

Explanation Procedure in a Decision-Analytic Consulting System : an Axiomatic Approach

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ABSTRACT

Many end-users consider the ability of explaining reasoning process the most important feature of a knowledge-based system. Unlike the existing rule-based system, it is difficult to explain the generated advice in a decision-analytic consulting system. This research attempts to produce qualitative text explanation of treatment decisions based on explicit normative decision models. Especially, the sequential application of the five decision-axioms for reasoning about preference makes it possible to explain the reason why a decision is generated. To implement the idea, DETES(DECision-Theoretic Explanation System) was designed and a prototype is under development.