

Abstract: Study on Community Detection from Flickr Using Collective Intelligence

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Abstract

The social network service (SNS) has been gaining increasing attention. Among the extant SNSs, our study focuses on Flickr, which is one of the most popular photo hosting and sharing websites. Users can upload and explore many photos on various subjects. In addition, users sharing common interests can become friends, and they can join the groups that match their interests in particular subjects. Facebook's friend recommendation has been proven to help users find potential friends easily, but Flickr is yet to offer friend or group recommendation services. For this reason, we propose a way of recommending photographically similar users and creating implicit user communities based on collective intelligence manifested through tag information. With a massive amount of tag data in Flickr, we represent users as term vectors after carrying out tag preprocessing and selecting only important ones. Then, we construct a user network and detect several overlapping communities using the CPM algorithm. Visualization and validation can be done using Gephi, one of the most popular graph analysis tools. A comparison with explicit groups declared by the users shows that our community detection results are effective. Overall, we expect that our study will be useful for many Flickr users and even Flickr itself.

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