

PA 2557: Applied Artificial Intelligence

Assignment 2

Wumpus World

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1 Explanation

After running the solver for the application, the agent check's if there is a breeze or a stench coming from nearby boxes. Based on the presence of a breeze or a stench, the breezeMethod() or the stenchMethod() is called which then takes actions to move to the nearest relatively safe location based on the current location and the status of nearby boxes (if they have been visited or if they are safe boxes). Using this procedure, the agent attempts to find gold (and picking it up as soon as it is found to end the map).

2 Methods

- direction(int x,int y)- Has the player agent look in left, right, up and down directions
- safe(int x,int y)- Marks the current box safe by assigning it a values of 1
- safePath(int x,int y)- Calculates the scores of the up, down, left and right boxes to find the box with the min score and return that score as the next box in the agent's path.
- breezeAdjacentboxes(int x,int y)- Assigns a score to the nearby boxes based on the presence of a breeze nearby
- breezeMethod(int x,int y)- Checks if there is a breeze in the up, down, left or right boxes.

- `strenchAdjacentboxes(int x,int y,int s,int a)`- Assigns a score to the nearby boxes based on the presence of a breeze nearby
- `shoot(int x,int y,int d)`- Shoots the arrow of the player agent
- `strenchmethod(int x,int y,int s)`- Checks if there is a breeze in the up, down, left or right boxes.