# On soft partition attribute selection

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**ABSTRACT**
Rough set theory provides a methodology for data analysis based on the approximation of information systems. It is revolves around the notion of discernibility i.e. the ability to distinguish between objects based on their attributes value. It allows inferring data dependencies that are useful in the fields of feature selection and decision model construction. Since it is proven that every rough set is a soft set, therefore, within the context of soft sets theory, we present a soft set-based framework for partition attribute selection. The paper unifies existing work in this direction, and introduces the concepts of maximum attribute relative to determine and rank the attribute in the multi-valued information system. Experimental results demonstrate the potentiality of the proposed technique to discover the attribute subsets, leading to partition selection models which better coverage and achieve lower computational time than that the baseline techniques.

**KEYWORDS:**
Soft set theory; Partition attribute; Attribute relative; Complexity

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