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Friend suggestion in social network based on user log

To cite this article: R. Kaviya *et al* 2017 *IOP Conf. Ser.: Mater. Sci. Eng.* **263** 042079

View the article online for updates and enhancements.

Friend suggestion in social network based on user log

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Abstract.   Simple friend recommendation algorithms such as similarity, popularity and social aspects is the basic requirement to be explored to methodically form high-performance social friend recommendation. Suggestion of friends is followed. No tags of character were followed. In the proposed system, we use an algorithm for network correlation-based social friend recommendation (NC-based SFR).It includes user activities like where one lives and works. A new friend recommendation method, based on network correlation, by considering the effect of different social roles. To model the correlation between different networks, we develop a method that aligns these networks through important feature selection. We consider by preserving the network structure for a more better recommendations so that it significantly improves the accuracy for better friend-recommendation.

Key Terms - Social network alignment, friend suggestion, feature selection, tag selection.

1. Introduction

Data Mining is defined as "the process of extracting knowledge data discovery of valid, authentic and actionable information from large databases. Data mining also used to derives patterns and trends that are exist in the collected data. These patterns and trends can be collected together and defined as a mining model, which can be applied to specific scenarios for the business.

The input design is the link between the information system and the user. It comprises of the specification and procedures for data preparation and those steps are necessary to put transaction data in to a usable form for processing. This can be achieved by inspecting the computer to read data from a written or printed document or it can occur by having people

keying the data directly into the system. The design of input focuses on controlling the amount of input required, controlling the errors, avoiding delay, avoiding extra steps and keeping the process simple. The input is designed in such a way so that it provides security and ease of use with retaining the privacy. The initial motivation for feature selection is that the social data often contain many different features that are difficult to deal with, and most of the features are redundant except for specific tasks. To deal with this problem, we usually apply feature extraction or feature selection methods.

2. Related Work

Shangrong Huang, Jian[1]-In existing system, simple friend recommendation algorithms such as similarity, popularity are used. In social aspects it needs to be explored to systematically build high-performance social friend recommendation. So Suggestion of friends friend are friends is followed. No tags of characters are followed. In proposed system we Use an algorithm for network correlation-based social friend recommendation (NC-based SFR).It includes user activities like where one lives and works. So We propose a new friend recommendation method, based on network correlation, by considering the effect of different social roles. To model the correlation between different networks, we develop a method that aligns these networks through important feature selection. Then we consider by preserving the network structure for a more better recommendations so that it significantly improves the accuracy for better friend-recommendation.

Xinwang Liu, Lei Wang, [2]- The concept introduced is selecting the features. The main aim is to select a subset of features from high-dimensional data according to a predefined selection criterion. So that it can bring many benefits such as removing irrelevant and redundant features, reducing the chance of over fitting, saving computational cost, improving prediction accuracy ,and enhancing result comprehensibility.

Yan-Ying Chen, An-Jung Cheng, [3]- They conduct personalized travel recommendation by further considering specific user profiles or attributes such as their gender, age as well as travel group types like family, friends. So we propose a personalized travel recommendation model considering user's attributes as well as their group types and the knowledge mined from travel logs.

Meng Jiang,Peng Cui [4]- They investigated the social recommendation problem on the basis of psychology and sociology studies, which exhibit two important factors-individual preference and interpersonal influence. The problem in the existing system is that it affect the users' decisions based on information adoption and thus it increases the unpredictability of the item adoption. So we propose two factors individual preference and interpersonal influence. If these factors are properly incorporated into recommendation, the uncertainty can be reduced and quality can be improved.

Nan Li and Guanling Chen[5]- The Location-based Mobile Social Networks (MSNs) are becoming increasingly popular by the success of Online Social Networks (OSNs), such as Facebook. It allows by extending the existing online social network (OSNs) for the user to know when their friends are around and providing the ability to meet new people who share common interests. we propose a system based on the social networks which it allows the users to make new friends, based on their common interests and it also allows the users to easily share thoughts, activities, photos, and other information with friends to strengthen their connections.

Xing Xie[6]- A general friend recommendation framework can be characterized based on user interest in two dimensions: context (location, time) and content so that it will improve the recommending quality. This system can be designed in a real online social network field to show the effectiveness of the framework. In existing system most users friends come from those with social relationship in real life, such as schoolmates, colleagues and so on. But in fact, users tend to make some new friends in online social networks. In proposed system, we recommend potential friends (ie.users with similar interest), by analyzing user activities Joanna Sliwa, Tomasz Podlasek,[7]- Efficiency of Web Single Sign On (SSO) solution used to provide authentication and authorization of user requests and responses during web portal invocation in a tactical radio network environment.

Yi Yang, Zhigang Ma, [8]- We propose a new multi-task feature selection algorithm and apply it to multimedia such as video and image analysis. Instead of evaluating the importance of each feature individually, our algorithm selects features in a batch mode, by which the feature correlation is considered. Main aim of Feature selection is to reduce redundancy and noise in the original feature set.
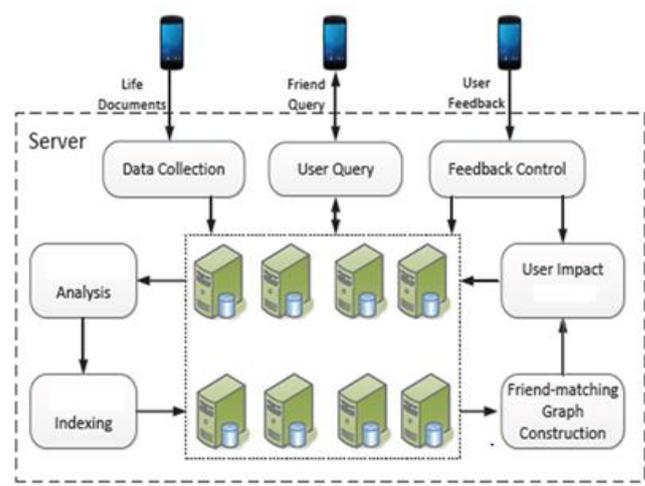
3. Proposed System

Figure 1: Architecture of the proposed model

Simple friend recommendation algorithms such as similarity, popularity and social aspects are explored systematically to build high-performance social friend recommendation in the existing system. Suggestion of friends is followed. No tags of character are followed. However in the proposed system**,** an algorithm for network correlation-based social friend recommendation (NC-based SFR).It includes user activities like the resident and work location of the user. Thus a new friend recommendation method is proposed based on the network correlation which considers the effect of different social roles. To model the correlation between different networks, a method is developed that aligns these networks through important feature selection. The network structure is preserved for   better recommendations which significantly improves the accuracy for better friend-recommendation. Figure 1 shows the architecture of the proposed model. The different operations performed on the server side are data collection, fetching the user query results and providing feedback to user. The results are analysed by techniques like indexing, constructing a graph for matching friends and the impact of user on a particular log. Data is distributed and using an index mechanism data is retrieved and provided to the user.

The major modules are

- Social Network Corelation
- Network Alignment

3.1 Social Network Corelation

This correlation is between different networks. The three different networks formed are user friendship network, tag and image content network. SVM is used as the reference model for classifying the users as "recommended" or "not recommended". Data from 10000 users is

extracted which was available in 2000 flickr groups. There are five group of users and hence five class labels are present. A transition probability is defined according to the relations between group members and a random walk-based algorithm is developed to calculate the relative score between nodes. This algorithm is utilized to link between networks for multi purpose recommendation such as item/query/friendship.

3.2 Network Alignment

This module is mainly used for reducing internet traffic and to find co-occurrence of elements in different networks. A model based collaborative filtering is used to determine the favour of every user for each feature and thereby calculating the similarity of complete feature space between users. Friends can be recommended by ranking the similarities.
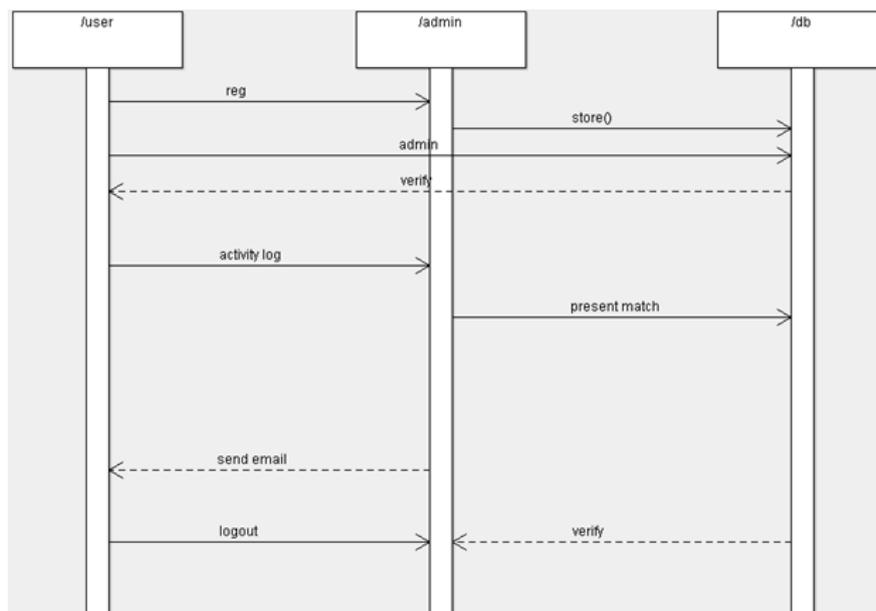

Figure 2: Sequence Diagram for the final system

4.   Results and Discussion

Different social networks have similar structures which can be handled using similar methods. In experiments we align only two networks. So that they can extend the idea of network alignment to many networks, and consider the individual properties of these networks to make better recommendations. The idea of network correlation can also be applied for applications other than

friend recommendation thereby we can find friends of similar activity. This kind of recommendation is particularly useful for text similarity which is also known as random tag similarity. In this technique, a random number of features are chosen and friends of each user are recommended according to their tag similarity. Context and content information is associated with domain knowledge. Many applications have utilized friend recommendation.

Figure 3: User Registration

Figure 4: User can give comments and upload images

Figure 5: Analysis of the images

5. Conclusion

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. So that it form a own network of friends and reduce false request and increase accuracy.

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