

Implementing Range

Let's start with range. First, we need to define what is range, what should the sensor do, what are its targets and how it can work.

Range can be visualized using a sphere that has its center point in the AI Agent. The sphere can be bigger or smaller. Based on this, the AI will have a bigger range or a smaller one.

Let's limit the sensor to only enemies. But it can be extended very easily to support other points of interest such as pickable items, cover areas and more.

The sensor will use a list that will be constantly updated with the targets as they are coming in the range or moving out of it.

We will also use Godot's event system called signals. They will be triggered when an enemy target has either entered the range or left it.

Let's look at the code now.

If you run this example, you can see when the AI Agent detects the target and when it does not.

By only implementing this, the enemy will have eyes in its back as well. In most cases, we don't want that. Enemies usually have a cone of view like a real person's field of vision.

Let's look at the next tutorial on how we can implement this functionality.