Report-01: Title :Heuristic Function

CSE-0408 Summer 2021

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Abstract—**A heuristic function h(n) , takes a node n and returns a non-negative real number that is an estimate of the cost of the least-cost path from node n to a goal node. The function h(n) 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—**About Heuristic Function ,the 8-puzzle problem in Python.**

I. INTRODUCTION

Definition:The heuristic function is a way to inform the search about the direction to a goal. It provides an informed way to guess which neighbor of a node will lead to a goal. There is nothing magical about a heuristic function. It must use only information that can be readily obtained about a node.

Objective of heuristics function:The heuristic function is a way to inform the search about the direction to a goal. It provides an informed way to guess which neighbor of a node will lead to a goal. There is nothing magical about a heuristic function. It must use only information that can be readily obtained about a node.

II. LITERATURE REVIEW

The study of heuristics in human decision-making was developed in the 1970s and the 1980s by the psychologists Amos Tversky and Daniel Kahneman although the concept had been originally introduced by the Nobel laureate Herbert A. Simon, whose original, primary object of research was problem solving that i showed that...

III. PROPOSED METHODOLOGY

Heuristics are methods for solving problems in a quick way that delivers a result that is sufficient enough to be useful given time constraints. Investors and financial professionals use a heuristic approach to speed up analysis and investment decisions.

Current state [[8,1,2],[3,6,4],[0,7,5]] and the goal state is [[1,2,3],[8,0,4],[7,6,5]

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

REFERENCES

[1] G. Eason, B. Noble, and I. N. Sneddon, "On certain integrals of Lipschitz-Hankel type involving products of Bessel functions," Phil. Trans. Roy. Soc. London, vol. A247, pp. 529–551, April 1955.

[2] J. Clerk Maxwell, A Treatise on Electricity and Magnetism, 3rd ed., vol. 2. Oxford: Clarendon, 1892, pp.68–73.

[3] I. S. Jacobs and C. P. Bean, "Fine particles, thin films and exchange anisotropy," in Magnetism, vol. III, G. T. Rado and H. Suhl, Eds. New York: Academic, 1963, pp. 271–350.

[4] K. Elissa, "Title of paper if known," unpublished.

[5] R. Nicole, "Title of paper with only first word capitalized," J. Name Stand. Abbrev., in press.

[6] Y. Yorozu, M. Hirano, K. Oka, and Y. Tagawa, "Electron spectroscopy studies on magneto-optical media and plastic substrate interface," IEEE Transl. J. Magn. Japan, vol. 2, pp. 740–741, August 1987 [Digests 9th Annual Conf. Magnetics Japan, p. 301, 1982].

[7] M. Young, The Technical Writer's Handbook. Mill Valley, CA: University Science, 1989.