

Active Shooter Response for University campus

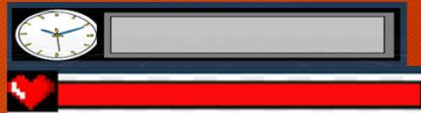
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Introduction

- Active Shooter Response Training system to help teach students and campus personnel how to respond in the event of an active shooter within a college campus.
- This training follows the NSA's standard protocol for reacting to an active shooter by providing three scenario scenes including a POV from the shooter themselves.
- **These responses are given as:**
 - Modes from the victims POV:
 1. Run
 2. Hide
 3. Fight
 - Mode from the shooters POV:
 1. Provide a view from the active shooter's point of view like a first-person shooter but with further emotional reactions and reasoning.

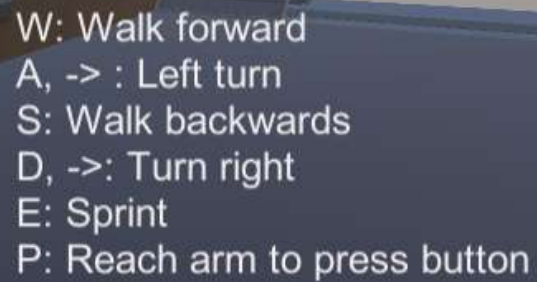
Common Prefabs and assets

- To make the entire experience more linear common prefabs and assets are used.
- These include but are not limited to
 - Shared Avatar Sources (Mixamo characters and animations)
 - Timers
 - Health Bars
 - Base Environment (Campus)
 - A main menu to navigate between scenarios



Common Prefabs and assets

Key controls



W: Walk forward
A, -> : Left turn
S: Walk backwards
D, ->: Turn right
E: Sprint
P: Reach arm to press button

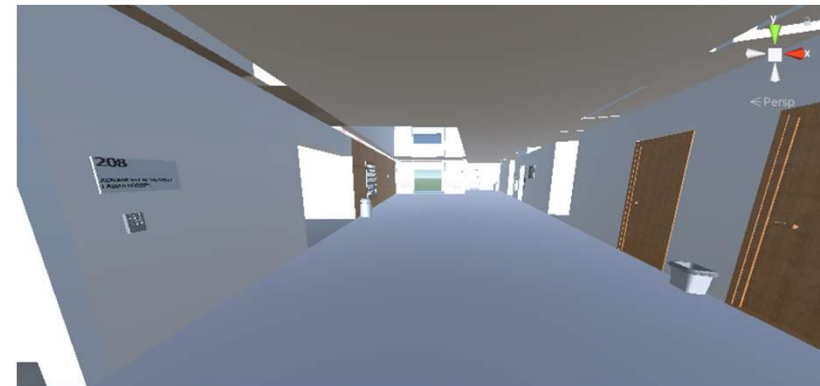
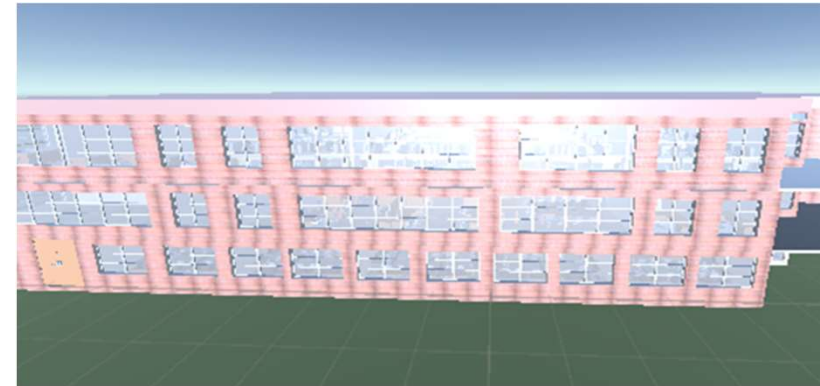
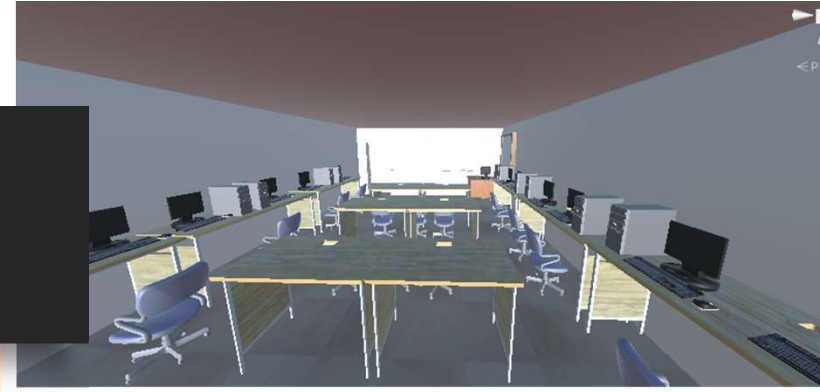
Scene Navigation



Buttons to navigate through scenes

Run/Hide Scenario

User will be introduced to tactics, techniques, and procedures that should be followed in the case that he/she are caught in an active shooter scenario. This mode will familiarize users with how to quickly determine the most reasonable way to protect their lives and others.



Run/Hide Design

Location: Building located on Bowie State University campus. Model will be provided by instructor.

Avatars/Animation: This mode consist of 5 avatars. Each avatar displays a unique animation which plays in a natural loop.

Interactivity: The user is required to complete several actions to successfully escape assailant.

Task

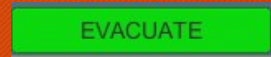
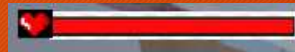
1. Identify the active shooter
2. Pull the alarm to alert all bystanders of the threat.
3. Locate a “safe space” to provide cover and protection.



Specifications

First Person

- Takes damage from shooter
- Enacts “evacuation “ method
- Simulates pressing of alarm
- Dies after depletion of health



Shooter

- Follows first person user through computer science building
- Simulates reloading of weapon
- Enacts damage on user

Bystander

- Opens in talking state
- Evacuates building on “evacuation”

First Person User

Animation states

1. Idle
2. Walk/Run
3. Reach
4. Die



Shooter

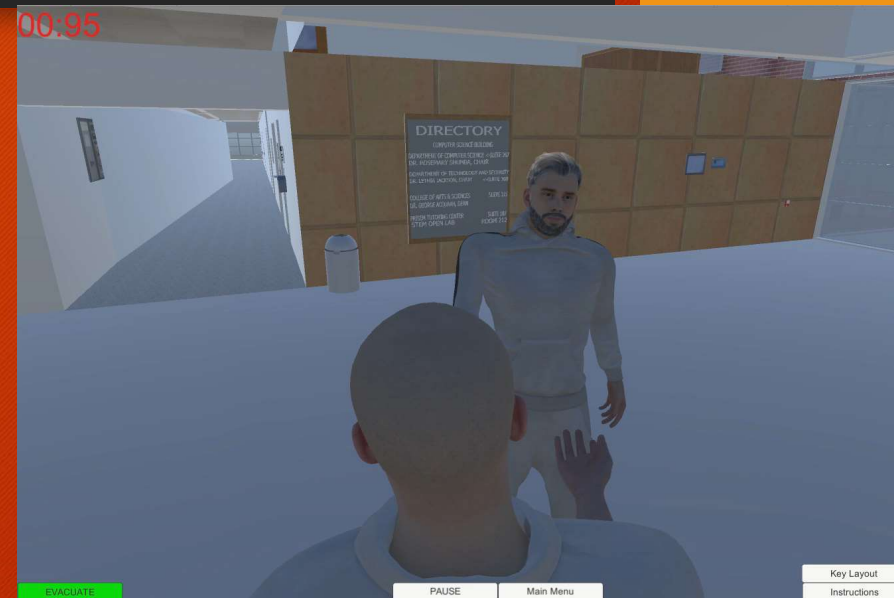
- Follows user through computer science building
- 4-meter damage zone



Bystanders

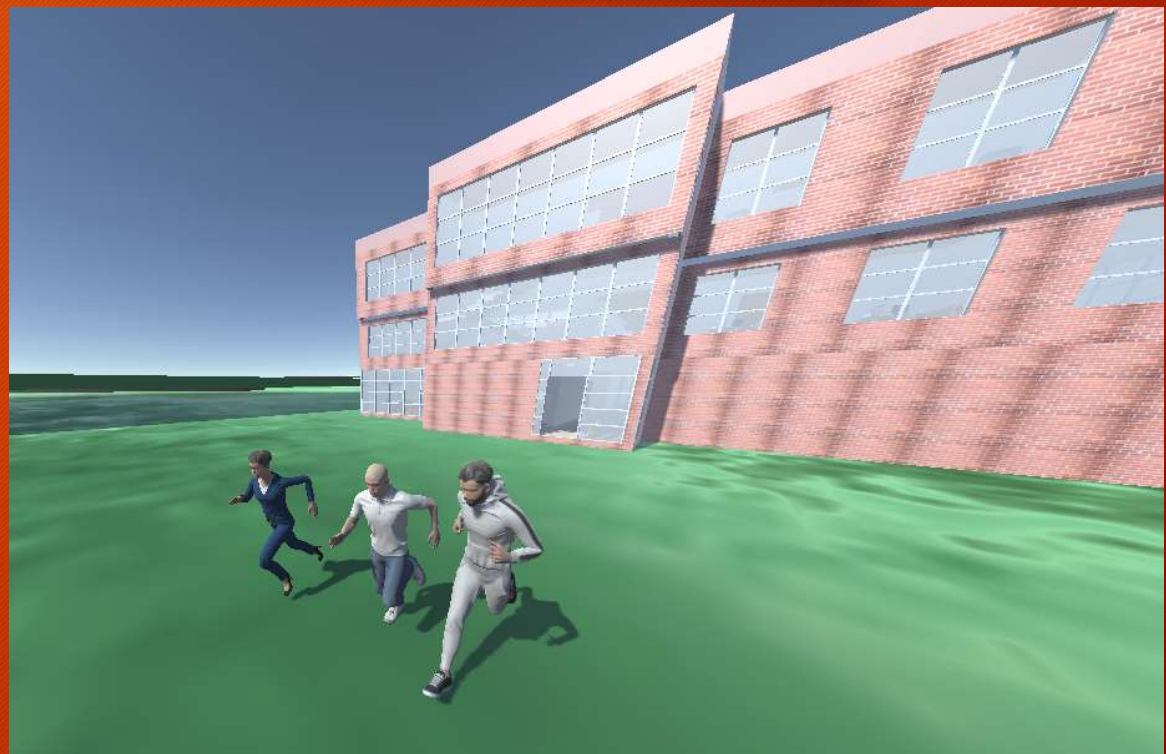
Animation states

- 1) Begin in talking state
- 2) Evacuate building after warning sign is given



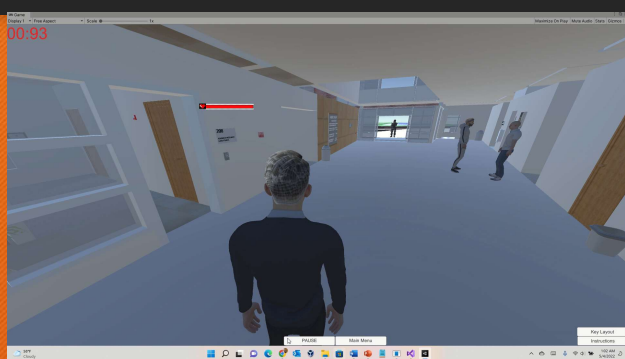
Safe Zone

Safely exits building

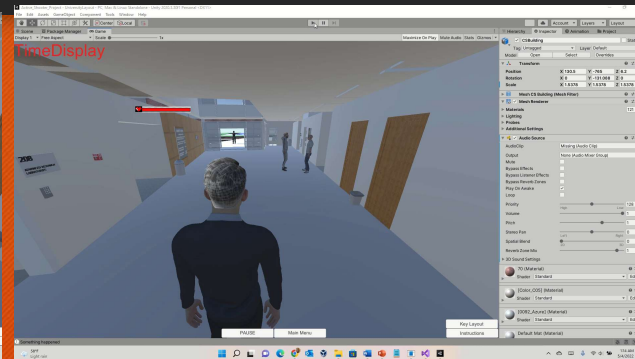


Run Demo

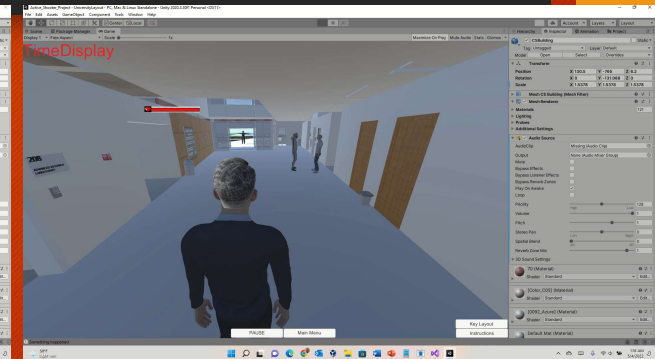
Instruction



Exit Building Successfully



Die



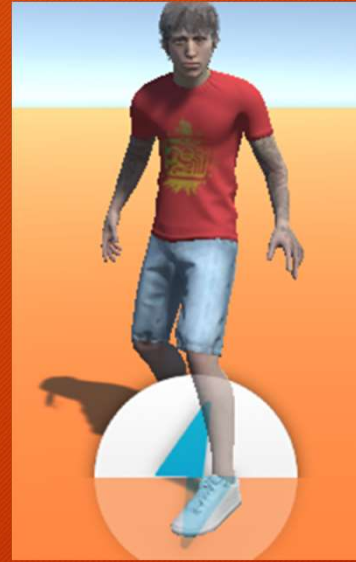
Fight Scenario

- This scene is a simulation of a confrontation with the shooter and fighting your way out of danger

Problem: Shooter has blocked you only way out

Solution: Use body, environment, and throwable objects to distract, disarm, and defeat the shooter before time runs out

Goal: Defeat the shooter before the time runs out



Fight Scenario (Student)

- is third person controlled and moves around the classroom to defeat the shooter
- Fight Actions include:
 - Punch
 - Kick
 - Grab
 - Throw
 - Crouch
 - Idle
- A health bar is given to the fighter to manage your changes of winning.
- Has a backpack (inventory) to store throwable textbooks
 - picked up around the room and thrown at the shooter to decrease their health.
- The fighter has 10 minutes to beat the shooter to complete the round



Seconds to Beat Shooter
48

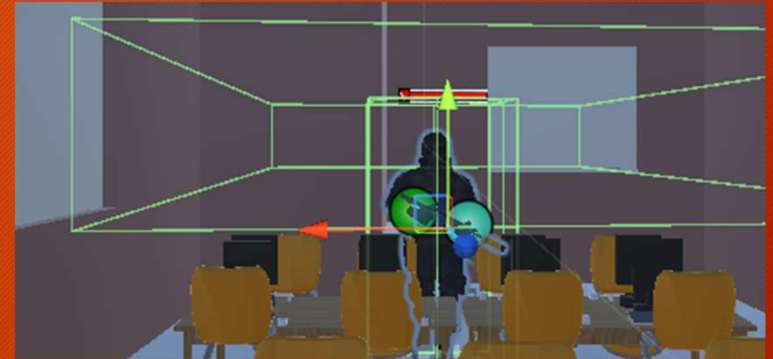


Inventory Count: 4



Fight Scenario (Shooter)

- Looped actions (Walking around the room)
- Semi Sentient
 - has field of view to “see” student/fighter
 - knows last location student seen if not armed and follows user once seen
- Has a health-bar affected by student punching and throwing textbooks
- Can decrease student health bar using punching and sight



DEAD
YOU HAVE FAILED!

Fight Scenario (Conclusion)

- Three conclusions are available for this scenario
 - Success - defeated the shooter
 - Timed out - ran out of time
 - Failed- killed by shooter

SUCCESS!
YOU BEAT HIM

TIME OUT
YOU HAVE FAILED!

DEAD
YOU HAVE FAILED!

Fight Demo



Shooter POV

- This scene is a simulation where you act as the shooter

Problem: people will be alerted upon the first shot heard, and try get to safety before you can take them all out

Solution: position your 1st shot strategically to be able to hit them all without any escaping

Goal: Take everyone out before they reach the security shed

In this scenario, you are the shooter from the 1st person perspective. You must shoot as many people as you can before they reach the security shed in the North parking lot.

- Fire = f key

Score is displayed as a percentage of total agents / students shot.

(press the SPACE BAR key to start)



Shooter POV (Shooter)

- is controlled in the 1st person and has gun to move around the campus shooting victims
- a non-lethal rubber bullet gun is simulated to knock out the victims
- score is kept as a percentage of agents killed



Simulation Ended!

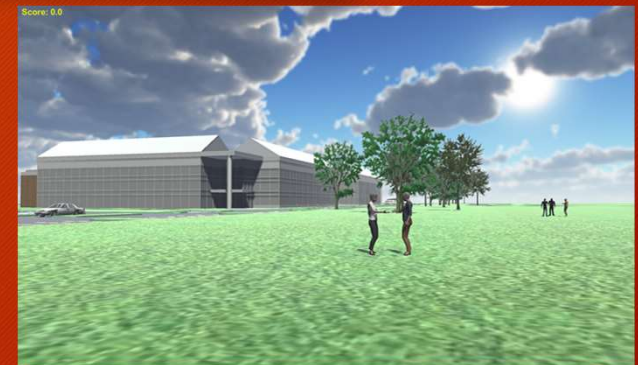
Agents / Students taken out: 4
Agents / Students escaped: 3

Score: 57.1%

(press SPACE BAR for Main Menu)

Shooter POV (Students)

- until the first shot is heard, students will continue talking with one another as if nothing is wrong
- once a gun shot is heard, students will attempt to run to a security shed placed in the North parking lot of campus
- a single hit from the rubber bullet can render a student unconscious
- once hit, the student will remain unconscious for the duration of the simulation



Shooter POV (Conclusion)

- the simulation lasts until all of the students/agents are either dead (unconscious) or have made it to safety

Active Shooter Demo

In this scenario, you are the shooter from the 1st person perspective. You must shoot as many people as you can before they reach the security shed in the North parking lot.

- Fire = f key

Score is displayed as a percentage of total agents / students shot.

(press the SPACE BAR key to start)