An Alternative Algorithm for Soft Set Parameter Selection using Special Order

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Abstract.
The outcome of the reduction of soft data is dependent on the quality and discount evidence that increases with optimization analysis. There is a set of techniques that can be used to reduce the data, but the different techniques showed different results as each technique is focused on solving a particular problem. This paper proposed a parameter reduction algorithm, known as **3C** algorithm, to circumvent the false frequent object in reduction. Results indicated that the proposed algorithm is easy to implement and perform better than the state-of-the-art parameter reduction algorithm. Also, the proposed algorithm can be used as an effective alternative method for reducing parameters in order to enhance the decision making process. Comparative analysis were performed between the proposed algorithm and the state-of-the-art parameter reduction algorithm using several soft set in terms of parameter reduction.

Keywords: Boolean-valued information system; Knowledge Management; Parameters reductions

1. Introduction

In the discovery ofknowledge, a soft set is more effective if their size is small [2,6,7]. The reduction of objects or dimension (attributes) in a soft set contains some amount of redundancy that cannot help knowledge discovery. These redundancies need to be eliminated to allow only the relevant attributes for use in the discovery of knowledge.

There are several techniques that can be utilised for parameter reduction dealing with uncertainty in soft set theory to achieve reduction based on information characteristics. Mohammed *et al*. [10] have compared several attributes reduction techniques. In Maji [1], the optimal and sub-optimal decision generated based on maximum weight has a lot of inconsistency, and consequently has resulted in wrong

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