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# AI Assessment Plan Document

## Simulation description:

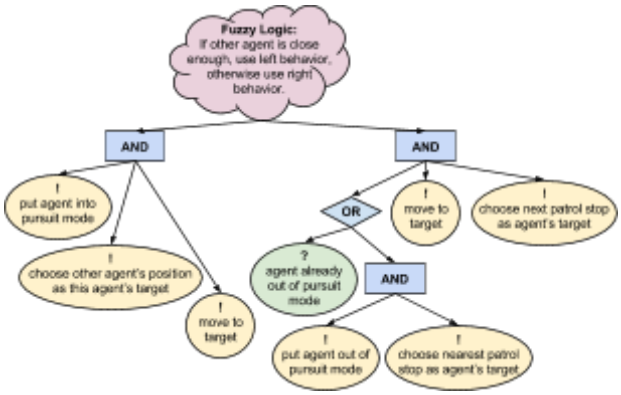
The simulation contains an area with several obstacles and two agents.

The first agent hovers above all the obstacles and follows a preset patrol route, unless it comes close to the second agent, which it then follows. If the second agent gets out of the first agent's range, the first agent returns to the closest stop on the patrol route and resumes patrolling.

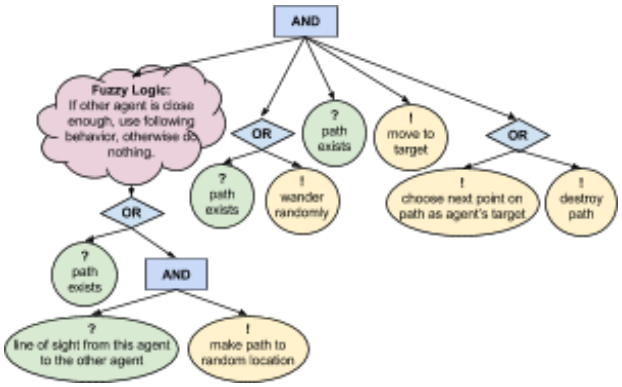
The second agent wanders randomly, using steering behaviors to avoid obstacles, unless it gets close to the second agent and has an unobstructed line of sight to it, at which time the second agent uses pathfinding to move to a random location at higher speed.

## Agent Decision Making:

Both agents are controlled by behavior trees, each of which incorporate fuzzy logic nodes, which choose which child behavior to execute (if any) based on fuzzy logic rules.




First agent's behavior tree




Second agent's behavior tree

## Locomotion techniques:

The first agent just travels in a straight line towards its current target, whether that target is the next stop on its patrol route or the current location of the other agent.

The second agent uses two different locomotion methods. While wandering, it uses steering behaviors, one of which randomly changes its direction and the other of which repels it from the edges of the navmesh when it gets too close. While fleeing, it uses A* pathfinding to generate a path to a randomly-chosen location within the navmesh, smooths that path, and then travels in a straight line to each point on that path.