

## **Abstract:**

The recommender system or the system proposes to offer the most suitable items (data, information, goods, etc.) by analyzing the behavior of its user. The recommender system decides on the user's current usage by checking the number of other users' use, advising or not giving advice. The challenges of the advisor system can be called the time of implementation due to the large volume of comparisons, as well as the issue of predicting privileges due to the lack of initial input information by new customers, which is known as the cold start problem. Failure to use the time factor can reduce the accuracy of the system in the future, and also due to the increasing amount of data and the need for further comparisons, the system speed will slow down. In this thesis, a new advisory system based on fuzzy interoperability algorithms is introduced in online stores that improves the accuracy and speed of the recommendation, and in addition to the similarity and scoring criterion, the time factor as an important parameter for measuring the similarity of users Used for clustering. The results of the implementation of the proposed method and its application on the actual data set represent the quality of the proposed method in comparison with the basic method and other studies.

## **Keywords:**

Recommender system, user behavior patterns, meta-heuristic algorithms, fuzzy algorithms



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**Subject :  
Product offer based on the interests of each person by fuzzy meta-  
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