

Name: _____

Learning

1. In this assignment, you will use the solutions from the in-class exercises as a starting point. Currently, the AI randomly selects a hidden location using a uniform distribution. If it does not find the player at that location, it then randomly seeks another location. It continues this process until the player is found. To quantify the performance of the learning algorithm, we will first need to implement a scoring mechanism:
 - (a) Add a scoring system for the AI. Modify the `enemy_bb` to add a parameter called `score`, which is initialized to 0.
 - (b) Then, modify the finite state machine so that the AI receives 3 points for finding the player on the first try, 2 points for the second try, 1 point for the third try, and no points for any additional tries.
 - (c) Display the score on the screen by tweaking the `statusline` function.
2. Often, games will cheat as a way of increasing the difficulty of the game. Modify the finite state machine so that the AI cheats 70% of the time and finds you on the first try (the other 30% of the time, the AI will randomly search a hidden location as usual).
Hint: You can find exactly where the player is by accessing the player's blackboard (through `self.ai.blackboard['player'].blackboard`).
3. Submit your entire directory (including `avatar.py` and `pathfind.py`) in `lastname.zip`.