

Analysis of Artificial Intelligence in games - Red dead redemption 2

Goal of the AI

The AI of RDR2 has two main goals, the first is a worldbuilding goal, to create a realistic world you need humans with realistic behavior. Towns are filled with people with personal intentions. The second goal is to create interaction between the player and other characters.

I think there are a few different types of NPCs:

- **Town or similar**
These NPCs have a routine they follow, they are often unarmed.
- **Wandering**
These NPCs travel across the map (seemingly without a destination). They either greet the player or don't want them close (Friendly / Not Friendly). These NPC's are often armed
- **Stranger Quest**
These NPCs will call out to the player (for help), then a mini-quest starts. For example, help someone back to town.
- **Important / Story**
These NPCs can have very different behaviors. For example, in your camp NPCs know you and walk up to you to have a short talk or remind you of a quest.

States & triggers

I spent the most time analyzing the wandering NPCs, they seem to be either friendly or not. This might also be influenced by whether they are armed.

When you 'threaten' an NPC's that's armed they will fight till death, when they are almost dead they try to flee but it's usually too late. They stop shooting when you leave but will remember you and try to kill you if they see you again. The most important states are:

- Wandering / Doing town stuff
- Threatened > Attack
- Almost Dead > Flee

Although these NPCs don't seem to have many states they have many ways to trigger the 'Threatened' state:

- Riding too close to a 'Not Friendly' wanderer
- Committing crimes / other suspicious behavior
- Drawing your weapon
- Shooting at them
- Etc.

The 'Friendly' NPCs don't attack the player when 'Threatened', they flee and try to report the crime in the town, then the sheriff will investigate and try to kill the player if they find him.

Good / Bad

The aggressive behavior of some NPCs is quite extreme to me, why would you kill someone because they keep riding close to you.

When I tried to follow a town NPC they finished their task but didn't do anything else. Then I assumed that NPC's that are doing tasks in town have a set 'animation'. When they are done they 'reset' or something. But this does not happen when the player is nearby. Testing this proved that, when I went away for a few seconds the NPC's had disappeared although they had stood there a long time.

Improve

I would like to see a way to 'solve' a conflict because usually, the player can easily kill the other NPC's but they won't stop trying to kill you unless you leave.

Like the GTA games, almost all of the time you don't get arrested but shot dead. I think this isn't realistic at all, although maybe more in RDR2 because it is set in 1899.

BELOW ARE MY NOTES I MADE WHILE PLAYING

Observations

Traveler on a horse, irritated

Warned me about riding close
Drew weapon
I did not respond
Shot me dead and fled

Traveler on a horse, irritated

Got irritated, rode faster
I kept following
Drew weapon
I also drew my weapon
Shot me
I killed him
(Horse fled)

Traveler on a horse, irritated

Rode past him
I Drew weapon
He also drew his weapon
He shot first
I killed him
Bystander began shooting me
Shot him once
He still decided to keep fighting
Shot him dead

Traveler on a horse, Somewhat friendly

Shot toward him
Became 'witness'
Followed him all the way to town
He reported the crime
I became 'wanted'
The sheriff started investigating town (last seen location of me?)
I let them see me
They noticed me and started shooting
Other NPC's fled the scene
They did not try to arrest me but shot me dead

Camper

Agitated when approached
Stole his horse
He started shooting
I ran away
He lost track of me
I went back to look
He seemed to remember me
He began shooting
I hurt him badly
He tried to flee but couldn't walk far and fell dead
I took the body to town to see if NPC would react to a corpse
Bystanders notice and investigated
They all drew their weapons and started shooting

Man on a horse carriage

I drive into him and crash
He merely looks at me but keeps riding
I kill his horses
He flees
I try to stop him
He then 'defends' himself by shooting

An important character in camp

Walks up to me to ask me how I've been

Optional 'Quests'

NPC ask for help
The player can accept or decline

Following traveling NPC

doesn't seem to have an end destination

Watching Sheep

I followed and NPC carrying a bag of grain
he put it with the rest of the bags
he walked to the sheep pen
there he smoked a cigarette (along with 4 other men)
for at least 6 in-game hours
tried to check if they would disappear if left
on my second try, they indeed did