

# REACTIVE MULTI-AGENT MODEL FOR COLLABORATIVE FILTERING – BASED RECOMMENDER SYSTEMS

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## Abstract:

In recent 20 years, using multi-agent models has been developed in many research fields, especially in social science. These multi-agent models allow simulating and studying a complex part of real world by performing insilico test, or called real simulation. Recently, some research has also proposed multi-agent model for Information Retrieval problems and has achieved some remarkable results. In this paper, we introduce a reactive multi-agent model as a new approach for recommender systems in order to overcome some common limitations of recommender systems, especially recomputation proplems when new data is added to the system. Experimental results also indicate that the proposed model can be applied for recommendation problems and our model performs more stably than collaborative filtering based recommender systems.

*Key words: Collaborative filtering; Recommender systems; Multi-agent systems; Reactive multi-agent model; Reactive agent; Attractive force; Repulsive force.*