

AI The Girl World

Group: G09

Part 4: Robust Search

In order to deal with a dynamic world, as some of the obstacles, oracles and charging stations could be moving around while we are making any moves, we simply implemented a new idea of robust search.

The new algorithm is keep checking if our path to that goal is blocked when we move towards that goal. If it somehow becomes blocked, it will try to recalculate and search for an alternative moveable path. Then our strategy is to update and accept the new path instead.

Although the robust search has not been optimised, it can still tackle the dynamic world changing problem, i.e., the location of object is moving instead of static. And after some parameters in libraries were modified, it successfully handles 20 things move every 10 seconds in all directions. Finally, based on our own certain amount of testing, the new algorithm will still be successful under other parameters.