

# Plagiarism Scan Report

## Summary

Report Generated Date	15 May, 2018
Plagiarism Status	<b>100% Unique</b>
Total Words	225
Total Characters	1608
Any Ignore Url Used	

## Content Checked For Plagiarism:

Haiqin Yang, Guang Ling, Yuxin Su, Michael R. Lyu, and Irwin King [2] describe a Recommender systems are promising for providing personalized favorite services. Collaborative filtering (CF) technologies, making prediction of users' preference based on users' previous behaviors, have become one of the most successful techniques to build modern recommender systems. Several challenging issues occur in previously proposed CF methods:

- Most CF methods ignore users' response patterns and may yield biased parameter estimation and suboptimal performance;
- Some CF methods adopt heuristic weight settings, which lacks a systematical implementation;
- The multinomial mixture models may weaken the computational ability of matrix factorization for generating the data matrix, thus increasing the computational cost of training.

To resolve these issues, incorporate users' response models into the probabilistic matrix factorization (PMF), a popular matrix factorization CF model, to establish the Response Aware Probabilistic Matrix Factorization (RAPMF) framework. Additionally, they make the hypothesis on the user response as a Bernoulli sharing which is parameterized by the rating scores for the observed ratings while as a step function for the unobserved ratings. Also, they speed up the algorithm by a mini-batch execution and a crafting scheduling strategy. To conclude, they design different tentative protocols and conduct systematical observed evaluation on both synthetic and real-world datasets to exhibit the merits of the proposed RAPMF and its mini-batch implementation.

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