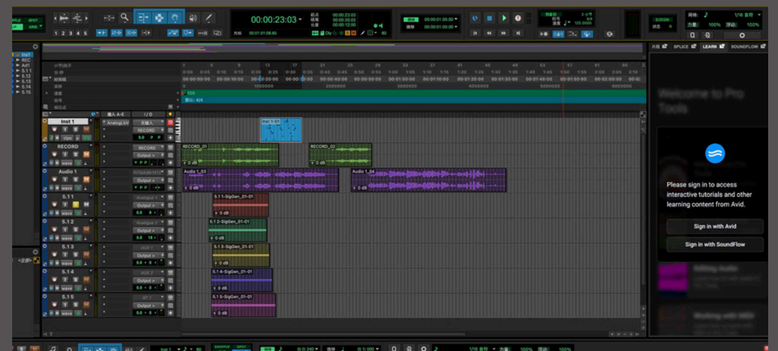
MATCHING SOUND FOR ANIMATION

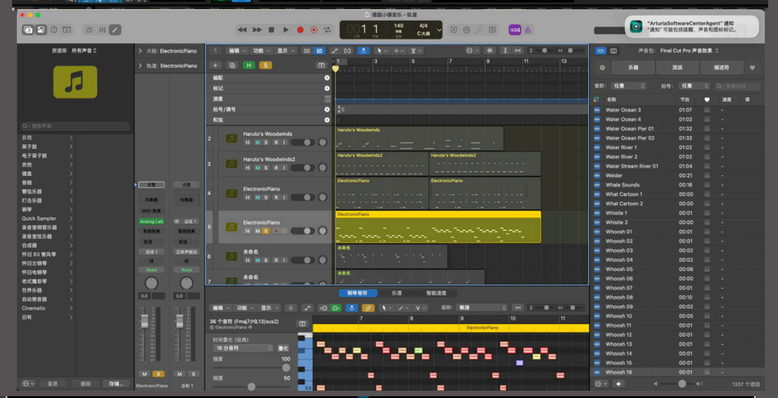
WEEK9 Nov 9th



PRODUCTING SOUND

WEEK10 Nov 11th









FOLEY RECORDING

WEEK10 Nov 11th

CAT201_FOLE WORK SCHEDULE

Foley	Troll1	Troll2	Troll3	Troll4	Troll5	Troll6	Big troll
breath	✅	✅	✅	✅	✅	✅	
footstep	✅	✅	✅	✅	✅	✅	
Wind when walking							✅
Mumble away of troll	✅	✅	✅	✅	✅	✅	✅
laughing			✅				✅

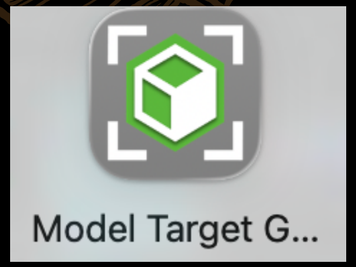


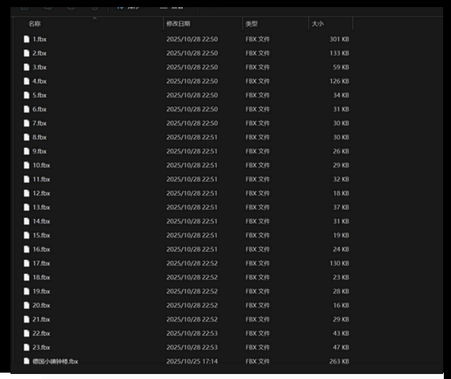
PRODUCING AND TRAINING TO RECOGNIZE 3D MODELS

Sep 22th
WEEK3

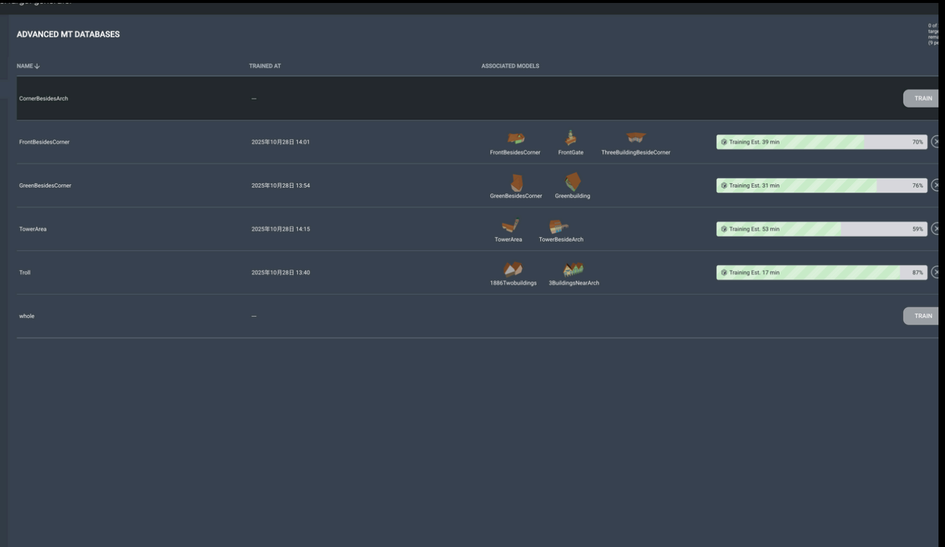
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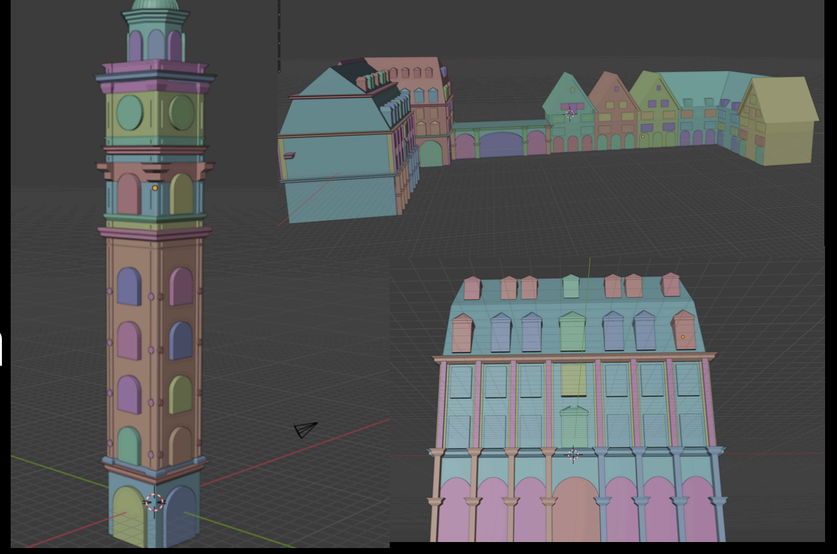
Oct 25th
WEEK6

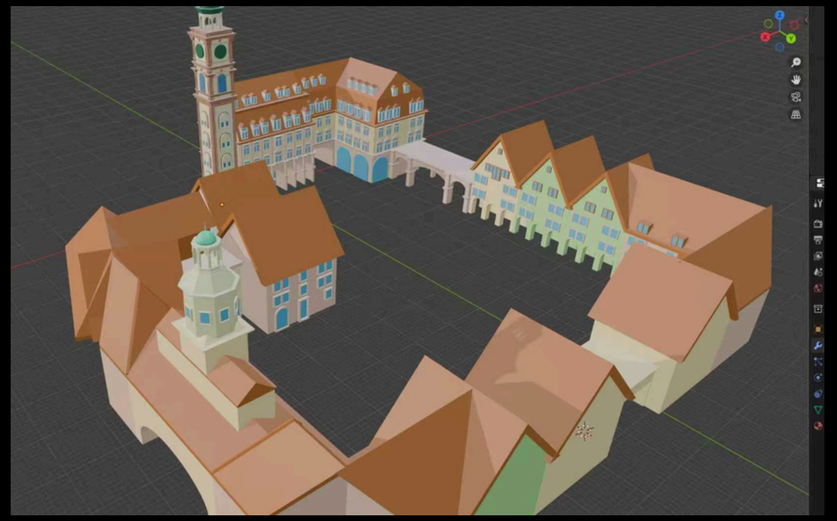


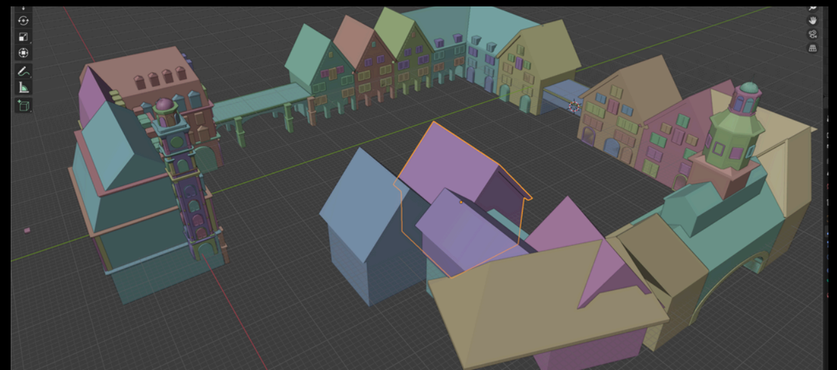


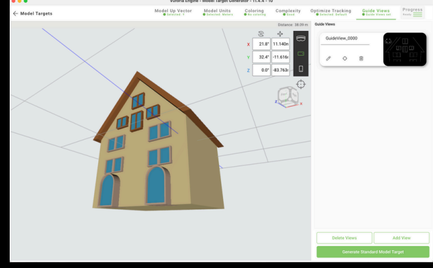


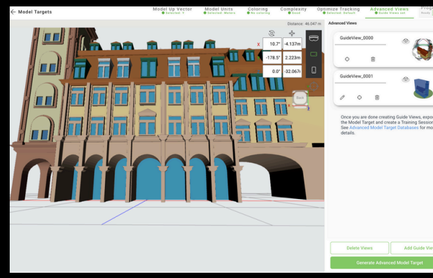


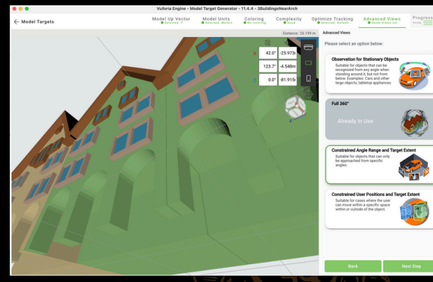


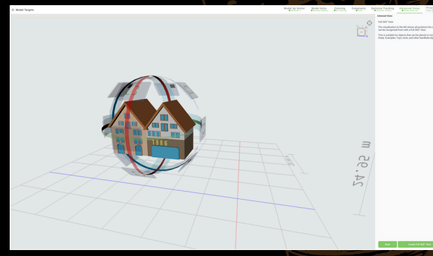


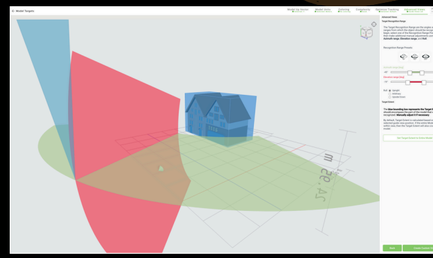












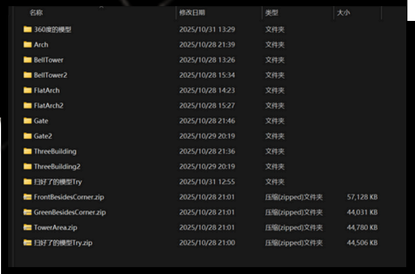
TRAINING TO RECOGNIZE ARCHITECTURAL MODELS BUT FAILED.

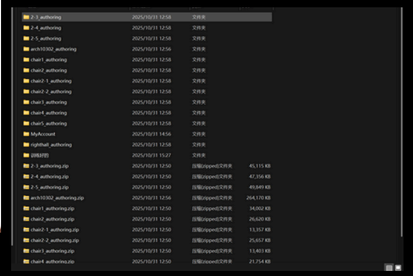
Oct 30th WEEK 7

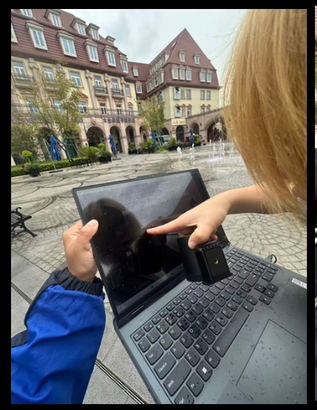
SCANNING THE AREA ALSO RESULTED IN RECOGNITION FAILURE.

Nov 10th WEEK9













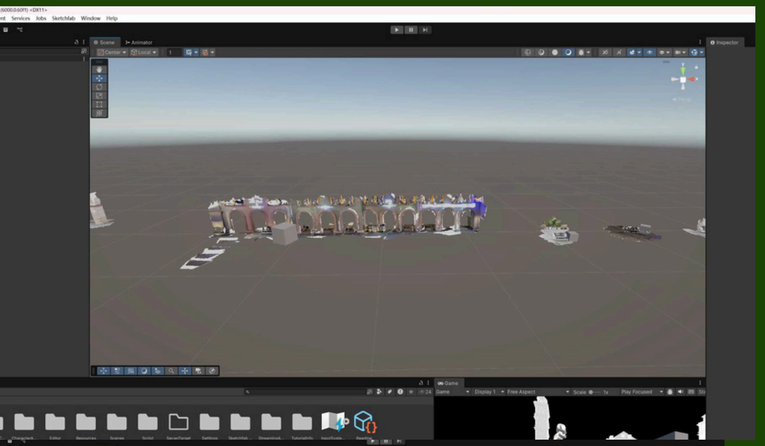


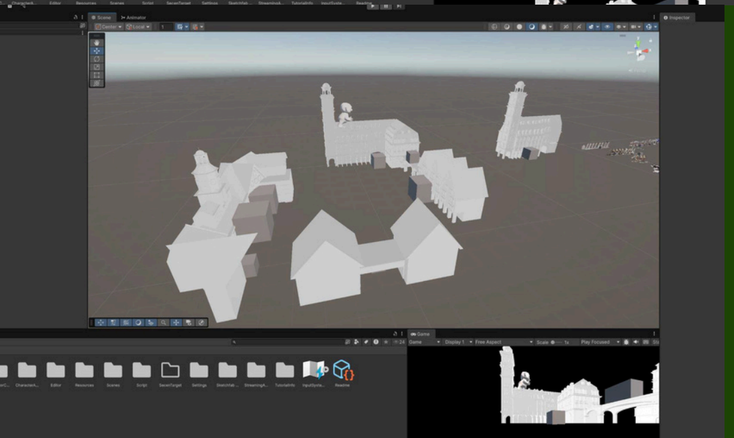


SWITCHING FROM AREA TARGET TO IMAGE TARGET

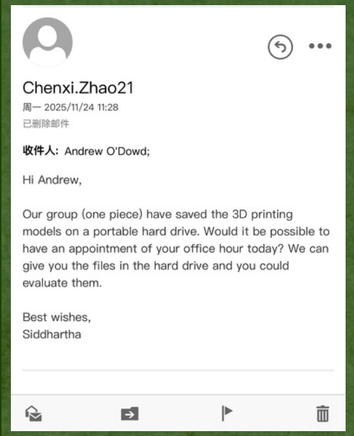
WE ENCOUNTERED A MAJOR CHALLENGE: THE BUILDING WAS TOO LARGE TO SCAN PROPERLY. AFTER COUNTLESS ATTEMPTS, THE MOBILE SCAN STILL FAILED, AND ONLY A DRONE SCAN COULD CAPTURE THE FULL STRUCTURE.

Following unsuccessful scanning, we shifted from attempting 3D-printed architectural models to creating physical books.

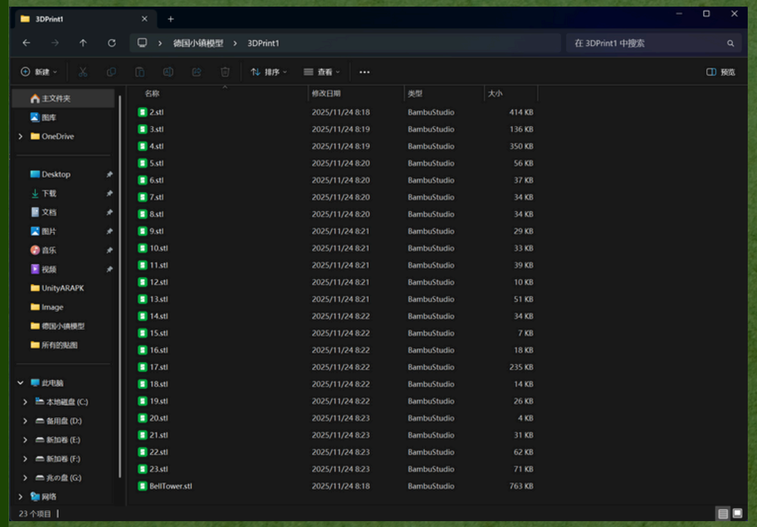




WEEK 11
Nov 24th



However, it was prohibitively expensive with uncertain returns, so we decided to abandon it for now.



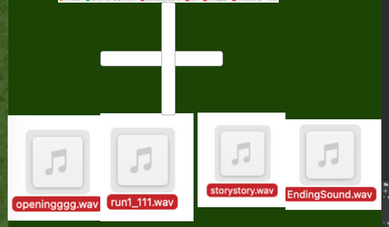
WEEK 11
Nov 27th

Fnal design allows users to scan images which in turn displays a data-driven 3D model of the architecture and trolls with animation

WEEK 11
Nov 28th

WE ADDED TEXT IN UNITY AND SYNCHRONIZED IT WITH EACH SOUND, MODEL, AND ANIMATION. WE ALSO RECORDED THE VOICE-OVER NARRATION.







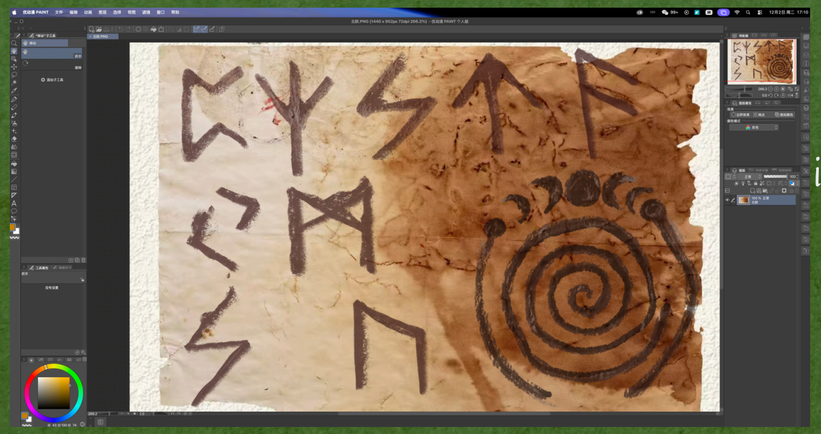
TARGET IMAGE DESIGN

Nov 24th
WEEK 11



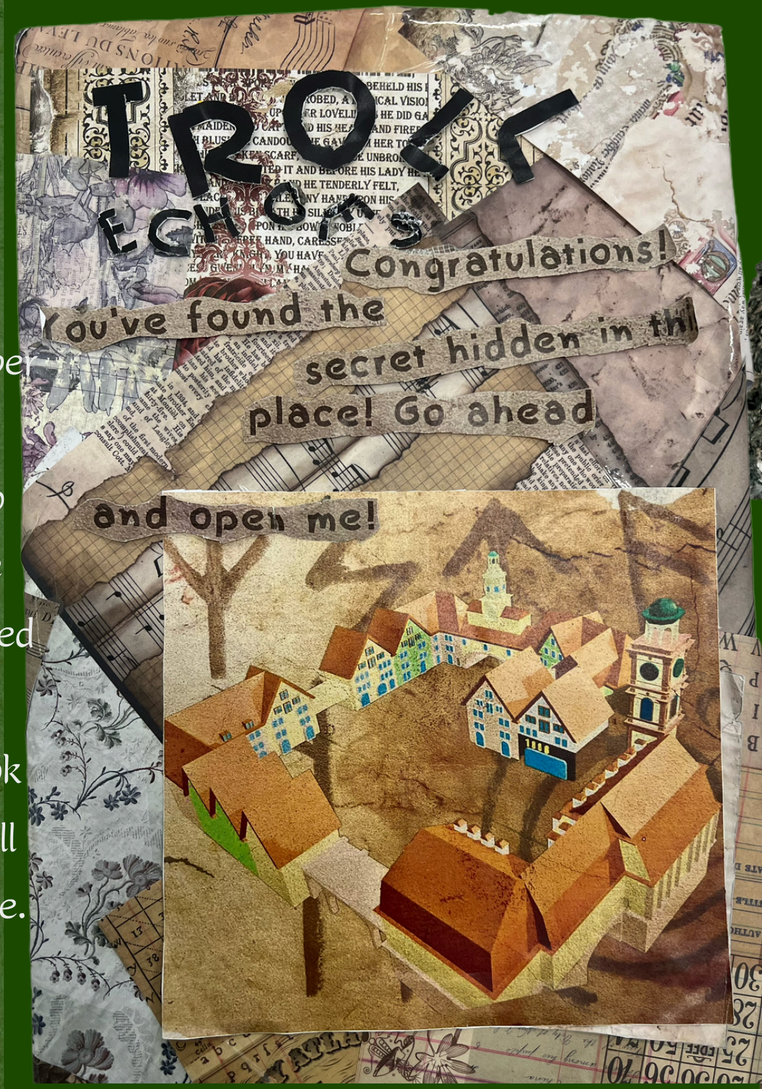


We changed our strategy—using paper models and small physical models to present the entire process. We narrated the project in the form of a storybook and gave each troll its own unique name.



NOV 28TH
WEEK 11

TANGIBLE WORKS







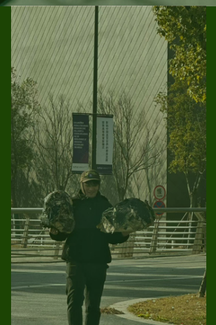


SHOOTING DAY

WEEK 12 Nov 30th

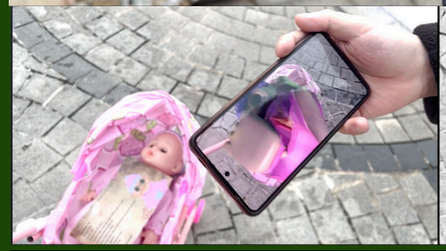
We brought the physical stones we created to a German town for filming. During the shoot, many visitors gathered to watch and experience the scene.









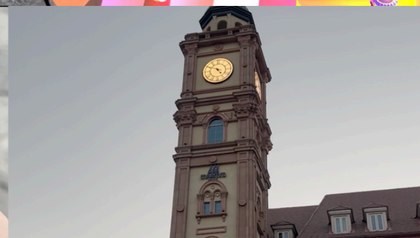






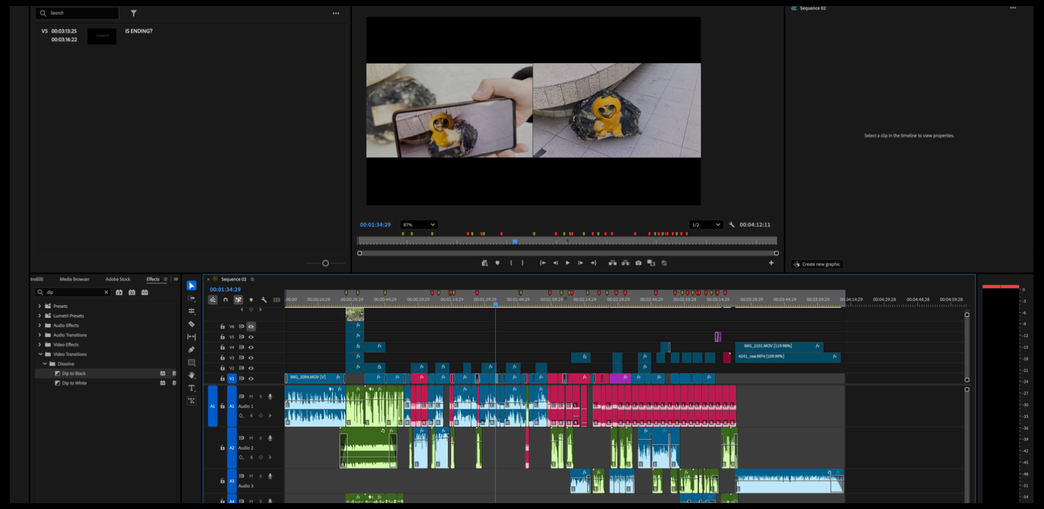






VEDIO EIDITING

Dec 1st WEEK12



SCAN IT WATCH
DEMO VEDIO



ADR

DURING FILMING, THE SCENE CONTAINED SOUNDS FROM THE FOUNTAIN AND MANY VISITORS. WE PERFORMED ADR DURING THE EDITING PROCESS.





ONLINE IMAGE TARGET WEBSITE

WEEK12
Dec 3rd

SCAN IT YOU WILL SEE ALL IMAGE TARGET.
USE THE APP AND SCAN THESE IMAGE WILL GIVE YOU SURPRISE

To ensure universal access to our AR experience without requiring physical books or cards, we have created web-hosted versions of all target images. Scan the QR code on the right to access the website directly

https://echoes-of-the-troll-dc08f62c.base44.app



ECHOES OF THE TROLL

An Augmented Reality Experience

SCAN ME IN ROTHENBURG GERMAN VILLAGE



ARE YOU READY TO ENTER

THE MAGIC TROLL WORLD?



PART 1

Troll Identity Certificates















PART 11

The Storybook Pages





THE FINAL SECRET

Scan to reveal the ultimate surprise...



IP MERCH



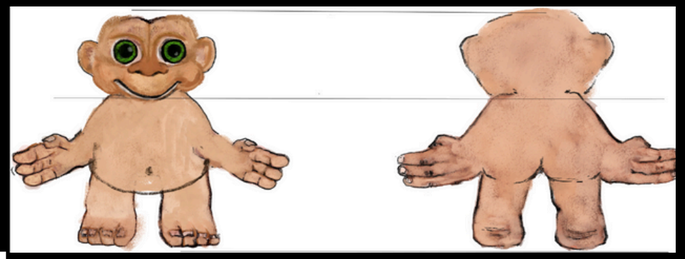




A CHRISTMAS–THEMED BILLBOARD FEATURING A TROLL

DIY
YOUR OWN LITTLE TROLL





We invite kids to come and create their own troll. Keeping the troll's original skin, they can design and paint its clothes.









IP MERCH





TROLL PHONE CASES COLLECTION

Premium Winter Edition



TROLL WINTER COLLECTION 2

More Winter Fashion



TROLL WINTER COLLECTION

Winter Fashion Collection



TROLL ARCHITECTURAL DESSERTS

Fairy-Tale Village Collection



MORE TROLL DESSERTS

Delicious Treats Collection



TROLL DESSERTS

Sweet Treats Collection



MORE TROLL ARCHITECTURAL DESSERTS

Fairy-Tale Delicacies Collection



IP MERCH

CHILDREN'S MERCH PRODUCTS





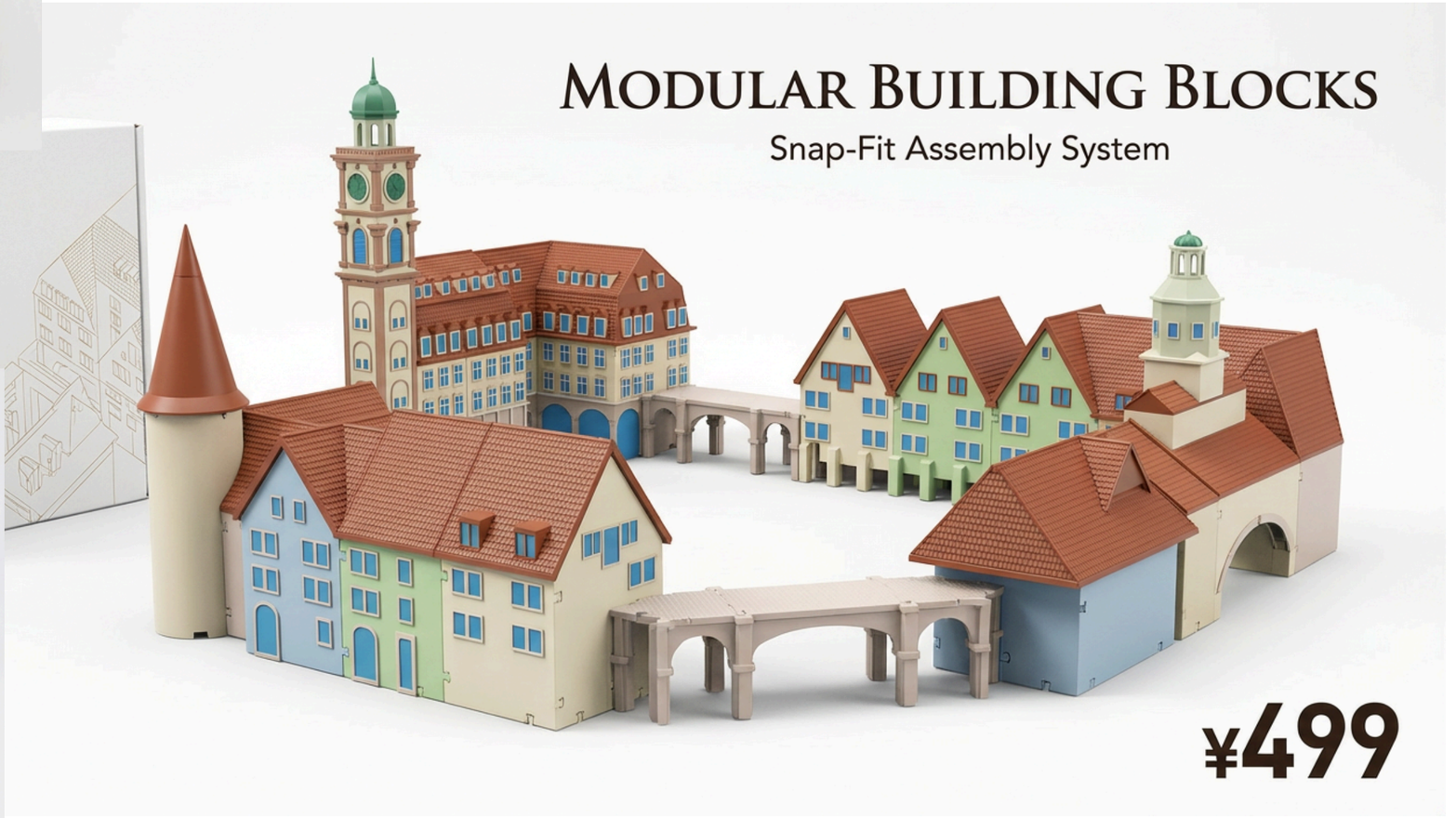


IP MERCH

TOWN–THEMED BUILDING BLOCKS







IP MERCH

TROLL–THEMED CARDS















IP MERCH





TOUR BUS PROGRAM



A TRAVEL PROGRAM FOR CHILDREN: THE TROLL KIDS' BUS

TROLL–THEMED TRAVEL EXPERIENCES, INCLUDING A WINTER–LIMITED TOUR BUS AND A CHILDREN'S MINI TRAIN.

Member	Tools Used	Key Contributions
1. Zhaocheng Zhang	Blender, Maya, Unity, Cubase, Analog Lab 5	• 3D modeling (Blender & Maya) • Visual and audio adjustments in Unity (lighting, color, SFX) • Animation editing • Footstep recording & sound effects • Scripting / programming • Exporting the final AR application build • **Video recording and editing**
2. Chenxi Zhao	CSP (Clip Studio Paint), Substance 3D Painter, Mixamo, Premiere Pro, Cubase / Analog Lab 5	• Concept design & character design (CSP) • Texturing in Substance 3D Painter • Mixamo animation selection • Background music creation for Trolls • Footstep recording • Creating physical stone props & painting • Mid-term PPT & final poster support • Filming and editing final video (Premiere) • Text editing for final PDF submission • **Video recording and editing**
3. Xinyue Gou	— (physical & testing focus)	• Painting and assisting with physical stone props • Image cutting & editing • Resource searching for concept design • Testing the final AR experience • **Video recording and editing**
4. Lieyangzong Chi	Procreate, Substance 3D Painter, Mixamo	• Assisting with concept development • Designing three Troll characters (Procreate) • Customizing animations in Mixamo • Texturing in Substance 3D Painter • Footstep recording • Producing mid-term PPT & final poster • Text editing for final PDF submission • **Video recording and editing**

← DIVISION OF LABOR AND PEER RENIEW

TOOLS：

BLENDER +MAYA+SUBSTANCE 3D PAINTER，UNITY， PROCREATE ,CSP , ANALOG LAB5+CUBASE

Throughout the development of this AR project, the team collaborated closely across all stages—from early concept exploration to visual design, character creation, animation integration, physical prop making, audio recording, and final presentation. Each member contributed to different aspects of the workflow, including modeling, texturing, illustration, animation processing, sound design, video production, documentation, and testing, ensuring that both the artistic and technical elements of the experience were carefully considered. Although the process involved numerous challenges, failed attempts, and ideas that could not be fully realized, the continuous refinement and problem-solving carried out by the team ultimately resulted in a polished and cohesive final work.

PEER ASSESSMENT	OUTSTANDING	EXCELLENT	VERY GOOD	GOOD	SATISFACTORY	POOR
ZHAOCHENG.ZHAO	√					
CHENXI.ZHAO	√					
XINYUE.GOU	√					
LIEYANGZONG.CHI	√					













THANK YOU!



ONE PIECE :
ZHAOCHENG.ZHANG
XINYUE.GOU
CHENXI.ZHAO
LIEYANGZONG.CHI



