

# Friendbook Recommendation System

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## ABSTRACT

We are implementing the Friend book a semantic based friend recommendation system for web system. Recommends the friends or connects the friends on their interest, mutual friends, and posts instead of social graph. By taking advantage of sensor rich smart phone as well as web system, Friend book discovers the life styles of users from similarity between interest, post, and location have the high similarity for recommends the friends. we are inspired by text mining, which model's users of daily life's documents from which his/her interest, location, post are extracted by using the clustering and decision making system. We are going to implement this system for web system. We are integrates improve the accuracy of recommendation system the results show that the recommendations system properly give back the preferences of users in select friends.

**keywords— Recommendation System, Social Networks, User Friend Item, Clustering And Decision Making, Hadoop.**

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## I. INTRODUCTION

Few years ago, people typically made friends with other who live or work. Recommendation system are software tools. Friendship is an important part of humans life. Make friends it is easy but make friend with interests is hard task. Many human being have many friend and their attraction also different. Many social network provide recommendation system for friend to friend communication to recommend their friend. The suggestion provided by supporting their users in various decisions making processes, such as location where are lives, as well as interest what music to be listen or what news to read. Recommendation system have to be valuable means for online users to replication with the information overburden and have come to one of the most strong and accepted device in data mining.example-facebook, amazon, twitter. In this recommendation system there are two major types: collaborative filtering based recommendation and content based recommendations[1][2][3].the most important thing in friend book recommendation system to identify or guess the user choice and analysing the user interest on his/her behaviour to generate the personalized friend recommendations.[4]

In friend recommendation system for location [ based means friend is connect from location releted (ex i am in pune ) have used in many social websites example:-facebook, twitter, facebook is social network we can provide the recommendation system with friends of friends methods to recommends new friends to users[5].the main thing in this location based recommendation system friends who have similar interest or another things with self to users. After that another we can use for recommendation system is micro user blog model [6]. This can perform that making friends is an ordinary way of establishing relationship with others social network. In this system friend recommendation system is becoming a very important aspect and attracting attention is visual communities and social network.in social network, micro-blog has increasingly popular but they are not provide good results. Also we have in another way of the online social network has very much demand at market level. The recommendation system is used for product or services to support their decision making process.it is also used to recommend the various resources and user may interested in mining users interest. The recommendation system recommend partner, people etc. And various things like book and songs, photos, application. Networking sites such as Facebook, twitter have such recommendation system to helps users deals with excess information. Recommendation of target user in social networking friend

recommendations of the one of the primary functions of social networking services. Suggesting friends has been done by calculating location in a network or content's on user's profile.

## II. RELATED WORK

The in recommendation systems we can use in number of system perform that is follows:

### 2.1 The similar of micro blog user model of friend recommendation system

In micro-blog based similarity of friend recommendation system we can implement design of the first level we necessary of collect the friend as per requirement of user profile such comment, micro-blog, links. this system is performed by using k-nearest neighbour(knn) algorithm[7] after that there are two types of similarity of we can use for micro user blog model:-

#### 2.1.1 Interaction based similarity

#### 2.1.2 Content based similarity

Interaction based similarity use for the interaction relationship between two characteristics of compute the link power for the users and content based similarity use for the cosine sameness is a calculate of two vectors and then improving the **exactness**.

### 2.2 locations based mobile social networks of friend recommendation system

In this recommendation system is introduces our proceed towards for location based system through recommending the friend. we can implement for social network like Facebook, twitter. we can analysed by location similarity and interest similarity by the **voronoi diagram**. this voronoi diagram is necessary part of to collecting the friends[8][9]. after that comparing the user's interest with another one interest for relationship does not properly work. so does not found correct location for collecting friends .mobile device include such as tablet, notebook, smart phone etc. gps can be used to client to make friend with any device by using internet, the clients get user data via facebook[8][9], and communicate with our server to get the results of the recommendation. This system's recommendation method can be mainly divided into three steps:

#### 2.2.1 Collect data.

#### 2.2.2 Analyse data.

#### 2.2.3. Make recommendation.

through gps, system can obtain the user's location. the source of location data may be from notebook, tablet, smart phone or another one, we transfer the time at that location to the server by using wireless network. we collect user data such as interests from facebook, and then transfer it to

server to save it. when collecting data is done, we next can analyze this data to find the similarity. after that in location based system we can use different techniques like:

### 1] Graph-based induction

a machine learning technique called graph based induction(gbi) efficiently extracts typical pattern from graph data by stepwise pair expansion. we introduce gbi for general graph structured data, which can handle directed/undirected, colored/uncolored graph with/without loop and with colored/uncolored link.

### 2] Link mining

link mining refers to data mining techniques that explicitly consider these links when building predictive or descriptive models of the linked data. commonly addressed link mining tasks include object ranking, group detection ,collective classification, link prediction and subgroup discovery. in this recommendation system there are two algorithm are used:

#### I. Pareto-optimal genetic algorithm:-

Used for to solve multi-objective functions in recommendation algorithms. it is used for simultaneous optimization of multiple objectives where each solution evaluation is computationally and/or financially expensive fast utilizes a new ranking strategy that utilize more information about pareto dominance among solutions about relations.

#### II. Genetic algorithm:-

To developing recommendation algorithms. This heuristic is routinely used to optimization and search problems. it belongs to the larger class of evolutionary algorithms, which generate solutions to optimization problems using techniques inspired by natural evolution, such as inheritance, mutation, selection and crossover.[11]

### 2.3 Friend recommendation in social networks using genetic algorithms and network topology

The last few years mainly used in social networking site .in this capability use only collecting the friends for relationship online social networks through .ex:-mutual friend for social networking application.[10] network based method generally perform well providing quality recommendations. prior work in both industrial and academic sectors are use of the friends of friends method. it is same like a mutual friends. this approach implies a person is more likely to getting a relationship based a common union. however, this does not provide any human iterative components, which is a multidimensional system that may change over time.

Recommendation systems can be divided into two areas: object recommendation and link recommendation. amazon and filpkart companies emphasize object recommendation where products are recommended to users based on past behavioural patterns i.e what bought in previously.

Facebook is most famous social networking sites focus on link recommendation where friend recommendations are presented to users.

## 2.4 Friend Recommendation Techniques in Social Network

User interest is analyze depending upon in which activities user is interested. Based upon this there 4 friend recommendation technique are used.

A. Potential Friend Recommendation in Online Social Network.

B. Shortest Path Based Potential Common Friend For online Social Network.

C. A Social Trust Based Friend Recommendation For Online Social Network.

In this social network recommendation system three technique are used as follows:

**1. Preprocessing:**-The object of the preprocessing step is to extract the sentiments. Preprocessing on the comment is very necessary to improve the performance. It can extract related feature by cleaning input. To provide lexical input and improve performance it is very much important to clean spelling grammar mistake, slang language and emotions .and removing meaningless word transfer abriviation unnecessary punctuation and extra symbol into language, spelling correction.

**2. Semantic Analyzer:**-The domain specific, domain dictionary is used to structuring of the comment. In this step objective sentences (dont play any role) can be neglected.

**3.Sentiment classification:**-All the identified subjective comment are the input of this process. Subjective comment can be classified to identify positive or negative comment. We have to calculate polarity of each comment for this purpose we have touse standard algorithm such ID3 and K-nearest neighbor algorithm etc.[12]

## III.PROPOSED WORK

In this system we can implement our client side data perform to be real time activity and generated life documents to the server. Friend book system is high level of recommendation system. In server side perform those seven operations as follows:

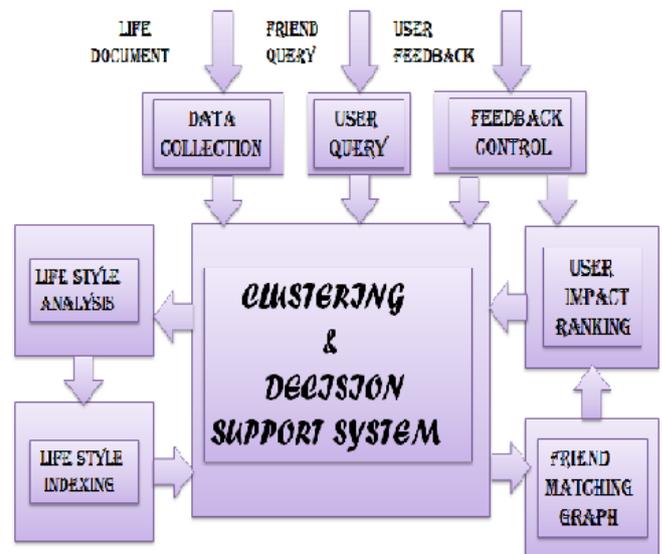


Fig:-Friend book Recommendation System

### 3.1] Data collections

Data collection module perform that input take from user .means we can take from life documents(Intrest,Post,Location,Mutual friends).this life documents are extracted from life style analysis.

### 3.2] Life style analysis

Life style modules are extracted data from the life style of the users.

### 3.3] Life style indexing

This module works on puts the input from the database format of the life style of users (interest, post, location, mutual friends)

### 3.4] Friend matching graph

This module represents the similarity of relationship between from the users. Number of friends has same life style or life documents so they can show the friend matching graph.

### 3.5] User impact ranking

User impact ranking module impact of the users calculated depends on friend matching graph by the user impact of ranking.

### 3.6] User query

This module we can take query from the users and sends the list of the friends from the users responses.

### 3.7] Feedback control

Finally it gives the feedback of the result from the friend recommendation system. These modules, friend

recommendations system can be upgrade by the constancy and reliability

Our proposed solution is also prompt by the recent move forward in smartphones, which have become more and more flavored in people's activity. A smartphone is no longer simply a communication device, but also a powerful and environmental reality platform from which we can extract rich context and content-aware information.

In this friend book recommendation system we use for the hadoop data and computation infrastructure for the storing the result and performing user interest. Another one we can use for the user impact ranking algorithm for the

#### IV. ADVANTAGE OF THE PROPOSED SYSTEM

\* Recommending the friend as per user preferences or user interest, post, location, mutual friend.

\*It is very easily finding the friend in social networks through the recommendation system.

\*It is reliable for the finding the friend for location Based system.

\*It is a real time applications used shortest path. And it is more effective than single source.

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#### VI. CONCLUSIONS

This paper highlights on providing the analysis about the various recommendation techniques developed or proposed. A system is performed the classification of different algorithm in terms of by considering parameter such as exactness, reliability, performance and accuracy. So the survey of algorithms is not generated the output so we are trying to improve the result, exactness of the existing system.

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