

## Application of Neural Graph Collaborative Filtering in Movie Recommendation System

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**Abstract**—With the gradual development of movie recommendation system, in order to improve the recommendation effect of movie recommendation system, we must learn how to get a better embedding. The main purpose of this paper is to apply neural graph collaborative filtering to the movie recommendation system. It exploits the user-item graph structure by propagating embeddings on it. This leads to the expressive modeling of high-order connectivity in user-item graph, effectively injecting the collaborative signal into the embedding process in an explicit manner. We conduct extensive experiments on MovieLens dataset, and verified the effectiveness and correctness of the algorithms we used.

### CONCLUSION

This paper combines movie recommendation with graph neural collaborative filtering, captures the high-order connection information between users and items, exploit it to embedding. Experiments show that it has a certain improvement compared with other algorithms. However, due to our processing of the data set, only the positive interaction was processed, and the negative interaction was ignored. How to use the negative interaction in the data set is the focus of future research in this paper.

