

Maze Solving Pet

The maze solving pet performs a depth first search to discover topology of entire maze, always searching clockwise around the compass. The search ends with the robot at the starting cell, with no further routes to consider.

Once each cell has been identified as a wall, a target or a path, a breadth first search is started from the target, giving each path cell a minimal distance from the target.

The distance on the starting cell now tells us how many steps it takes to get to the target, and by looking for a neighbor with a smaller distance to the target, moving to the neighbor and repeating, we navigate to the target by the shortest possible route.

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