

## Raycasts

Now that we can determine if a target is in range and in the field of view, we also need to determine if the target is not occluded by an object like a box or other environment prop.

To do this, we will use raycasting. Raycasting is the process of generating a ray, a line, from the AI Agent towards the target. If the ray intercepts something in between, we will return FALSE and if the ray successfully hits its target, then the result will be TRUE.

Raycasts in Godot can be implemented in code but there is a nicer way, provided by the engine. Using the RayCast Node. This node will cast a ray from its position to the cast to point. If it's enabled, it will also detect collisions.

As for the raycast detector script, we need to get a target and set the ray to point on it. The next step is to check the collision and see if it's the same as the target or not.

Let's look at the demo provided and see how it works.

With all these sensors in place: range, field of view and raycasts our AI Agent can properly determine what target it can see.

The next step is to alert the AI if it's being fired upon from behind.