

AN EFFECTIVE NOVEL FRIEND RECOMMENDATION IN SOCIAL NETWORKS

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Abstract

Data mining refers to extracting or mining knowledge from large amount of data. It is a process of discovering interest knowledge from large amount of data stored either in database or other information repositories. Knowledge base is domain knowledge that is used to guide search or evaluate the interestingness of resulting pattern. Such knowledge can include concept hierarchies used to organize attribute/attribute values in to different levels of abstraction of data mining. Friend recommendation is an important recommender application in social media. Major social websites such as Twitter and Facebook are all capable of recommending friends to individuals. However, most of these websites use simple friend recommendation algorithms such as popularity or friend's friends are friends, which are intuitive but consider few of the characteristics of the social network. We create a new system which gives the friend recommendation in such a way that, it

analysis the users activity and suggest them. The user activity is based on the image they share on the social networks and the comment they leave on the image will be taken and compared and if there is a chance of matching the same characters with the other user on the social networks they will be analyzed and shows the friend suggestions to both of the user.

INTRODUCTION

Social networks have experienced explosive growth in the last decade. Social websites such as Twitter, YouTube and Flickr have billions of users who share opinions, photos and videos every day. Users make on-line friends through these social networks. One challenging issue is how to help these users to efficiently find new social friends. Social friend recommendation has therefore become a new research topic and several methods have been proposed to conduct recommendation efficiently .Content similarity (such as image visual similarity)

has been a primary method of friend recommendation. However, we argue that many other social aspects need to be explored to systematically build high-performance social friend recommendation, other than basing recommendation purely on content similarity matching. Making friends is often based on the following social aspects: 1) Social environment, including where one lives and works ; 2) Social behaviors and actions, including one's working performance, shopping habits, hobbies, and, importantly, interactions with one another. 3) Social status, such as gender, age, position, etc. We summarize all these aspects as an individual's "social role". Here the term "social role" is the part that a person plays as a member of a particular society . *"In on-line social networks, people behave differently in social situations because they carry different latent social roles"*.

To leverage the correlations between networks, we present a social network in which the nodes of the graph are users and the edges stand for the relationships between users. Different kinds of relationships lead to networks with different topologies. Taking Flickr as an example, users may upload tags to describe their uploaded photos; if two users have become friends, then they are in each other's "contact" list. In line with this information, we build a Flickr contact network in which the nodes are individuals and the edges represent whether they are friends or have "contact" with each other. Then we build a tag network in which the nodes are the same, but the edges represent the relationship of the tag set from each individual.

LITERATURE SURVEY

Lot of research papers were studied and analyzed, few prototype solutions have been reported in past years and some of the recent research papers and descriptions are listed over here.

Nan Li and Guanling Chen describes about " Multi-Layered Friendship Modelling for Location-Based Mobile Social Networks". we present analysis results of a commercial MSN for which we quantified the correlation between user's friendship with their mobility characteristics, social graph properties, and user profiles. The evaluation of the derived model from the empirical traces suggests that the model-based friend recommendation is effective, and its performance is better than well-known Naive Bayes classifier and J48 decision tree algorithms.

An-Jung Cheng describes about " Personalized Travel Recommendation by Mining People Attributes from Community-Contributed Photos". we based on the mined people attributes and preferred travel patterns between locations, it is able to adopt the mobile devices where the user profile and context information (e.g., geo-locations) can be easily detected from mobile sensors and further entails the "location-aware" recommending next travel location from his/her current location or even delivering context-related advertisements or services.

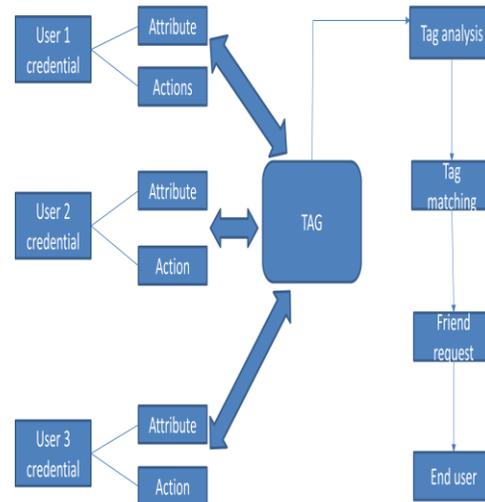
Lakshmi Fabian describes about " Scalable recommendation with social contextual information". An Individual preference analyze the social interests of an item content with user's interest and adopt only

users recommended results. Interpersonal influence is analyzing user-user interaction and their specific social relations. Beyond this, we propose a novel probabilistic matrix factorization method to fuse them in a latent space..

PROPOSED SYSTEM

Using algorithm for network correlation-based social friend recommendation (NC-based SFR). Social environment, including where one lives and works. Social behaviors and actions, including one's working performance, shopping habits, hobbies, and, importantly, interactions with one another. We propose a new friend recommendation method, based on network correlation, by considering the effect of different social roles. We create a new system which gives the friend recommendation in such a way that, it analysis the users activity and suggest them. The user activity is based on the image they share on the social networks and the comment they leave on the image will be taken and compared and if there is a chance of matching the same characters with the other user on the social networks they will be analyzed and shows the friend suggestions to both of the user.

SYSTEM ARCHITECTURE



MODULES

- User analysis
- Action log and character
- Tag creation
- Tag comparison

SYSTEM TESTING

The purpose of testing is to discover errors. Testing is the process of trying to discover every conceivable fault or weakness in a work product. There are various types of test. Each test type addresses a specific testing requirement.

TYPES OF TESTS

Unit testing

Unit testing involves the design of test cases that validate that the internal program logic is functioning properly, and that program inputs produce valid outputs. It performs accurately to the documented specifications and contains clearly defined inputs and expected results.

Integration testing

Integration tests are designed to test integrated software components to determine if they actually run as one program. Testing is event driven and is more concerned with the basic outcome of screens or fields. Integration tests demonstrate that although the components were individually satisfaction, as shown by successfully unit testing, the combination of components is correct and consistent. Integration testing is specifically aimed at exposing the problems that arise from the combination of components

Functional testing

Functional tests provide systematic demonstrations that functions tested are available as specified by the business and technical requirements, system documentation, and user manuals.

Unit Testing:

Unit testing is usually conducted as part of a combined code and unit test phase of the software lifecycle, although it is not uncommon for coding and unit testing to be conducted as two distinct phases.

Acceptance Testing

User Acceptance Testing is a critical phase of any project and requires significant participation by the

end user. It also ensures that the system meets the functional requirements.

Test Results: All the test cases mentioned above passed successfully. No defects encountered.

CONCLUSIONS

In this paper, we study the friend recommendation problem from the viewpoint of network correlation. A person has many different social roles on-line. In each social role, he/she makes different friends, and these different social roles form different social networks. To consider the effect of different social roles, we propose a network alignment method to find the correlations between networks. The second aspect we take into account is pairwise user similarity preservation to maintain the original data structure. Experimental results by aligning tag and contact networks have shown that the proposed NC-based SFR outperforms other methods in friend recommendation and achieves the highest precision in friend prediction. We find that a small number of features can align the tag network to the contact network well, and can provide sufficient information for friend recommendation. Both network alignment and social network structure preservation play an important role in our task.

ACKNOWLEDGEMENT

We would like to thank S.Sathea Sree Professor, who inspired us and guided us to involve in research work. We would also like to thank Dr.A.Vijayakumar, Professor, Head of Department, for continuous motivation and support.

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