

Identifying users' characteristics critical to product selection using Rough Set Theory

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A consumer's purchase decision making process is very complex. It is obvious that the set of product functional features has a major role in the purchase decision. However, for a same product, users may have different assessments. So it seems that other factors than product functional characteristics play a role in decision making. Frequently, customers are segmented based on characteristics such as age, gender, geographic location, etc. Nevertheless, in many cases it has been seen that the customers in the same segment have different points-of-view for the same product. For example, some customers in a group may consider a product suitable while others don't. Inconsistencies between customers can cause uncertainty for designers in producing the most satisfying product attributes. This paper presents a method to resolve this kind of uncertainty using Rough Set Theory. The input of this method is users' evaluation data for a product with respect to a specific customer subjective feeling. The output is sets of the most influential users' characteristics on their product selection preferences. By using reduced sets of users' characteristics, designers are able to reclassify users and resolve inconsistencies.