

Abstract Details

Title: A Novel 2-Tuple based Methodology for Deal Recommendation in an E-Business Environment

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Abstract: Today, the competition in businesses is increasing rapidly. Thus, more and more businesses are going online, which has given rise to a number of online shopping websites. These websites act as intermediary between the E-Business owners and the consumers. As the customer buys a product online, he/ she is presented with number of deals and the customer selects the best deal among them. The E-Business owners consider numerous criteria while providing a deal to the consumer. However, these criteria are uncertain and their values can be specified linguistically. Elicitation of linguistic information inevitably calls for the use of computing with words (CWW) methodology, to process it. A novel CWW methodology is the 2-tuple fuzzy linguistic approach. It has been applied to a number of application areas, however, to the best of our knowledge, no one has used it for deal recommendation in an E-Business environment. Therefore, in this paper we have proposed a novel 2-tuple based methodology for recommending a deal to a buyer of the product online, by processing the various criteria of the product seller/ E-Business owner. Using the CWW methodology, we generate a numeric score for an e-business owner, which is an indication of the deal quality offered by the owner. We also provide a linguistic recommendation corresponding to the score generated, which may be shown to the buyer. Linguistic recommendation is useful as human beings naturally understand and express themselves using 'words'.

Keywords: Computing with words; E-Business; Extension principle; symbolic method; Type 1 fuzzy sets; 2-tuple linguistic representation model.