

**Friend Recommendation System by LDA Model Using Text Mining**

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Abstract— A Few years ago, people casually made friends with people who work or live close to themselves, such partner or companion. This connection can be defined as G-friends, where G-friends stand for earthly location based friends because they are motivated by the earthly distances between each other. With the large advances in social networks, services such as Google+, Twitter, and Facebook have provided us many radical ways of making new friends. According to one of the popular social networks 'Facebook' statistics, single user has an average of 130 friends, conceivably larger than any other time in history. One challenge with current social networking services is how to recommend suitable friend to a user. Most of them depend on already existing user relationships to select friend candidates. For example, Facebook count on a social link analysis among those who already share common friends and recommends proportioned users as probable friends. Regrettably, this approach may not be the most appropriate based on recent friend findings.

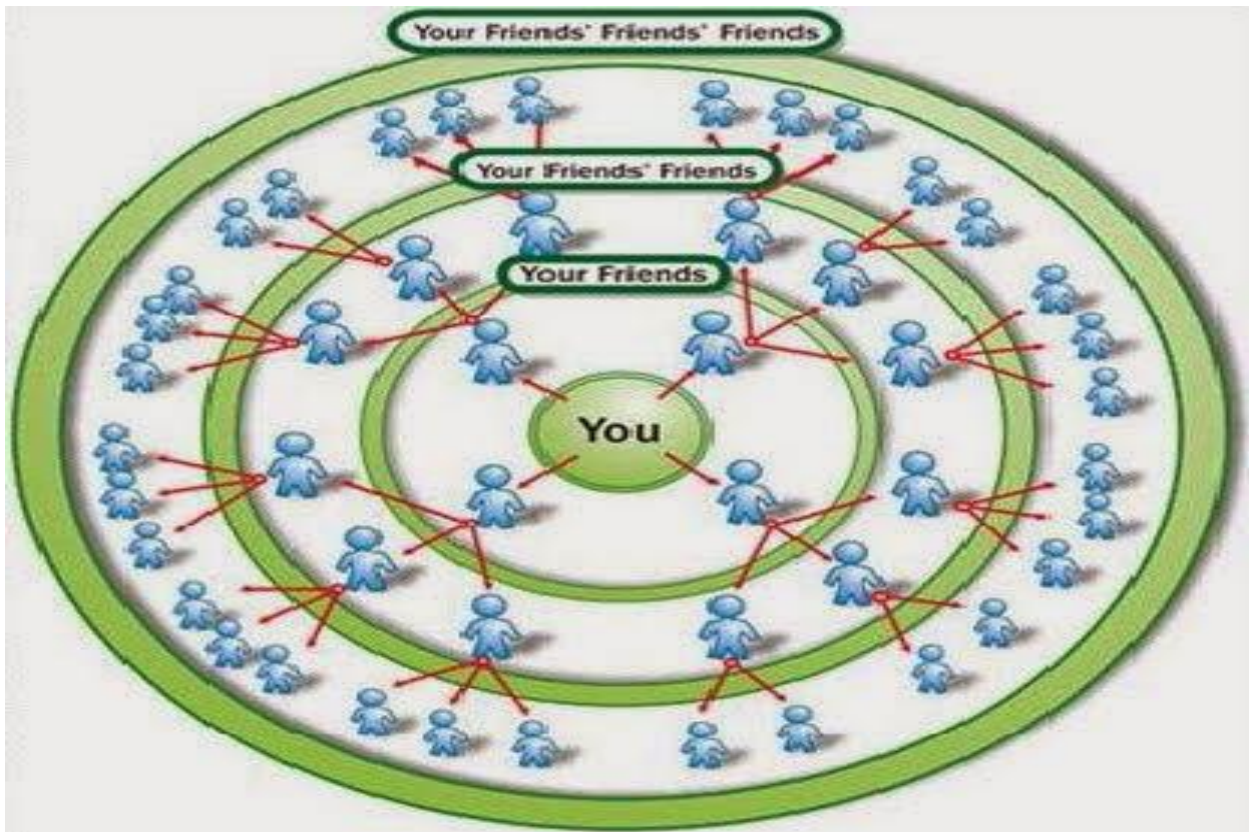
Keywords— Friend recommendation, data mining, social networks, life style, content recommendation

I. INTRODUCTION

Our social networks are driven by the tendency of individuals to associate and bond with people similar to us. This affects the establishment of any type of relationship which can be emotional, information transfer or even financial transactions. In conventional systems we concentrate on demographical similarities between users to check their compatibility which is better for physical world of the user but on social media it is not possible that each user will expect to make friends from the same geographical area in which he/she is staying, Consider an Indian citizen who is working in Japan, in this case user can prefer to make friends from his culture or might be another countries like Australia or USA. In this case if we restrict our recommendation system for some geographical distance then system will not be able to provide correct friend suggestions. As per the users social and informative considerations individuals might choose to form different kinds of links at different times. People partition their many friends into different planes of their social life. However, as has been shown with online social network services, all of one's contacts are taken together into a single contact list. When observing this collection of individuals and ties as a single network, the reasons for the creation and maintenance of each tie are not clear. Similarly, recommending new people with whom to form relations is confusing because of the removing nature of the relations themselves.

II. EXISTING SYSTEM

With fast advancements in social network services such as Facebook, Twitter and Google+ have provided us exciting ways of making friends. One challenge with conventional social networking services is how to suggest a good friend to a user. Current social networking services suggest friends to users based on their social graphs, which may not be the most appropriate way to user's preferences on friend selection in real life. Social networking sites such as Facebook and Twitter insisting on link recommendation where friend recommendations are presented to users. The recommendation algorithms employed by sites such as Facebook are private. Through observations, it is conceivable that a friends of friends' method is being used. This approach is useful and effective as it is easy to implement and the nature for humans to be drawn together through association.



III. PROPOSED SYSTEM

We represent a friend recommendation system, which recommends friends to users based on their life styles. By taking advantage of user data, system discovers life styles of users from user-centric data, measures the similarity which is present in life styles between users, and recommends friends to users if their life styles have high similarity. We model a user's daily life activities, from which his/her life styles are extracted. We use Latent Dirichlet Allocation algorithm for extracting user's life style. We find similarity metric which measure the similarity present in life styles between users, and further get a calculation for users' impact in terms of life styles with a friend-matching graph. We also have a linear feedback mechanism with help of which we will exploit the user's feedback to improve recommendation accuracy.

IV. SYSTEM ARCHITECTURE

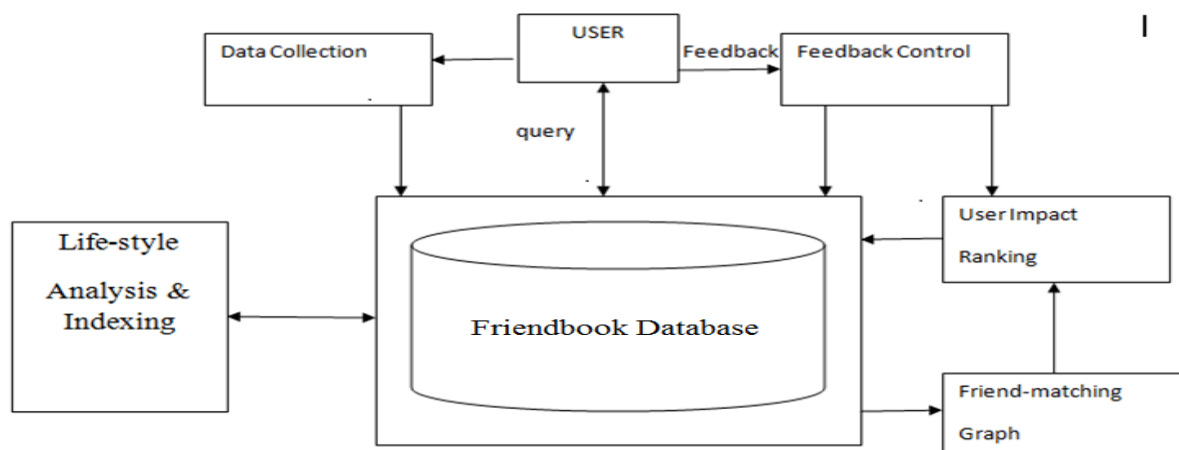


fig: Recommended System Architecture

V. USER INTERFACES



VI. FUTURE WORK

Proposed system is scalable to large-scale systems if we could implement the iterative matrix-vector multiplication method incrementally or distributive. The similarity portal used for the friend-matching graph is fixed in our current prototype of proposed system. It would be interesting to explore the adaption of the portal for each edge and see whether it can better represent the similarity relationship on the friend-matching graph. In large scale systems we can gather the information from the sensors such as GPS, microphone, accelerometer, gyroscope, camera etc.

VII. CONCLUSION

In this project, we will be presenting the design and implementation of a friend recommendation system for social networks by LDA model. We will be getting a system in which we will get suggested to the friends with similar life style instead of any random person. This system will be going to discover life styles of users from user data, measures the similarity of life styles between users, and will recommend friends to users if their life styles have high similarity. Different from the friend recommendation mechanisms relying on social graphs in existing social networking services, it extracted life styles from user-centric data collected and recommends potential friends to users if they share similar life styles. The results will show that the recommendations accurately reflect the preferences of users in choosing friends.

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