

I leave this question as a specific type of Find Shortest Path.

It contains start location, goal location in a Matrix(Graph), the most common solution is Dijkstra algorithm.

But base on all search algorithm we learned in class, I decide to choose A\* algorithm should have best performance in this type of question

There are 3 methods in my python script:

1. `path_find(size, start_loc, goal_loc, values)`

Main function represents A\* algorithm, I leave the step by step explanation as comments in my script

2. `heuristic(a,b)`

Heuristic function for calculate heuristic number, I use Pythagorean theorem for calculate distance between nodes

3. `reconstruct_path(came_from,current_node)`

Return a list of locations which use recursively method get `current_node` from dictionary named `came_from`