

pl.Ai.giarism

Game Design Document

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Quick Overview

Pl.ai.giarism (yes it's purposely misspelt) is an overhead stealth game where you play as an A.I. robot sneaking through high-security museums, filled with guards and other A.I. security tech, and try to steal as much art as you can to sell as your own.



Technical Information

- 3D graphics and animations
- Unity 2021.3.25f1
- URP/Build-in renderer (TBD)
- UGUI for GUI
- Unity PhysX for physics

Mechanics

Player

Movement

The game uses a basic 60° overhead camera and 8 direction movement. There is no vertical mobility.

Sprint

The player can sprint, but this produces sound that can be heard by enemies.

A.I. Training Level

A level that determines the effects of some abilities. The player can increase this level by stealing and selling art.

Neural Network (Ability)

The player can use this to slow down time (player moves at normal speed) for X amount of real time seconds.

This ability has a cool down.

Generative Art (Ability)

The player can create copies of art to substitute valuable art. The quality of it is determined by the training level.

Jailbreak (Ability)

The player can jailbreak nearby enemies/obstacles with a prompt that causes them to be stun or disabled. The effectiveness is based on training level.

This ability has a cool down.

Enemies

Alert

Enemies all each have an alert meter which increases based on certain player actions. When the alert meter is full, the enemy is alerted and will begin pursuit. All enemies around the alerted enemies in X radius will also become alerted.

Everytime the alert meter is increased, after a 2 second grace period the meter will begin to decrease. If the meter is increased during this grace period the timer resets, the meter does not decrease during the grace period.

Pursuit

When the enemy is alerted, they will begin to pursue the player. If the player is not in the line of sight, the pursuit meter will decrease. When the meter reaches 0, the enemy will stop pursuit and return to their post.

Vision

Enemies have a cone of vision (visible to the player). If the player is within it, the enemy's alert meter is increased.

Noise

Enemies can also hear certain players action within a radius, this increases their alert meter.

Distraction

If not alerted, enemies will investigate nearby distractions.

Noticing Stolen Art

Enemies can notice stolen art and increase their alert meter. However they can be fooled by substituted art of a similar quality to the stolen art.

Patrolling / Look Around

Enemies can patrol on a fixed path, or will stay in place and just look around.

Game

Heists

The game is played in discreet rounds known as "heists". The player's progression is carried over between heists.

Extracting, Selling or Training Art

The player can extract at any time at the exit. An inventory of all of the art stolen is shown, and the player can choose to "sell" or "train" each piece.

Selling the art earns the player money.
Training increases the player's training level.
The art is consumed either way by both options.

Getting Caught and Losing

If the player is caught, the current heist will end. The player will lose some amount of training level, a life, and all the stolen art from the current heist will be lost.

The player has X amount of lives and when all are used up, the game is over.

Winning

The player's goal is to earn \$X. Once this amount has been reached, the player wins and the game ends.

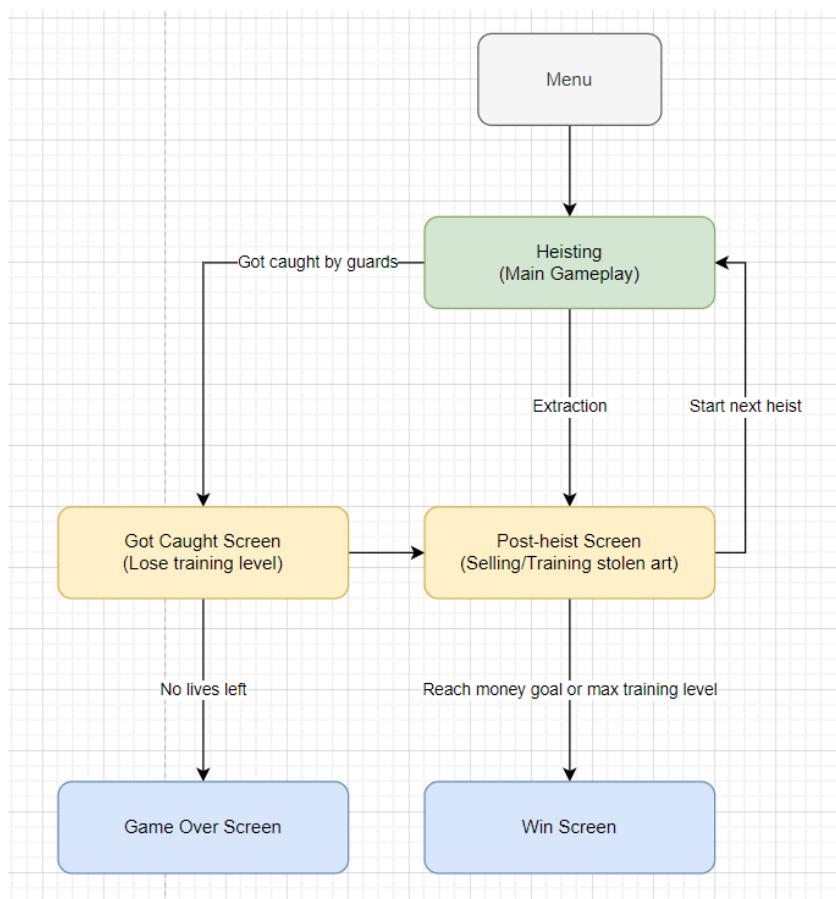
An alternate win condition is to reach max training level, where the AI is able to fully mass generate art and sell for profit.

Controls Overview

Control	Action
	Movement
	Interact
	Sprint
	Jailbreak(Stuns robot guards)

	Neural Net(Slow down all Enemies)
	Interact with menus

Game State and Screen Flow



Game Actors

Player (YG)

Refer to player mechanics.

Metrics

- Size: 1.8m height, 0.3 radius
- Walking speed: idk 5m/s or something just make it adjustable
- Sprint speed: 10m/s make it adjustable
- Can sprint infinitely, but notifies nearby enemies of noise.

Camera (YG)

60° Overhead camera.

Soft-damp follows the player, roughly centred on screen. Maybe with a buffer radius in the middle?

Diegetic/Key UI Actors

Alert pointers that point at the edges of the screen towards alerted enemies?

Enemies

Guard (Bryan)

Basic guard that has a cone of vision, patrols along a fixed route. Can be distracted by random noise.

- Requires public function (all enemies should have these):
 - NotifyDistraction(GameObject distraction) - will be called by distractions the player activated like the trashbin or lights.
 - Alert(GameObject alerter) - will be called by other enemies when they are alerted to also alert this enemy, this puts this enemy into **pursuit mode**.
 - Noise(float noiselevel) - will be called by the player when nearby this enemy and making noise, refer to mechanics on what this does.
 - Jailbreak(int playerLevel, float stunTime) - stuns the enemy for specified stun time if the playerLevel is \geq enemy level.

Metrics

- Size: 1.8m height, 0.3 radius
- Patrol speed: some slow shit like 1m/s
- Pursuit speed: 8m/s i guess just slightly slower than player's sprinting speed
- Vision cone: 40 degrees

Security Camera (Bryan)

Fixed position, cone of vision, looks around a fixed arc. Does not pursue the player when alerted, but has a large radius of notifying nearby guards when alerted.

Metrics

- Vision cone: 40 degrees

Security Bot

A robot guard with a full circle of vision around, patrols more slowly than basic guards. They will have speech bubbles saying funny ChatGPT stuff like: “As a GPT model, I must remind you that what you are doing is wrong!”

Metrics

- Same size and speed as normal guard
- Vision cone: 360 degrees

Entities

Artwork (JK)

The player can steal these, which will leave the spot they are on empty. Empty artwork spots can be replaced with generated AI art (refer to player mechanics).

- Requires public function:
 - Interact(GameObject interactor) - opens the artwork UI which has the prompts for stealing/replacing.
 - Steal(GameObject interactor) - steals the artwork.
 - Replace(int level) - replace the artwork with a shitty version of a specified level.
 - Query() : bool - returns a true/false if this artwork has been stolen (for enemies to see).
 - QueryReplicaLevel() : int - returns the level of the current replica artwork (for enemies to check).

Security Lock (JK)

Door that blocks the player. Can be disabled by jailbreaking (refer to player mechanics).

- Requires public function:
 - Jailbreak(int playerLevel) - disables this lock and makes it disappear if the player level is \geq the lock's level, called by player.

Lights (Kif)

Can be turned off by the player to cause a distraction.

- Requires public functions:
 - TurnOnOff(bool state) - turns on/off the lights, called by switches linked to the light, then calls NotifyDistraction on all nearby enemies in X radius.

Switch (Kif)

Turn on/off lights. Links to one or more lights.

- Requires public function:
 - TriggerSwitch(GameObject interactor) - called by the player to toggle linked lights on/off
- Requires a public reference to linked lights (in Unity inspector)

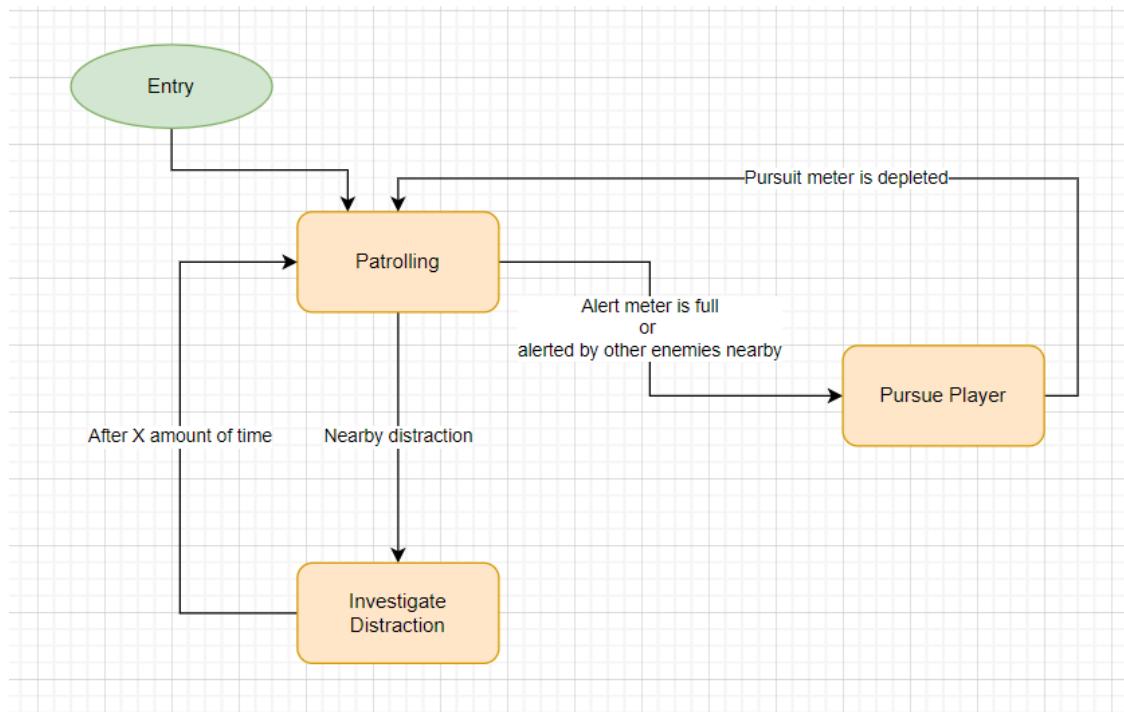
Trash Bin (Kif)

Can be knocked over by the player to cause a distraction

- Requires public function:
 - Knockover(GameObject interactor) - called by the player to knock over the bin, then calls NotifyDistraction on all nearby enemies in X radius.

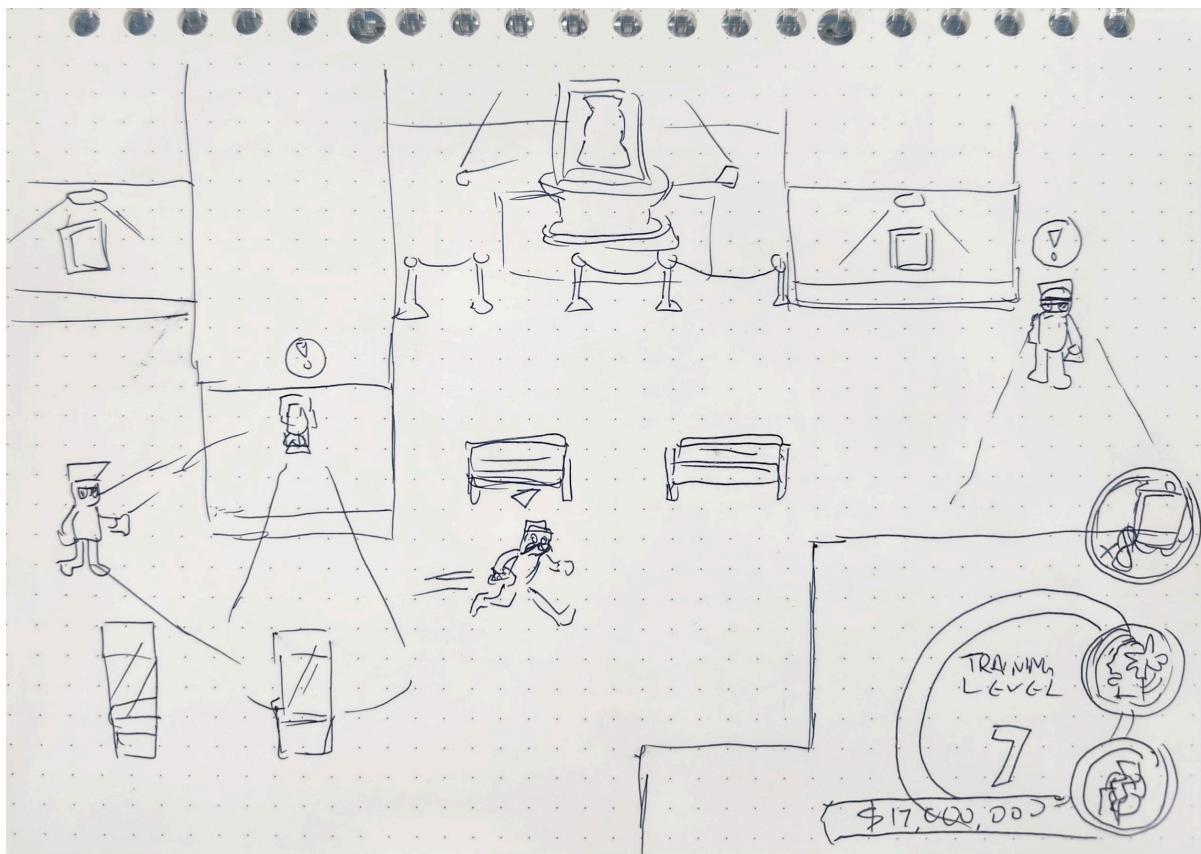
Behaviour Graphs

Basic Guard

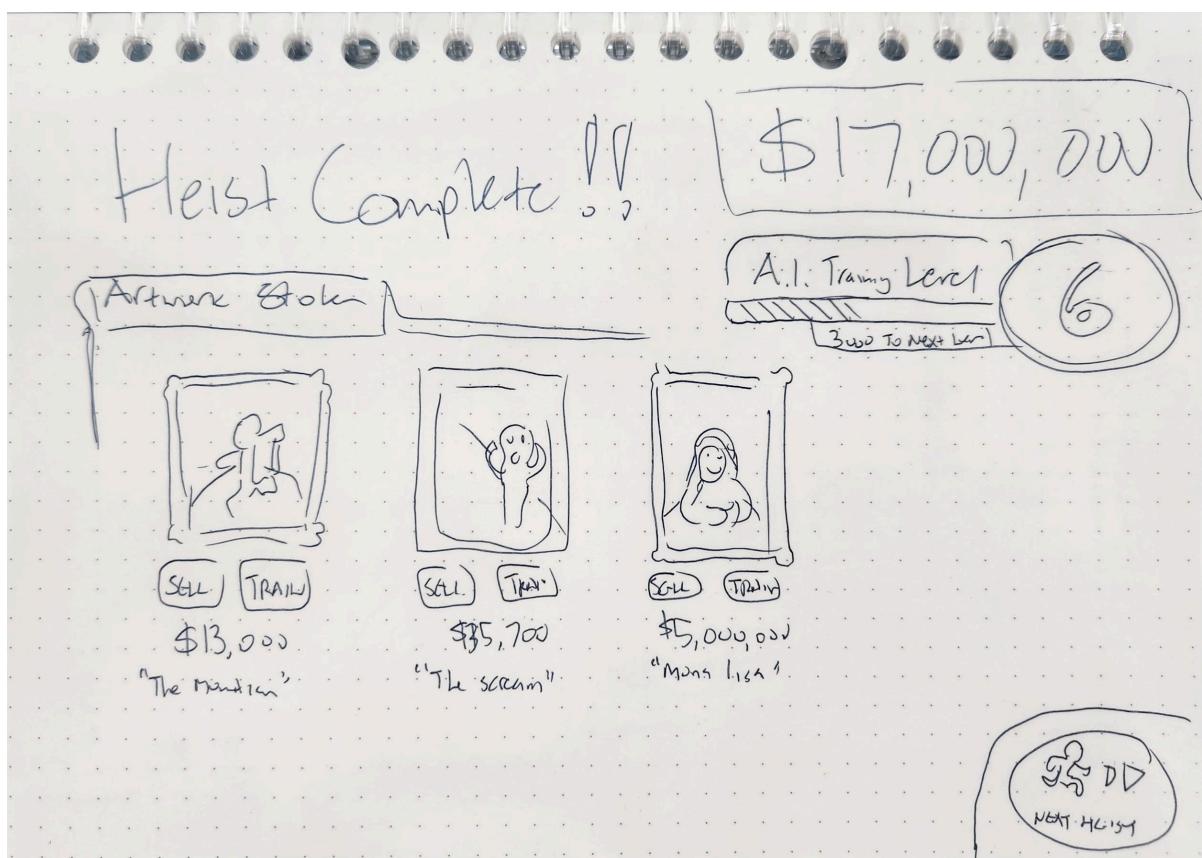


UI Sketches

Main Gameplay (Draft concept)

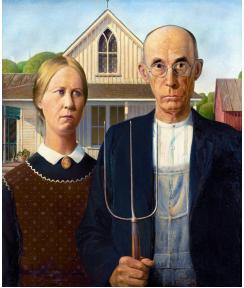


Heist Complete Screen (Draft concept)



List of Paintings to draw

Art	Artnname	Who wants to draw	Is it done and put into the git? (/crappy art/)
	Mona Lisa	Keith	
	Starry Night	YG	
	The Scream	Keith	
	Creation of Adam	Keith	
	The Last Supper		

	Girl with a Pearl Earring	Keith	
	Wanderer Above the Sea of Fog	YG	
	American Gothic	Keith	
	The Great Wave off Kanagawa	Keith	



Napoleon Crossing the Alps

JK