Biclustering ARTMAP Collaborative Filtering Recommender System

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ABSTRACT
Collaborative filtering is a technique for providing recommendations to users based on the preferences of each user and the behavior of users with similar interests in relation to similar items. Recommender systems are seeing widespread use in recent days, helping people choose which movies to watch, books to read, and things to buy. In this study, we examine the use of a biclustering algorithm, Biclustering ARTMAP, to build a collaborative filtering recommendation system. We introduce a modification to how the Biclustering ARTMAP algorithm computes the item-cluster similarity, and a way to use it for the prediction of user ratings. We apply the algorithm to the MovieLens 100k dataset, and find that it achieves promising performance compared to other published collaborative filtering techniques.