

## **Project Deliverable F: Prototype I and Customer Feedback**

GNG 1103 – Engineering Design

Faculty of Engineering – University of Ottawa

### **Team Members:**

Shiven Joshi

Joan Berghuijs

Nick Chen

Joshua Liu

---

### **Client Meeting 2 Feedback:**

We presented a slideshow outlining our group's design concept in the second client meeting. The VR plot the user will experience is a story of an adult soldier fighting to protect their family. The story will take place at the beginning of an infiltration mission. The user will get a quick look around at the surroundings present including torn-down buildings, an abandoned school, and various other locations. This is before invading an enemy base for the purpose of attempting to rescue trapped civilians. These civilians will include children. Our main game mechanic is a click-to-hide feature that is in place to help the user understand the realities of fighting against autonomous weapons.

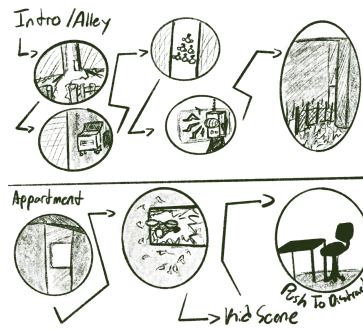
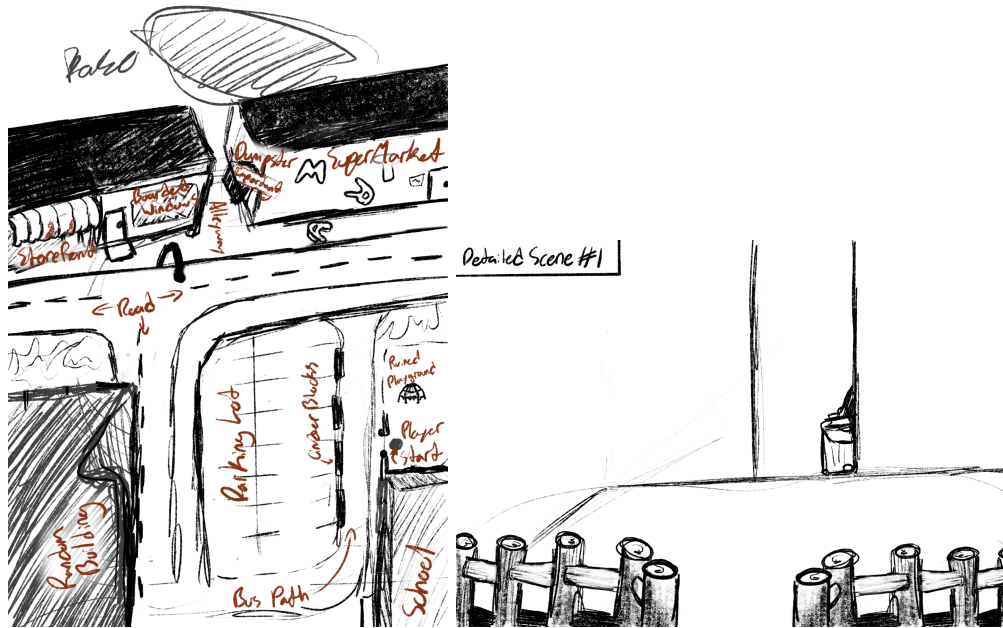
Our client believes that the setting and main plot is a good idea and shows the realities of war. They also like the click-to-hide game mechanic as it shows the helplessness behind fighting these drones. The client implored us to research the wars in Ukraine where civilians are being forced to fight. Some of their feedback included that our main protagonist should be associated with the state and is fighting for their country. This will resonate more with the user who most likely has a strong disposition for patriotism.

The “enemies” in the base will be our representation of an autonomous weapon. They are drones much like those in the present with some form of firearm strapped to them. The client respects the realism in this representation of autonomous weapons as it is realistic.

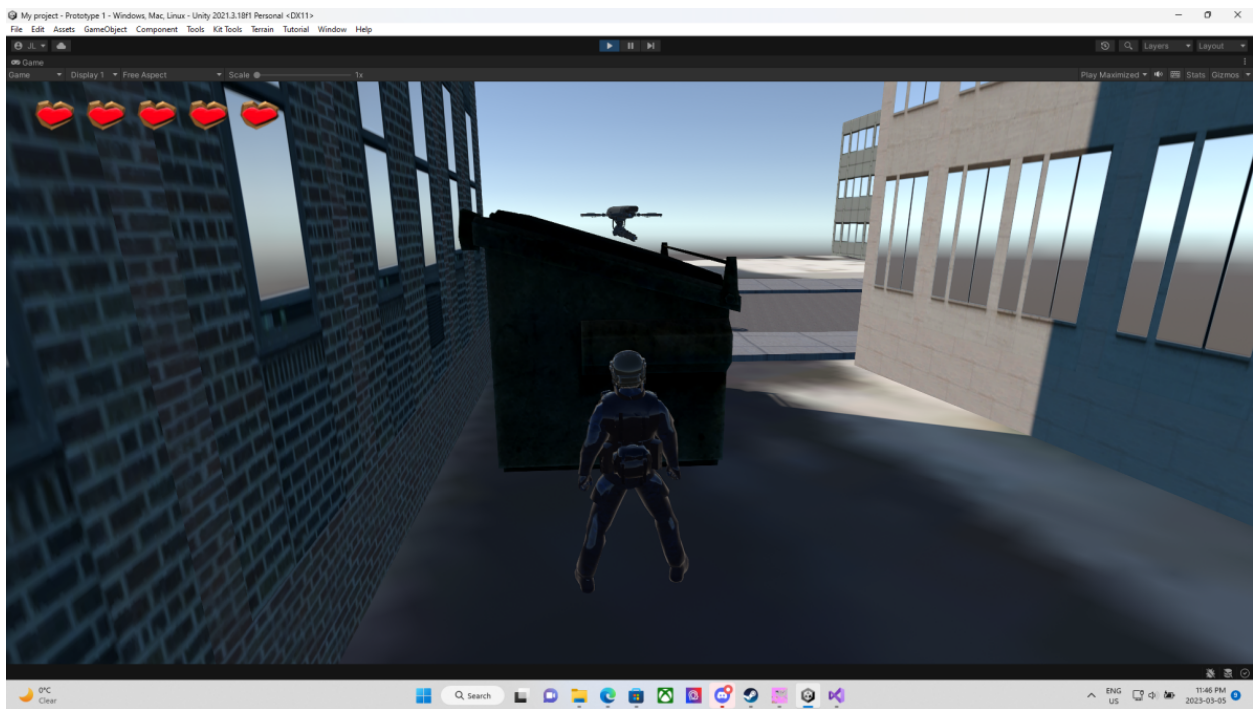
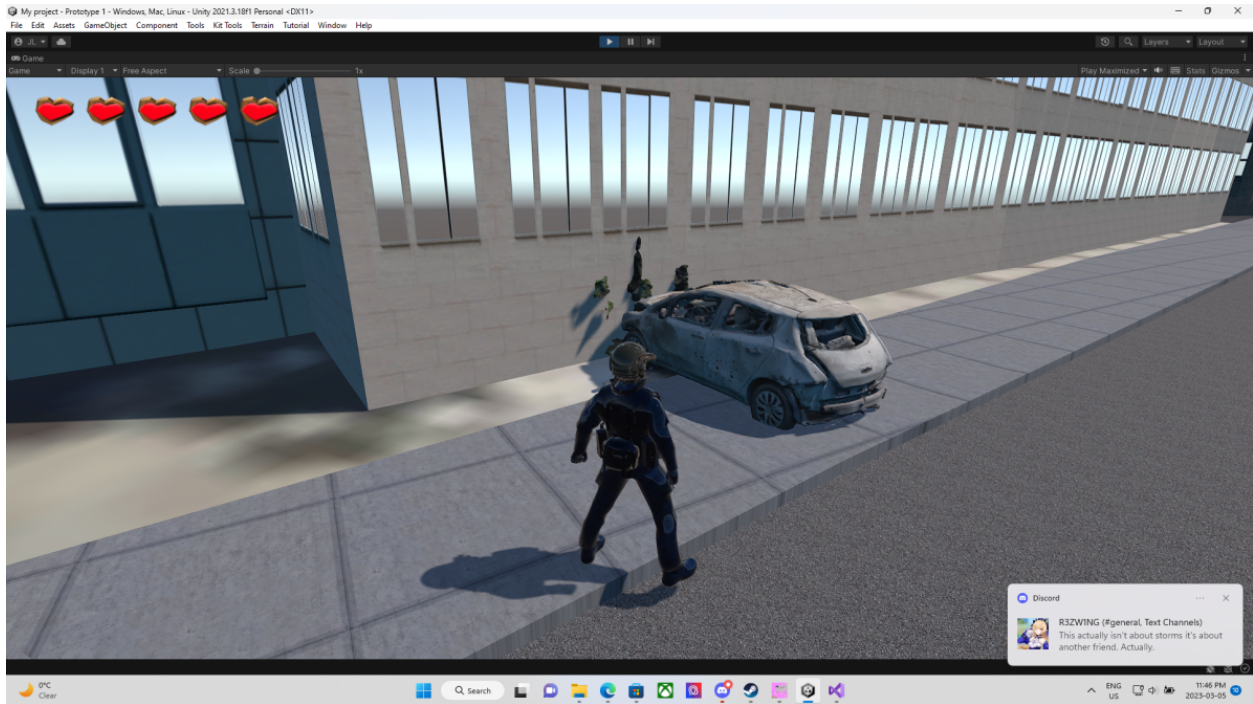
The main feedback that our client gave was to have a single core ethical issue that the user can see. The main issue that we are exploring is that these autonomous weapons aren't able to see through the fog of war, however, we also have other issues present in our experience. Our client wants us to make it more specific and leave it unambiguous. Something like mischaracterizing objects and blatantly judging things incorrectly. Things like mislabeling things, and using bias will clearly show the user the ethical concerns.

Using this feedback our group decided to incorporate the fact that our main protagonist is a soldier fighting for the state. In the first scene, a squad leader/general will declare the mission to our user with the ending tagline being “do it for your country”. Our group has also decided to focus more and research the idea of the fog of war. Our experience will focus on the ethical concern that autonomous weapons cannot see through the fog of war. Although, other ethical concerns will be included this will be at the forefront of convincing our users. We thoroughly enjoyed the ideas that our clients gave of the drone blatantly mislabeling things and having a bias in its programming. Our group plans to incorporate these actions into our autonomous weapons.

Prototype I:



Screenshots of VR experience prototype:



### Critical Components:

Critical components of the prototype include a 3rd person-controlled mockup player, animations, a parking lot, a city for the user to run through, and places for the user to crouch behind.

### Prototype Testing Plan:

#	Type	Objective	Fidelity	Feedback	Objective	Result
1	Testing of intro scene.	Performance of the first scene.	Low	No client involved	Making sure the scene makes sense Analysing key features in action Verifying feasibility	-
2	Testing of 2-3 scenes	Performance of the experience	Medium	No client feedback. An uninvolved person will try the experience and give feedback.	Making sure the experience runs smoothly and stays true to the objective of the project.	-
3	Testing full experience.	Performance and fluidity of full experience.	High	No client feedback. Group members will try the experience and see if their vision is implemented	Making sure there are no errors in the experience or any last-minute changes. The ethical concerns are clearly shown.	-