

COLLABORATIVE FILTERING ALGORITHMS IN NEWS RECOMMENDATION SYSTEM

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We thoroughly explored collaborative filtering algorithms and their usage in news recommendation systems in this paper. Our analysis included an overview of recommendation algorithms, text similarity research, and the development of collaborative filtering technology. The study revealed the widespread application and importance of collaborative filtering algorithms in recommendation systems. We specifically compared user-based and item-based collaborative filtering methods, highlighting their respective strengths and weaknesses and identifying their applicable scenarios.

In the literature review, we have outlined the accomplishments of the academic community's research and the current challenges faced while using collaborative filtering algorithms in news recommendation systems. Various methods such as Content-based Collaborative Filtering (CCF), hybrid methods, and model algorithms exhibit potential. However, the persistent difficulties like data sparsity, cold start problems, timeliness and dynamism, and explainability, emphasize the requirement for additional research and innovation in this domain.

In conclusion, while collaborative filtering algorithms have made some progress in news recommendation systems, there is still a need for further research and improvement. Future work should focus on solving the data sparsity and the cold start concern, enhancing the timeliness and explainability of the recommendation system. It should also explore more effective hybrid methods and model algorithms to improve the performance and user experience of the system. With the continuous development of natural language processing technologies and deep learning models, we are confident in our research and applications in news recommendation systems.

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