

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

International Islamic University Chittagong



Department of Computer Science and Engineering

REPORT

COURSE CODE	: CSE-3636
COURSE TITLE	: Artificial Intelligence Lab
NAME OF THE PROJECT	: Waiter Robot
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Introduction

A shortage of labour in the restaurant industry has resulted in numerous issues, including long wait times and miserable customers. This has led some owners of restaurants to come up with new ideas and include robots in the mix. Waiter robots are autonomous machines that can perform the functions of human waiters. They use artificial intelligence (AI) and sensors to navigate their way around the restaurant, take orders and serve foods.

Objective

- To take orders and serve foods to customers.
- To give prompt services by finding optimal path in restaurant area.
- To serve foods on the basis of time consumed for preparing food.

Components

Here I used :

1. Python.
2. Html.
3. Css.
4. Javascript.

The platform I used is Visual Studio Code.

Description

By using A* search algorithm the waiter robot choose the optimal path for providing service. It uses heuristic value for finding optimal path. Whenever it faces any obstacles, it considers those obstacles as block and avoids that path. Also it provides service on the basis of time consumed for preparing food.

Case 01:

If the cost (actual path cost) are same but timing is different, then it will choose the table for service according to less time consumed for preparing food.

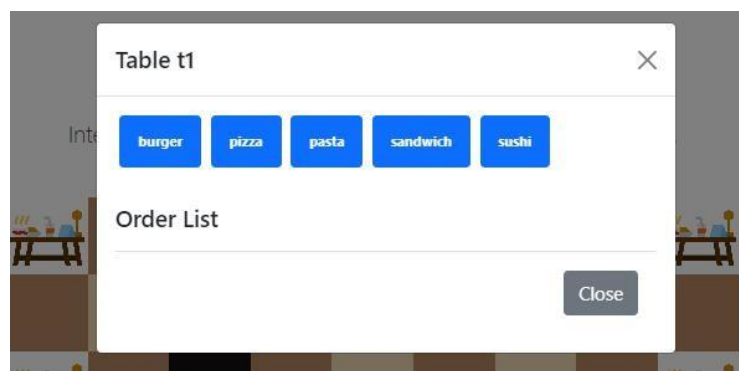
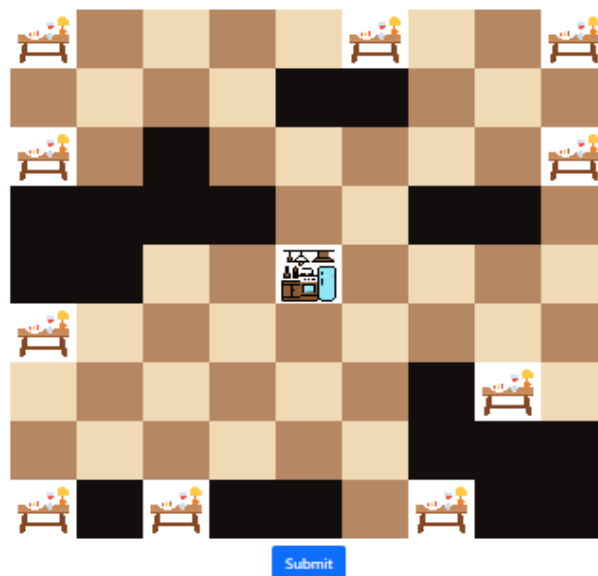
Case 02:

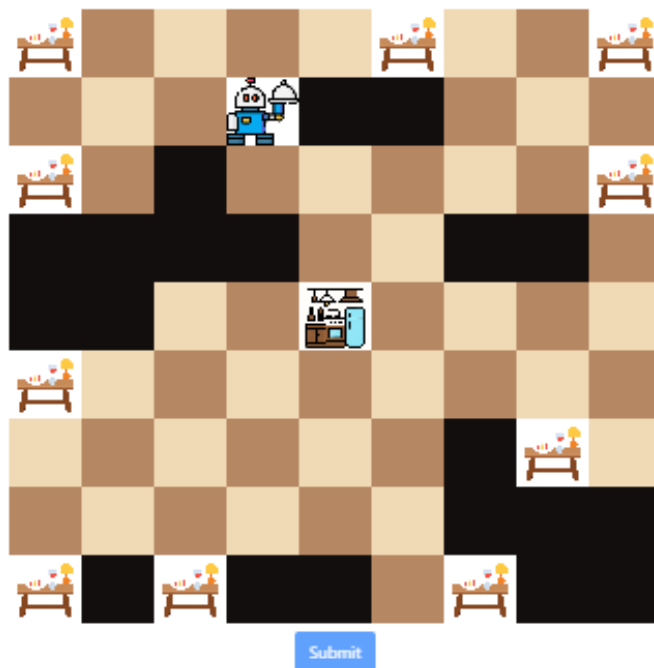
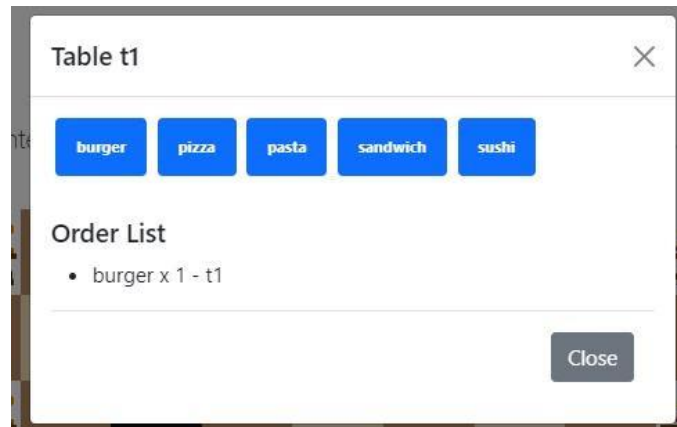
If time and cost are same then it prefers the one with less path. After providing the service, it returns back to the kitchen.

Output

AI Waiter

Interact with the AI waiter by selecting table and order options.





Reference Links

1. <https://www.geeksforgeeks.org/constraint-satisfaction-problems-csp-in-artificial-intelligence/>
2. https://github.com/Samahussien7/Waiter_Robot
3. <https://github.com/phantomf4321/The-waiter-robot>

Future Goals

- ✧ The waiter robots will be able to bring dirty dishes from the table when customers leave the table.
- ✧ Moreover customers can see how much time they should wait for their desired dishes.

