

Assignment No:1

Title:Heuristic Function

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Abstract—A heuristic function $h(n)$, takes a node n and returns a non-nenge real number that is an estimate of the cost of the least-cost path from node n to a goal node. The function Mn is an admissible heuristic if $h(n)$ is always less than or equal to the actual cost of a lowest-cost path from node n to a goal.

Index Terms—Here I mostly used in My report Python language and Anaconda(Jupyter notebook) editor.

I. INTRODUCTION

A heuristic, or a heuristic technique, is any approach to problem-solving that uses a practical method or various shortcuts in order to produce solutions that may not be optimal but are sufficient given a limited timeframe or deadline. Heuristics methods are intended to be flexible and are used for quick decisions, especially when finding an optimal solution is either impossible or impractical and when working with complex data.

II. LITERATURE REVIEW

The study of heuristics in human decision-making was developed in the 19708 and the 19805 by the psychologists Amos Tvcrsky and Daniel Kahneman although the concept had been originally introduced by the Nobel laureate Herbext A. Simon. whose original. primary object of research was problem solving that i showed.

III. PROPOSED METHODOLOGY

A Heuristic is a technique to solve a problem faster than classic methods, or to find an approximate solution when classic methods cannot. This is a kind of a shortcut as we often trade one of optimality, completeness, accuracy, or precision for speed. A Heuristic (or a heuristic function) takes a look at search algorithms.

IV. RULES OF SOLVING PROBLEM

It is represented by $h(n)$ and it calculates the cost of an optimal path between the pair of states. The value of the heuristic function is always positive. Admissibility of the heuristic function is given as: $h(n) := h^*(n)$ 1.Up 2.Down 3.Right 4.Left

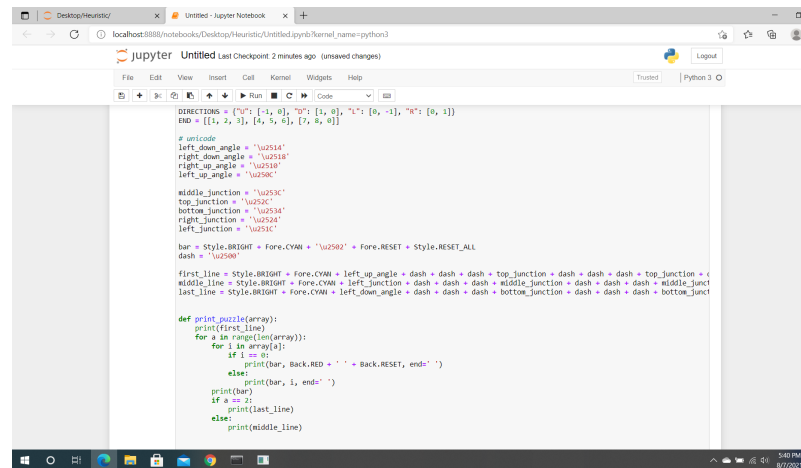


Fig. 1. Some Codes

V. CONCLUSION

From the definition, we can conclude that the goal is to find a faster solution or an approximate one, even if it is not optimal. In other words, when using a heuristic, we trade accuracy for the speed of the solution.

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