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Rough Computational Approach to UAR based on Dominance Matrix in IOIS

Author(s)
Xiaoyan Zhang, Weihua Xu

ABSTRACT
Rough set theory is a new mathematical tool to deal with vagueness and uncertainty. The classical rough set theory based on equivalence relation has made a great progress, while the equivalence relation is too harsh to meet and is extended to dominance relation in real world. It is important to investigate rough computational methods for rough set theory, which is one of the bottleneck problems in the development of rough set theory. In this article, rough computational approach to upper ap-proximation reduction (UAR) is discussed based on dominance matrix in inconsistent ordered information systems (IOIS). The algorithm of upper approximation reduction is obtained, from which we can provide approach to upper approximation reduction operated simply in inconsistent systems based on dominance relations. Finally, an example illustrates the validity of this method, and shows the method is excellent to a complicated information system.

KEYWORDS
Dominance Relation, Information System, Rough Set, Upper Approximation Reduction

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