



Ruonan Liu

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# » Game Designer & Developer Portfolio 2022



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Game Design & Develop

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# Personal Introduction

<b>Intro</b>	I'm Ruonan Liu, born in 2001, a Chinese game designer, developer and narrative designer with a background in computer science and game design education. I'm currently finishing my BS in University of Wisconsin – Madison and I hope to one day work with game developer or technical artist.
<b>Education</b>	University of Wisconsin – Madison, College of Letters & Science <ul style="list-style-type: none"><li>• Bachelor of Science - Computer Science, Aug 2020 – Dec 2022</li><li>• Minor in Game Design</li></ul>
<b>Software</b>	<ul style="list-style-type: none"><li>• Adobe Photoshop, After Effects, Premier</li><li>• Twine (basic scripting)</li><li>• Unity 3D (asset management, scene building, game development), Bitsy, RPG Maker MV</li><li>• Blender (low-poly modelling and shading)</li><li>• Java, Python, C/C++, Visual Studio, IntelliJ, Eclipse (coding)</li></ul>
<b>Interests</b>	<ul style="list-style-type: none"><li>• Cooking (traditional Chinses cuisine, baking), Game Jams, Compose music</li><li>• MMORPGs, MOBA, FPS and boardgames</li></ul>



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# » Scroll of Life Game Design Doc «

Virtual Reality, Collection



# » Game Concept «

## **Game Identity**

This is a first person perspective single player 3D adventure game about a story: an old man reviews his life by collecting elements in maps.

## **Design Interests**

1. Near-death experience may contain receiving a life review and a rapid movement toward and/or sudden immersion in a powerful light.
2. Life always has regrets. A chance to make up for regrets with a virtual reality experience.

## **Story**

In late autumn, a cry shattered the quiet of the night and you were born into an ordinary farming family. As the fourth child in the family, your parents did not show much excitement about your arrival. When you were choosing your own first birthday present, you pointed your finger at a pen on the low table that your uncle had brought to your father when he arrived yesterday. Coincidentally, then an evening breeze blows and the pen slowly rolls to the edge of the table and slowly falls in front of you. You grabbed the pen and lifted it high into the air. They were convinced that you were the Chosen One and that you would be able to achieve success in the future and complete change the family. In the process of revitalizing your family, there are many accidents, first you are forced to separate from your lover, and then you unfortunately fail the imperial examination. Despite this, you continued to take the examination with aspirations. In the end, you only became a minor local official, and at that time, your parents had long passed away.

## **Features**

1. Movement (walk, jump, and hide) control using controller.
2. Collect different elements in each map by collision.
3. The progress bar for each map will show the number of elements collected and remaining on the current map.

**Win condition:** collect all elements in all maps.

If player collects all hidden elements (will not show in progress bar), trigger hidden ending (extremely happy ending).

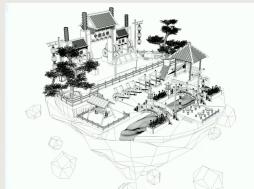
**Fail condition:** being attacked by enemies three times in each map. Player needs to restart a map.

**Enemy behavior:** moving around in the map, resting (idle), chasing/attacking player when player is spotted.

## **Art Concept**



# » Map & Dynamic Design «



## Childhood

The small town where you were born and start studying in childhood. The color theme is **Black**. The collectable element is pen.

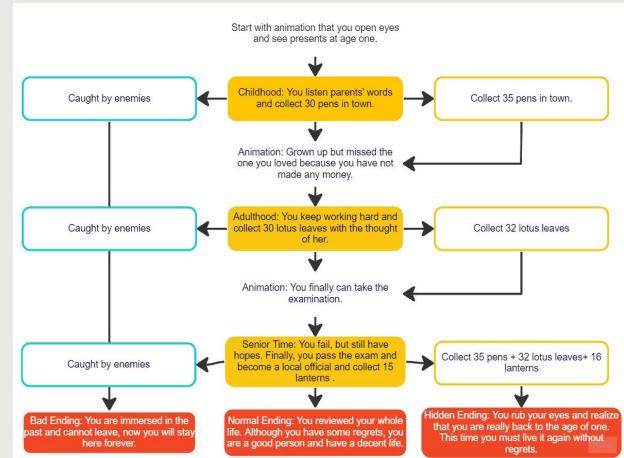
## Adulthood

The place where you lost the person you want to be with for the rest of your life. The color theme is **Green**. The collectable element is lotus leaf.

## Senior Time

The place where you study, where you meet the person you want to be with for the rest of your life. The color theme is **Yellow**. The collectable element is lanterns.

## Dynamic Design



After each map is cleared, the story will be told during the animation stage using traditional Chinese painting scrolls as the background.



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# » Before Lost Gee! Award Finalist «

JavaScript, RPG Maker MV

<https://epikoni.itch.io/before-lost>

Trailer: <https://uwmadison.app.box.com/s/42q91tnsyd4q23g1aizjsfo6g3101bo7>



# » Game Concept «

## Game Identity

This is a single player 2D adventure game about a story: a boy who finds out the world is collapsing travels back in time to save the world.

## Design Interests

The effects of global warming include: melting of polar ice sheets, sea level rise, inundation of low-lying coastal lands, impact on low-lying countries and coastal extract areas of most countries, and global climate change, resulting in abnormal rainstorms, drought phenomena, and the expansion of desertification, which will cause great harm to ecosystems, soil and water resources, human activities and life safety.

## Story

In a wooden cabin in the forest, the protagonist wakes up in bed, opens the door and finds that there is **fire outside**, animal carcasses are floating in the river, and cracks are gradually appearing on the ground. In his panic, he thought that his grandfather had told him before his death that there was **a way to turn back time**, so he hurried home, found a **time travel machine**, and traveled **back to two hundred years ago**. At this time, people had just started to develop industries, and they cut a lot of wood. Consumption has increased dramatically, and underground mineral deposits have been mined and smelted in large quantities, leading to sharp deforestation, climate warming, and ozone depletion. He is determined to do something to change the world.

## Features

1. Movement (walk and run) control using keyboard.
2. Turn based attack with different weapons and heal using mana.
3. Non combative tasks (planting tree, picking up trash, reducing waste water emissions), combative tasks (fighting enemies like animals, humans, or other imaginative creations), collecting items, level up skills

## Art Concept



# » Tasks & Characters Design «

## **Wise elder: Sedate.**

Guide players how to operate the time machine.

## **Enemies: Not independent-minded.**

Take orders from the final boss, grab the player's quest items and hide them.

## **Final boss: Malicious.**

The person behind the destruction of the ecological environment, beat him to save and return to the original world.



**Human characters maybe not always good. Some of them are villains.**

**Animals signify different personalities and tasks.**

## **Horse: Grumbling.**

Players need to pour magic water on the plants to help bring them back to life.

## **Whale: Optimistic.**

Players need to block three water stop valves to stop the factory's wastewater from being discharged into the river.

## **Cat: helpful.**

The player needs to get the torch with the help of the cat and burn all the garbage waste.



# Map Art



## Responsibility



Game design, map design,  
story concept, visual effect

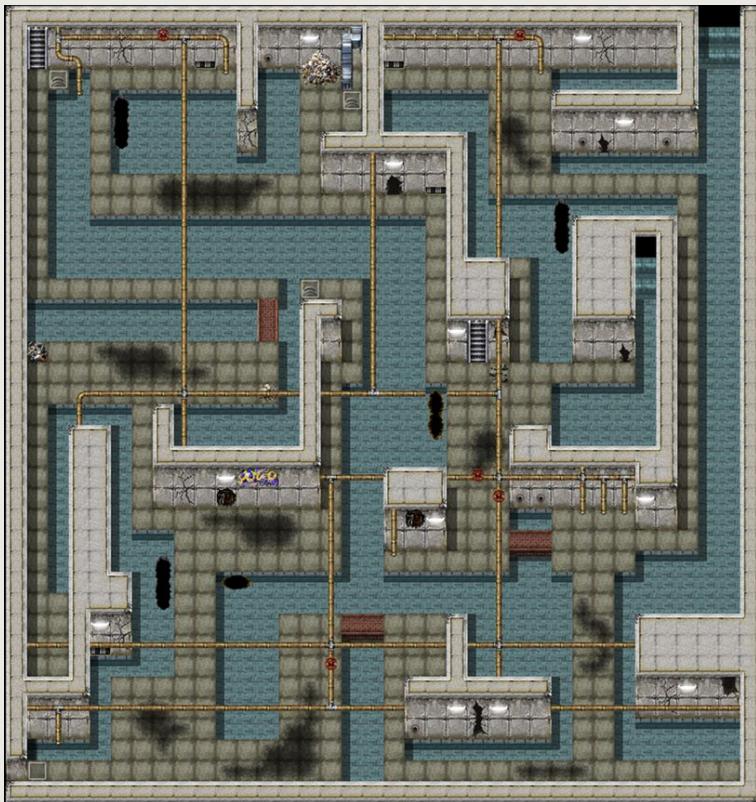
## Teams



Justin Pihowich (game  
design, writing), Michael Her  
(sound and visual effect), Rui  
Yang (map creation)



Horse tasks map



Inside of factory



The cat map where final boss is



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# »Underground Princess«

C#, Unity, Blender, Procreate

<https://epikoni.itch.io/underground-princess>

Gameplay video:

[https://drive.google.com/file/d/1G7N1weBLSZWXZ8tf2guaq-wkTXoWhh\\_W/view?usp=sharing](https://drive.google.com/file/d/1G7N1weBLSZWXZ8tf2guaq-wkTXoWhh_W/view?usp=sharing)



# » Game Concept «

## **Game Identity**

This is a single player 3D room escape game about a story: a brave female nurse rescues an imprisoned schoolgirl.

## **Design Interests**

Girls help girls is a very warm and powerful phrase.

People with similar experiences and feelings are more likely to understand and empathize with each other, and are more able to speak to the point and help to the point. Compared to men, women are generally more sensitive, more empathetic, more compassionate, and more likely to express their emotions. Because the gender brings a sense of inferiority is also ubiquitous, by all kinds of open, private and invisible harassment, was not valued, was denied ability and effort.

## **Story**

Around 1am on Mother's day (May 14), Alvin kidnapped Hannah. A witness saw this and reported it to police first thing in the morning, they met in the café across from where the kidnapping happened. Mya, a nurse, overheard the recount of the events and recalled a previous patient who matched the description and determined that Alvin was the kidnapper. She used the Hospital's database to find Alvin and save Hannah.

June 25, 2022

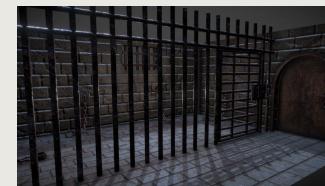
## **Features**

1. Movement control using keyboard.
2. Interactions: pickup, rotate, use, zoom in and out using keyboard.
3. Camera movement using mouse.

**Win Condition:** Solve all puzzles and take Hannah out safely.

**Fail Condition:** Fail to solve puzzles in time.

## **Art Concept**

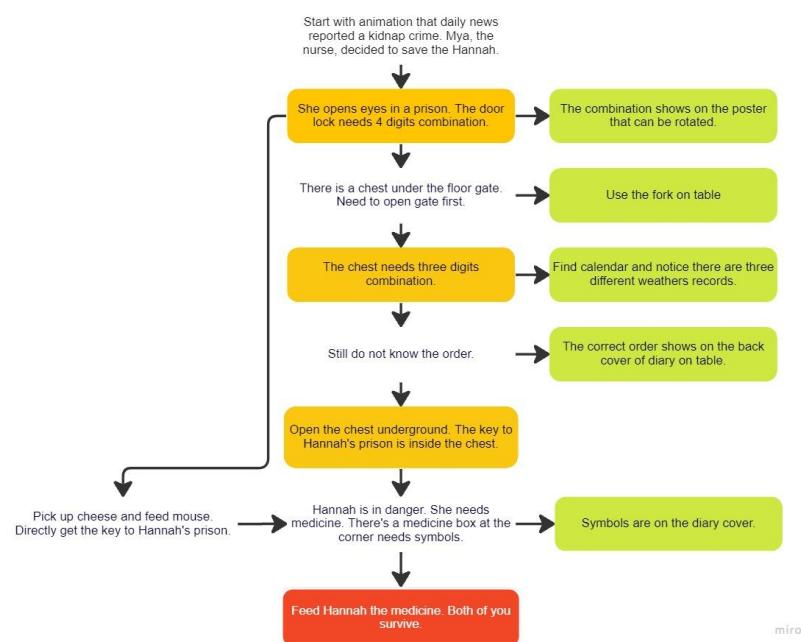


# » Game Scene «





# Puzzle Design





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# » Model & Shader Showcase «

Cinema 4D, Blender, Cycles, Eevee



# » Traditional Chinese Landmarks «



With red, orange, yellow, green, green, blue, purple, black and white as the main colors to show the traditional Chinese landmarks.

**Low poly** style buildings can be used in game scenes.

From red to white: Ruilong Bridge, Word-worshipping Paper Incinerator, Jiezi Ancient Town, Ancient Theater Stage, Yard, Yulong Bridge, Water wheel, Street, Xiyun Attic

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# My Bedroom

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Particle system  
Mantaflow (fluid simulator)  
Fabric texture



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# Gas Station

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Idea from Polygon Runway



# » Shaders «

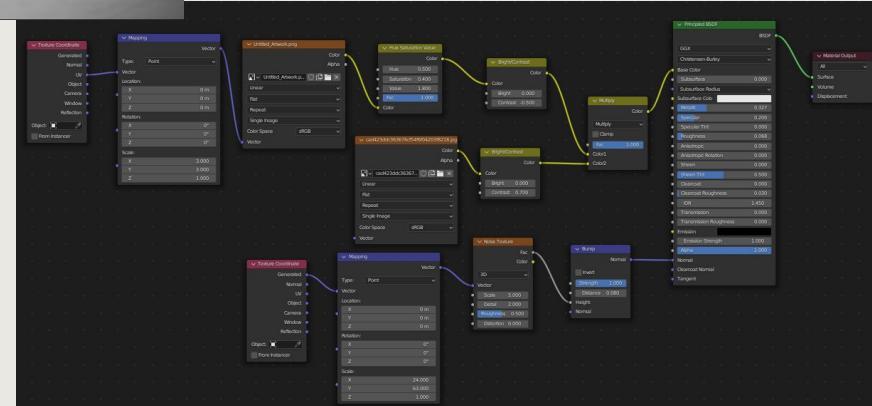
## Chinese Monochromes (ink style)

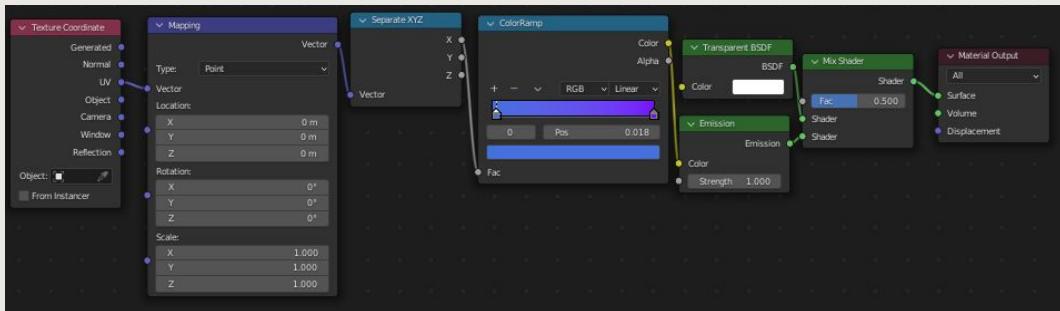
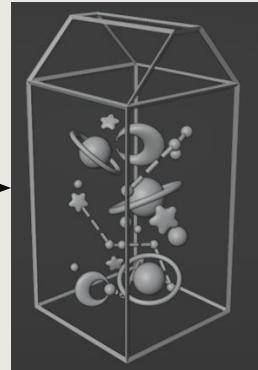
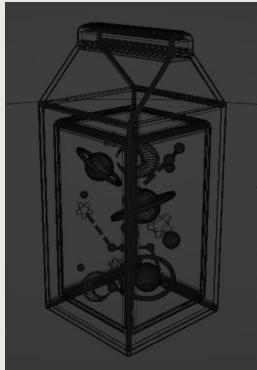
Inspired by a painting *Rare and Wonderful View of Xiao-Xiang*

Water made by using rice paper texture

Mountains made by modelling and shading

Plants made by UV editing





**Galaxy within Milk box**  
3D to 2D shading

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# » THANK YOU «

If have any questions, please contact me:

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Game Design & Develop

