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Exploring New Vista of Intelligent Collaborative Filtering: A Restaurant Recommendation Paradigm

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Highlights

- The article proposes two novel algorithms in the context of group recommendation system.
- The proposed research illustrates how optimal groups could be formed from the available information.
- A novel neighbor selection algorithm entitled as "Altered Client-based Collaborative Filtering" (ACCF) for Group Recommendation is proposed.
- Restaurant recommendation system is utilized as a test bed for the validation of ACCF.
- The proposed method ACCF is highly effective and useful in the corresponding sub-domains of its relative dominions.

Abstract- Due to a busy schedule, people highly dependent on various kinds of online recommendations to utilize their precious time. The collaborative filtering is wide as the recommendation tool in the majority of the commercial recommenders. However, the outcome of collaborative filtering is often jeopardized by the sparsity, cold start, and grey sheep problems. To solve these issues in a more efficient way, a novel collaborative filtering algorithm entitled as Altered Client-based Collaborative Filtering (ACCF) for group recommendation is proposed. ACCF employs Dragonfly Algorithm to deal with the sparsity and neighbor selection. Restaurant recommendation system is utilized as a test bed for the validation of ACCF. With the end goal of performance assessment, a comparative study has been incorporated that depicts the proposed algorithm successfully minimizes the sparsity problem. The experimental outcome rendering ACCF provides 37%, 59%, 53% more Coverage, Precision and F-Measure than the user-based collaborative filtering even applicable for a small sample of data.

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