

# JERMs: Autonomous Killer

## Robots VR

Jadon

Ella

Rayyan

Megan



**01**

**Project Beginning**

# Laying the Foundations

<u>User Needs/Design Criteria</u>	<u>Priority</u>
MEMORABLE	5
CLARITY	5
REASONABLY IMMERSIVE	5
CONCERNED EMOTIONS	4
DISABILITY CONSIDERATION	3
COST	3

## Problem Statement

“Encourage **decision-makers in legislatures** to preemptively ban autonomous killer robots by designing an **immersive** and **memorable** VR simulation that **provokes concern** while balancing **realism** and **simplicity**.”



# Project Progression

Interactable environment

Easily recognisable geography

Storyline is NOT overloaded with details

appropriate region/time, taking into account diversity of users

Includes relatable aspects of a user's life

Duration < 60 seconds

number of complex assets < 5

budget < \$20

= YES

# Problems Encountered

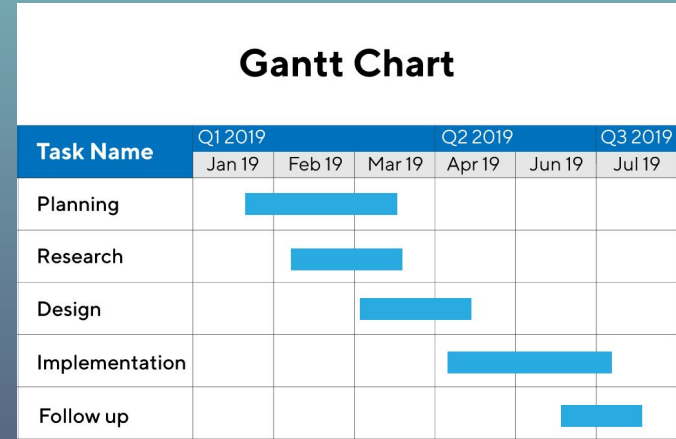
- 1) Slow start because of busy schedules
- 2) Did not have an open line of communication throughout the week
- 3) Did not have specific task owners
- 4) Did not have a clear idea of final outcome



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# Lessons learned

- 1) Communication is Key
- 2) It works to distribute tasks and responsibilities
- 3) Feedback from client/peers is necessary



A decorative graphic on the left side of the slide, consisting of a grid of white-outlined hexagons. Some hexagons are filled with a light teal color, while others are empty. Small teal dots are placed at the vertices of the hexagons, and thin teal lines connect some of them, creating a network-like structure. The background of the slide is a gradient from teal at the top to dark blue at the bottom.

02

# Chosen Concepts

Rayyan

<b><u>Design Criteria</u></b>	
<b><u>Functional</u></b>	<b><u>Constraints</u></b>
Unsettling/Concerning	Time
Emotionally charged	Assets
Interactable environment	Budget
Recognizable geography	
Environment resonate with users	
Elements rooted in reality	
Low complexity	
Minimal assets	
Low reliance on location changes	
No language barrier/intensive storyline	

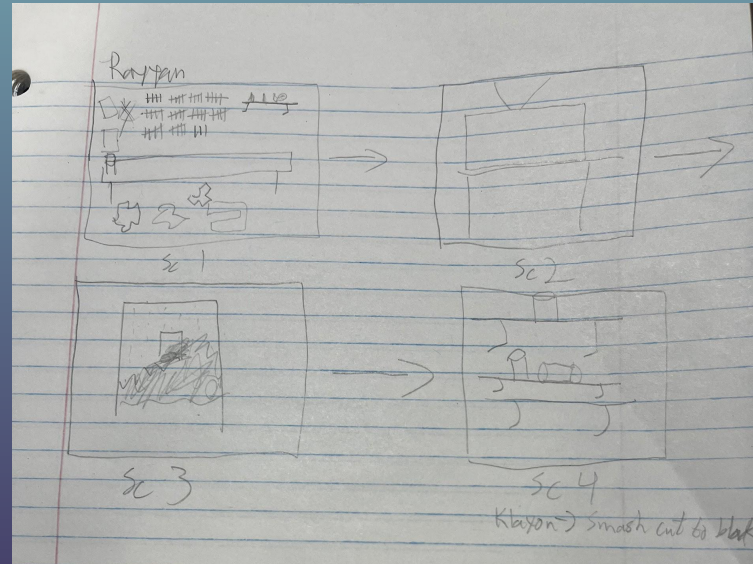
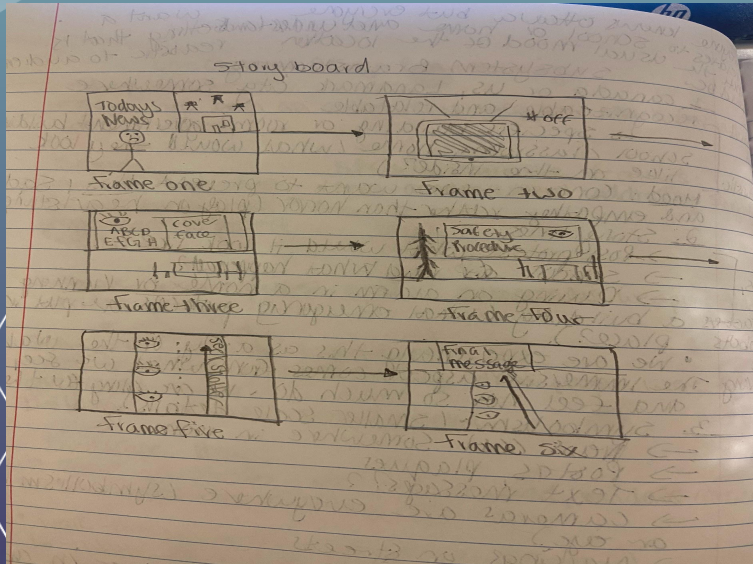
# Subsystems

1. Atmosphere/Setting
2. Storyline
3. Assets/Features

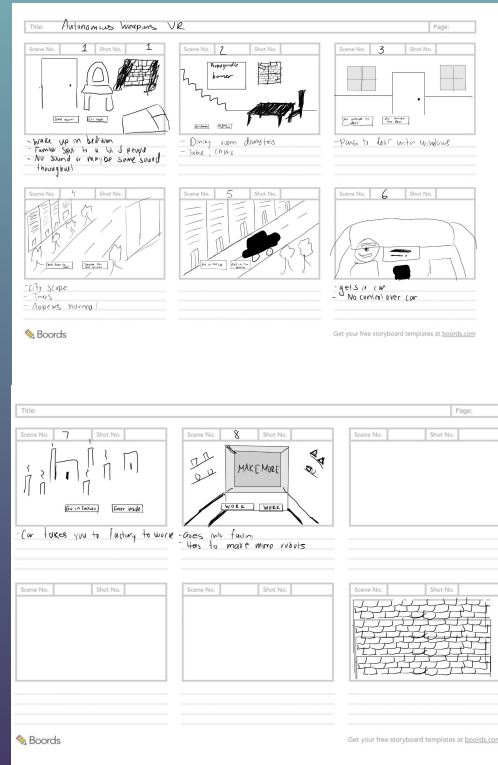
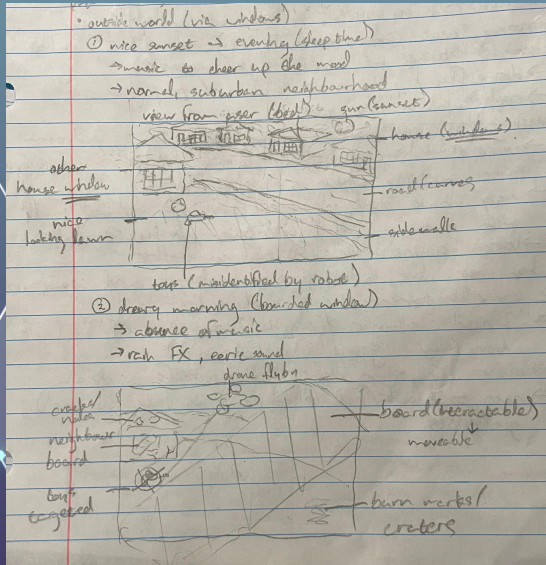




# Original Sketches

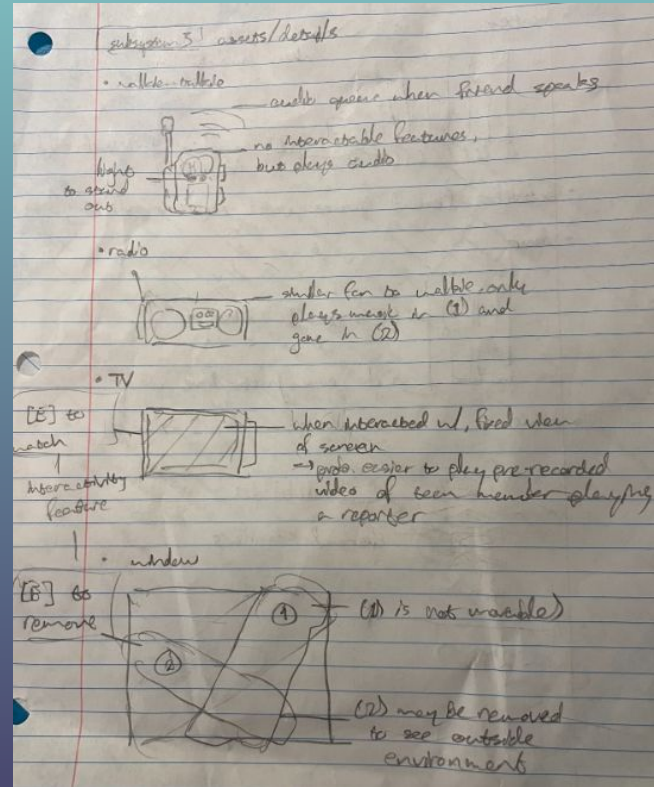


# Original Sketches



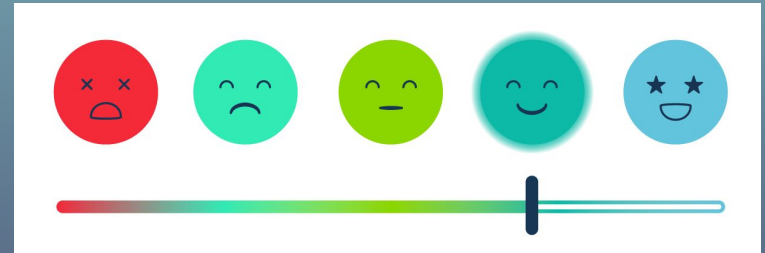
# Assets/Features

- A/V (TV/radio/walkie-talkie)
- Posters (Propaganda, Safety procedures)
- Cameras
- Boarded windows
- Locks
- Symbolic graffiti
- "Choice" button



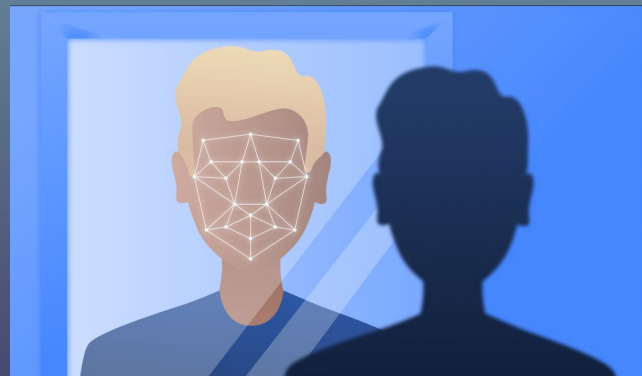
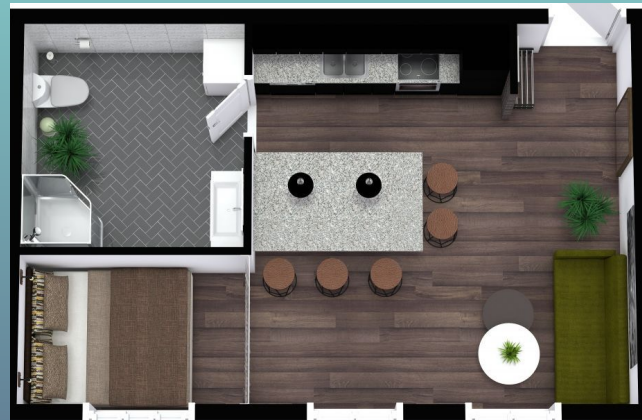
# Feedback Received Client Meet (I)

- Focusing on too many aspects related to autonomous robots
- Setting/atmosphere too complicated
- Over ambitious with the timeline we were given
- Storyline too complex
- Make it simple!
- Loved the message
- Liked our assets



# How we took the feedback

- Used facial recognition for our simulation
- Polished and reduced the setting
- Developed a storyline specific to facial recognition
- Designed assets specific to storyline





03

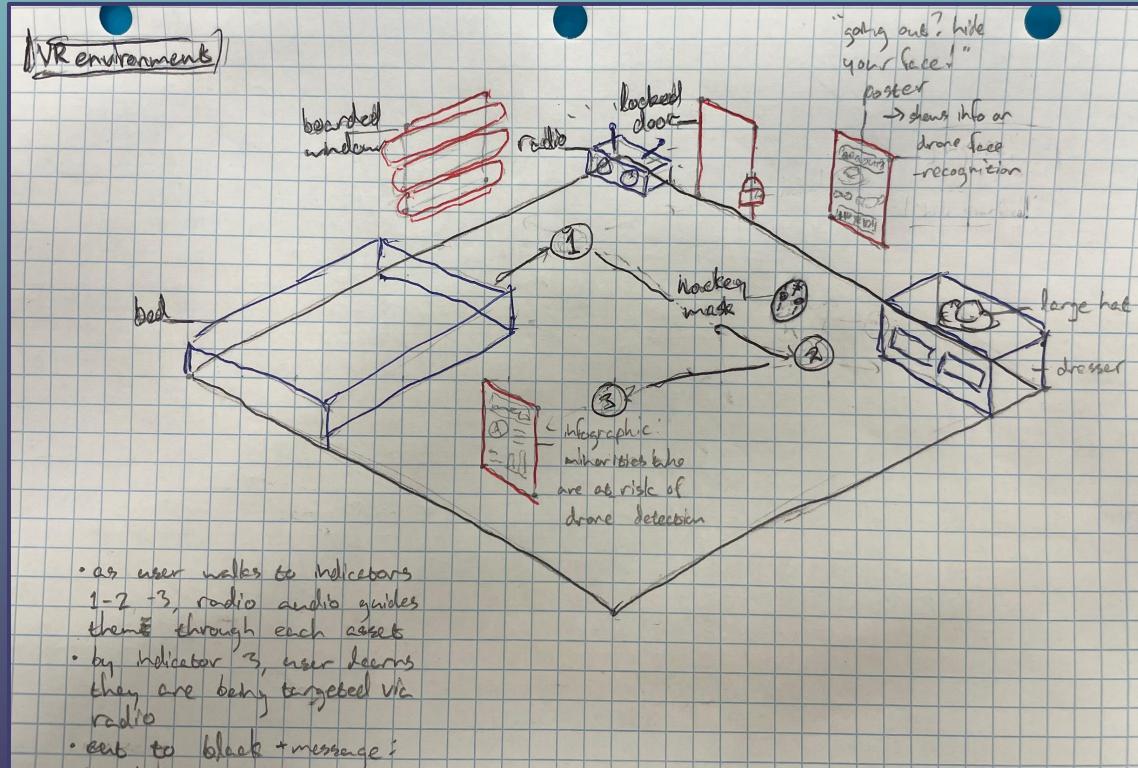
**Development**

Ella

# Subsystem development

- Setting/Atmosphere
- Storyline
- Assets/Features

# Setting/Atmosphere





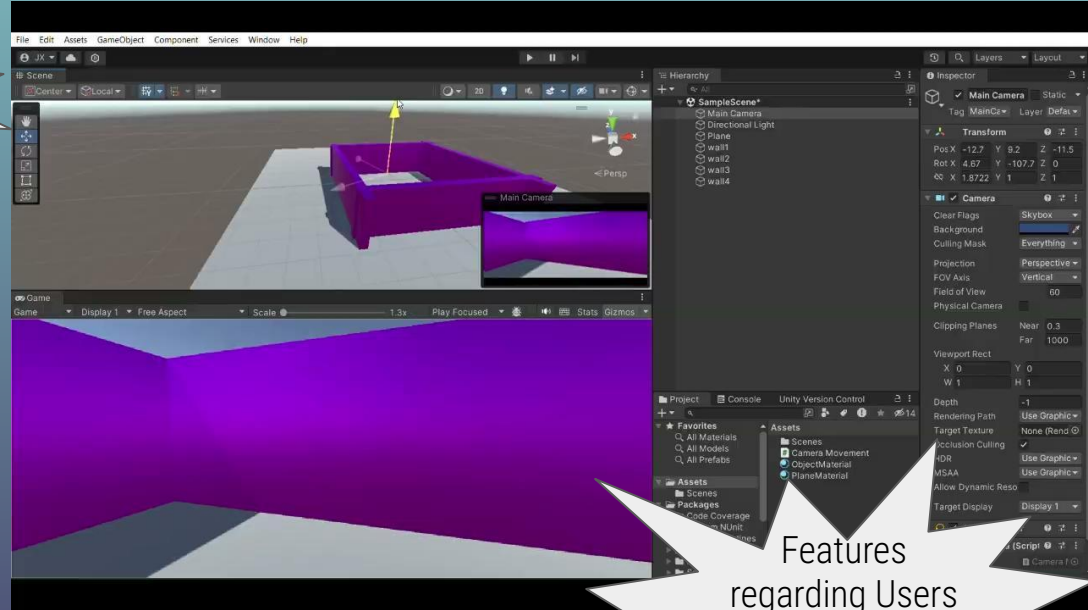
# Assets

## BILL OF MATERIALS

PRODUCT NAME	"you are not the target", VR environment PSA	
APPROVED BY		
DATE OF APPROVAL		
PART COUNT	16	
TOTAL COST	~37\$	

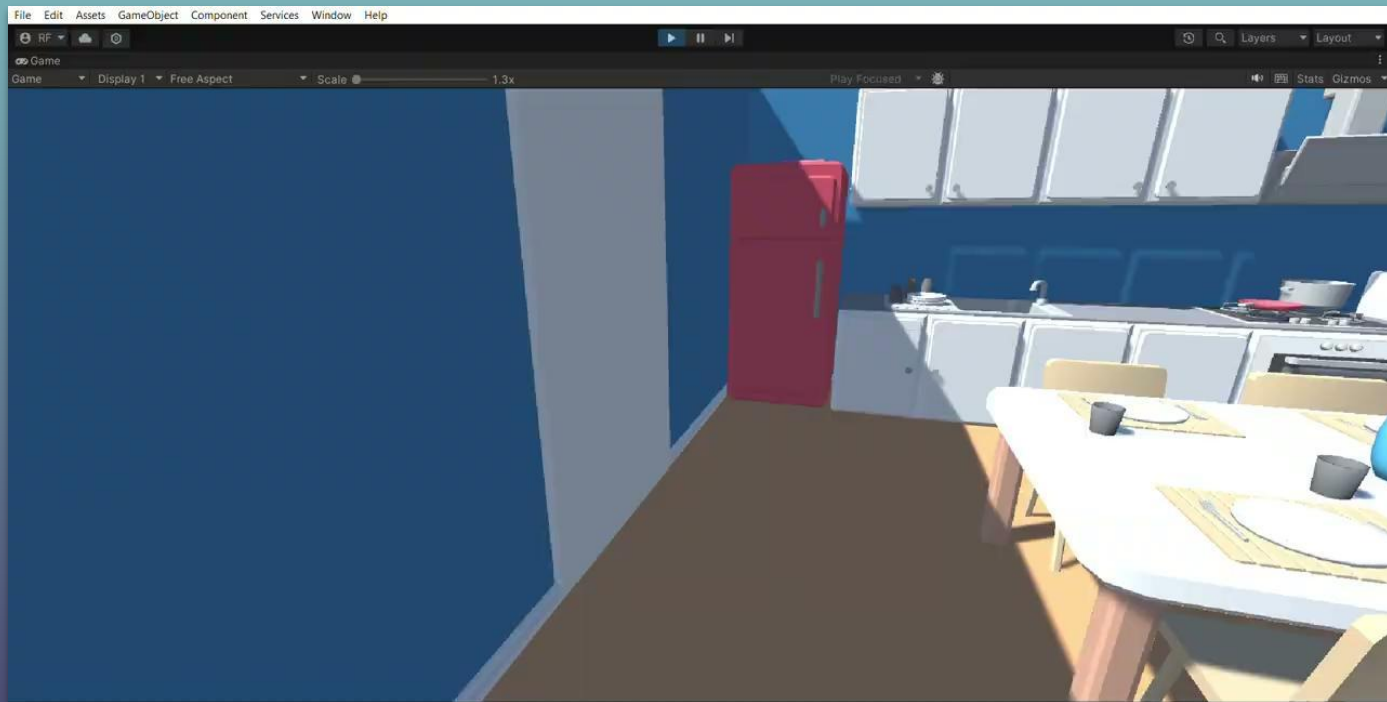
PART NUMBER	PART NAME	DESCRIPTION	QTY	UNIT S	UNIT COST	AMOUNT
1	unity software	<a href="https://unity.com/success-stories/integrated-success/unity-sourcecode&amp;utm_medium=sourcecode&amp;utm_source=sourcecode&amp;utm_campaign=sourcecode&amp;utm_content=sourcecode">https://unity.com/success-stories/integrated-success/unity-sourcecode&amp;utm_medium=sourcecode&amp;utm_source=sourcecode&amp;utm_campaign=sourcecode&amp;utm_content=sourcecode</a>	1	1	0\$ (provided by university of Ottawa)	0\$
2	VR headset	(provided by university)	1	1	0\$ (provided)	0\$
3	city package	<a href="https://unity.com/packages/3d/environments/urban/urban-city">https://unity.com/packages/3d/environments/urban/urban-city</a>	1	1	0	0
4	SFX pack	<a href="https://store.unity.com/packages/audio/sfx/sfx-pack">https://store.unity.com/packages/audio/sfx/sfx-pack</a>	1	1	0	0
5	nature ambience audio	<a href="https://store.unity.com/packages/audio/ambient/nature/nature-ambience-audio">https://store.unity.com/packages/audio/ambient/nature/nature-ambience-audio</a>	1	1	0	0

Materials Needed

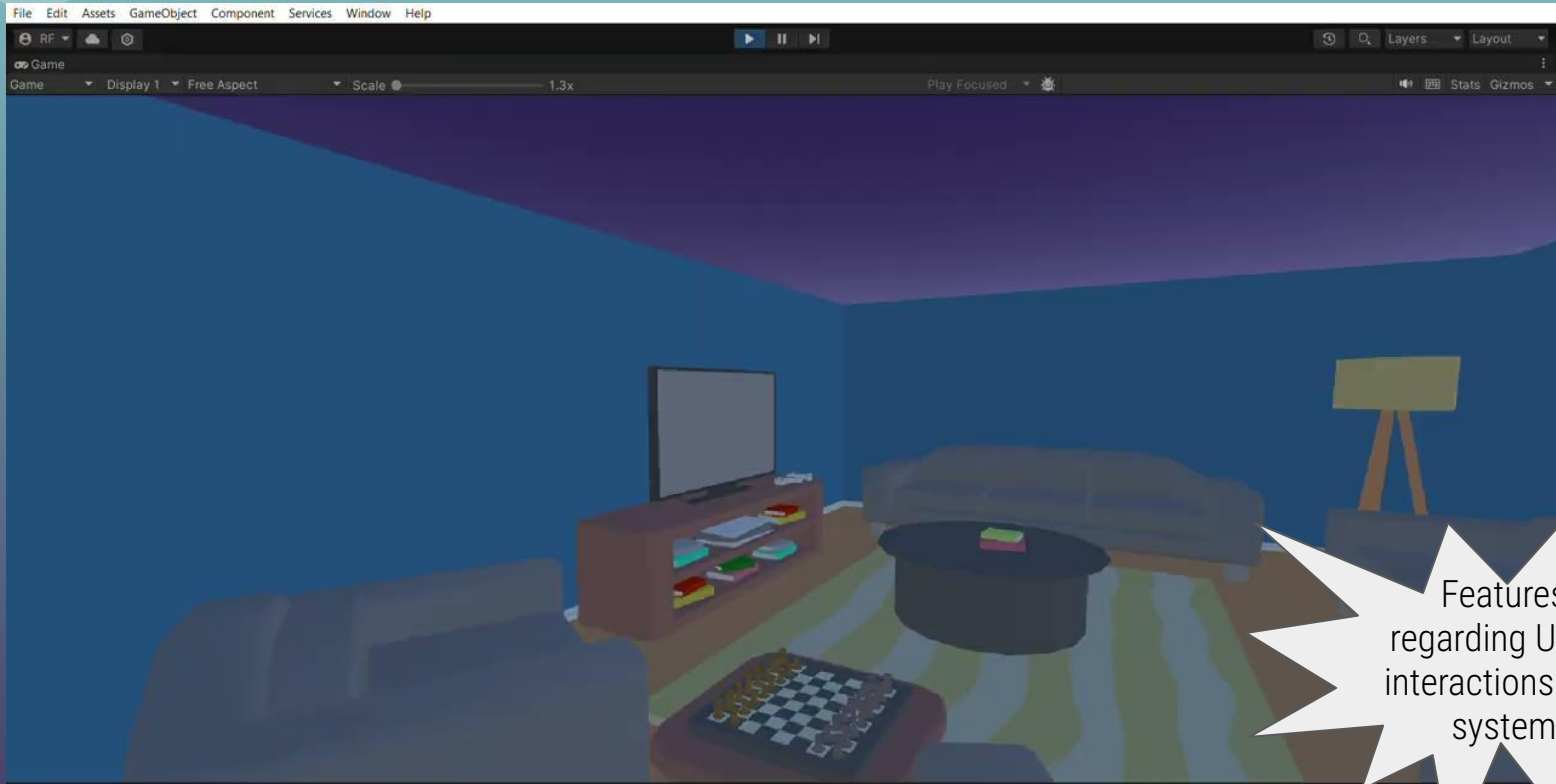


Features regarding Users interactions with system

# Atmosphere/Setting



# Prototype of Audio in Unity



Features regarding Users interactions with system

# Radio incorporated into unity



# Newscast (script)

**[SCENE 1]** Reporter: In the latest news, the autonomous robots used in the military to target and eliminate threats are now governing our streets to neutralize \*POTENTIAL\* criminals. These robots use the statistics of an average criminal to facilitate their targeting.

\*pan to see stats poster on criminals\*

**[SCENE 2]** According to acting Commissioner John Doe “Really, it’s simple folks. Don’t look criminal, don’t be criminal, and don’t do crime”.

\*pan to poster saying don’t look criminal, don’t be criminal, and don’t do crime”

**[SCENE 3]** Today's trending story, a grocery bag was mistaken for criminal weaponry and eliminated outside of a grocery store, leaving countless people scared to go outside and buy essential items.

\*pan to the empty pantry showing food scarcity\*

**[SCENE 4]** In other news, local residents have reported an increase in robot break-ins. Make sure you are replacing your window boards regularly and that your padlocks are up to date to stay concealed from those robots! On to you, Susan.

\*pans to windows and locks\*

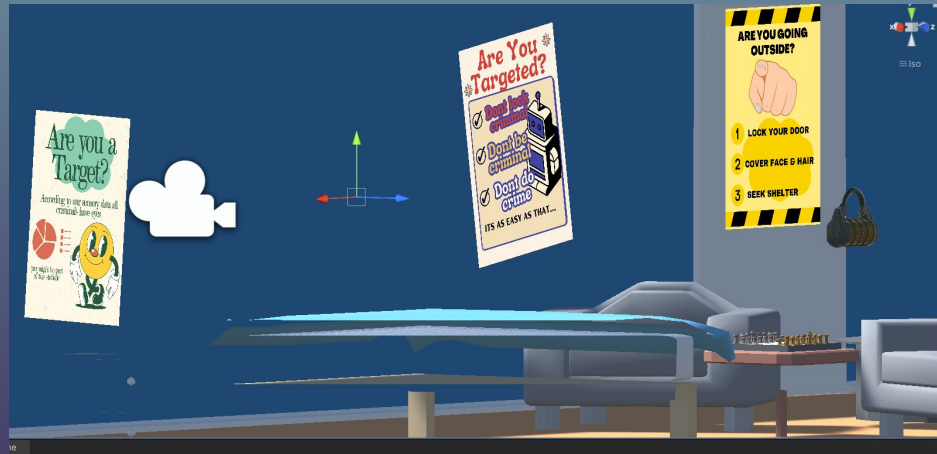
**[TRANS. SCENE 5]** Just a quick reminder to all of our listeners going outside tonight to take the usual safety precautions. (start fading audio) Lock your door behind you, cover up and if you encounter a drone, seek shelter immediately. And now onto tonight’s forecast!

\*pans to hats, masks, gloves, posters etc.\*

# Storyline



Shoutout Canva





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04

# **Trials and Tribulations**

Megan



# Final takeaways

Always ask

- 1) “does this fulfill the client’s needs?”
- 2) “Will we have enough time to complete this?”
- 3) “Will the user understand what we are doing?”
- 4) “Are we communicating well with one another?”