

User Profile Extraction from Twitter for Personalized News Recommendation

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Abstract—Extracting personal profiles from various sources such as purchased items, watched movies, mailing records, etc. is important for recommender systems. For personalized news recommendation, in particular, existing methods mostly utilize information obtainable from the news articles read by the users such as titles, texts, and click-through data.

This paper aims to investigate a different method to build personal profiles using the information obtained from Twitter to provide personalized news recommendation service. For a Twitter user, our method utilizes tweets, re-tweets, and hashtags, from which important keywords are extracted to build the personal profile.

The usefulness of this method is validated by implementing a prototype news recommendation service and by performing a user study. Using a simple cosine similarity measure, we compare the differences among the user profiles, and also among the recommended news lists, in order to check the discriminative power of the proposed method. The prediction accuracy of news recommendation is measured against a small group of users.

(P19)Keyword— Personalized News Recommendation, User Profile, Twitter, tweets/re-tweets, hashtags



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