**Group 8: Deliverable C**

**DESIGN CRITERIA**

# Design Criteria

|  |  |  |
| --- | --- | --- |
| Needs | Criteria | importance |
| Warning - Autonomous weapons are problematic. | Convey message | 5 |
| Influence Politicians - Sway politicians to ban autonomous weapons. | Persuasive | 5 |
| Responsibility & Ethics - Raise ethical questions regarding responsibility in using autonomous weapons. | Ethical | 4 |
| Time-Specific - Maximum video length of 60s, specific time allocations for different elements. | Time-Specific | 4 |
| Showcase Negative Impact - Showcase how machines negatively impact the world. | Illustrative | 3 |
| Budgetary Constraint - Limited to $50. | Cost | 3 |
| Elicit Emotional Reactions - Elicit fear and/or hope in the viewer.  Emotional Balance - Invoke fear, inspiration, and sadness in a 1:1:1 ratio. | Evocative | 2 |

**BENCHMARKING**

Importance of elements for benchmarking multiplier:

* Anti-Robots elements = 6
* Storytelling and emotional elements = 5
* Setting = 4
* Destruction Shown = 3
* POV = 2
* Audio = 1

Scoring: Red = 1, Yellow = 2, Green = 3

|  |  |  |  |
| --- | --- | --- | --- |
| Title: | **Stop Killer Robots: A Virtual Reality Experience** | **GNG1103 Stop Killer Robots VR Simulation** | **JERMs Stop Killer Robots (P8)** |
| Authors: | BRAKT DESIGN | [jeanine259](https://makerepo.com/jeanine259)  [rohangopaul](https://makerepo.com/rohangopaul) | [EllaMac,](https://makerepo.com/EllaMac) [JadonXia](https://makerepo.com/JadonXia)  [RFaru,](https://makerepo.com/RFaru) [MeganB45755](https://makerepo.com/MeganB45755) |
| Link: | https://www.youtube.com/watch?v=xkn0pOwwaBE&ab\_channel=Alex | https://drive.google.com/file/d/1osHEAVXla-0ELyrJ1nXfshBQ3RFc3EHs/view | https://www.youtube.com/watch?v=EzTwev30hRI&ab\_channel=jasian |
| Storytelling: | Robots have been released as a policing measure but have gone rogue | Robots are controlling a city with them killing unauthorized personnel | Robots are being used to govern criminals and threats |
| Setting: | Office before, front yard during implementation, graveyard after implementation | City street | Room of someone surviving |
| Destruction Shown: | Robots targeting and eliminating children and tombstones of victims | Warzone with sandbags, fire and debris littered in the street | None shown |
| POV: | First person POV with an adult with children who got killed by robots | Unknown | First person POV of someone hiding out from the robots in a room |
| Audio: | News detailing new robot police, kids playing in a yard with robots coming, more news of the robots' attack | Sounds of screams, gunfire, explosions, sirens, and a recording by the robots on instructions | Radio message of people detailing how to avoid getting detected by robots |
| Anti-Robots elements: | Shows the victims of an unprovoked attack of the robots, a child’s tombstone | Many posters and newspapers exclaiming the ban of autonomous weapons | Posters detailing how to avoid detection from robots |
| Score: | 63 | 48 | 43 |

**TARGET SPECIFICATIONS**

# Functional Requirement

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Design specification | Relation (>,<,=) | Value | Unit | Verification method |
| Convey message | = | yes | N/A | Prototypes retroactions |
| Persuasive | = | yes | N/A |
| Ethical | = | yes | N/A |
| Illustrative | = | yes | N/A |
| Emotional Balance | = | Fear, sadness, inspiration, guilt | 1:1:1:1 |

# Non-functional requirement

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Design specification | Relation (>,<,=) | Value | Unit | Verification method |
| Video length | = | 60 | seconds | test |
| Size of 3D environment | <= | 100000 | ft2 | test |
| Detail of 3D environment | = | yes | N/A | Test |
| POV shown | = | Victim of weapons | N/A | Test, User feedback |
| Audio | = | Give sense of unsettlement, fear, anti-robot | N/A | User feedback |

# Constrains

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Design specification | Relation (>,<,=) | Value | Unit | Verification method |
| Budget | <= | 50 | CAD | Statement |
| Video length | <= | 60 | seconds | Test |
| Emotions used | =! | Rage | N/A | User feedback |

**CLIENT MEETING**

Our client wanted a video made from a VR environment that could convince politicians to ban autonomous weapons. To achieve this goal, we needed to use a combination of strong emotions and a showcase of how civilians would react to an environment where autonomous weapons were to be deployed.

The client wanted a product to highlight the ethical standpoints and the vulnerability of the civilians, the inspiration to act, and not the violence or destruction that these weapons could employ. These translated into the following needs:

* The viewer is made aware of all the potential risks and consequences that autonomous weapons bring if they are put into use.
* Ethical questions are asked by the viewer on how it is hard to assign responsibility when things go wrong.
* Elicit emotional highs and lows into the viewer such as fear and hope to garner emotional investment.
* Demonstrate the potential for destruction autonomous weapons can possess by not being controlled by a person.

The one constraint on emotion we had was to not use rage, as the client declared it was not a reliable source of motivation or inspiration. Therefore, we decided to work around the emotions of fear, sadness, inspiration, and guilt to create our final video. Additionally, when the client spoke of past products, they remarked that those projects often tried to make a VR environment that was too big and too detailed, and it ended being a task too big to finish in the allotted time. Therefore, we decided to create non-functional requirements that would limit the detail and size of our 3D world. These requirements were based on an estimation of real-life settings that we could use in our world.

To summarize, the client meeting affected our list of needs and criteria as well as the constraints and the requirements of our product, which helped us create a good foundation for our design concepts.