

Abstract

Collaborative Filtering (CF) is one of a popular approach for building Recommender System using information and preference of another users in order to give an items recommendation. One of basic problem in CF is data sparsity, which affect recommendation result. In general, there are two types of algorithm in CF: memory-based and model-based, each methods has a plus and minus for giving recommendation. This research use smoothing and fusing strategy. That's method is an hybrid approach of memory-based and model-based to solve data sparsity problem.

Based on testing result, smoothing strategy can reduce error system which measured by MAE from 2,277 to 0,7465 or reducing until 50.624% compared with did not use smoothing and fusing strategy. Furthermore, the sparsity level can affect accuracy. The more sparse data rating owned, then the result accuracy is getting worse.

Keywords: Collaborative Filtering, Recommender System, Smoothing and Fusing, Data Sparsity