A Consistent Hybrid of Analytical Hierarchy Process (AHP) and Graph Theory Matrix Approach (GTMA) with Application to Selection of PET scan Machine Problem for Cancer Hospital

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Abstract

The principle purpose of this paper is Hybridization of Analytical Hierarchy Process (AHP) with Graph Theory Matrix Approach (GTMA). In this article Hybridization of AHP is being done in the matter of basic leadership. The proposed methodology is considered for a specific Cancer hospital that was required to choose Pet Scan Machine for Cancer patients. There are such a significant number of PET scan machines accessible in market and the choice to choose a correct machine more often than not includes various criteria. In this way with a specific end goal to survive vulnerabilities, hybridization of AHP-GTMA has been made. Since AHP has been an outstanding technique for mining the decision maker psyche and GTMA approach is utilized for data mining. Both of these mining forms are hybridized so as to choose the machine with best highlights. Furthermore theoretical consistency is also presented. Finally the results are verified with Soft Expert Set and stability of hybrid method is checked by Satty’s Scale.

References


Index Terms

Computer Science  Applied Mathematics

Keywords

Hybridization, Soft Expert Set, AHP Technique, GTMA, Agree soft expert set, Disagree soft expert set, Machine