A Novel Method Presents Enhancement of Facebook: Book of Friend

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***Abstract*: Using friend book recommends friend to users based on their life styles. A user's daily life as life document. Friend book discovers life styles of users from user-centric sensor data, measures the similarity of life styles between users, and recommends friends to users if their life styles have high similarity.We further propose a similarity metric to measure the similarity of life styles between users, and calculate users' impact in terms of life styles with a friend-matching graph. Friend book integrates a feedback mechanism to further improve the recommendation accuracy. We have implemented Friend book on the Android-based smart phones, and evaluated its performance on both. Different from the friend recommendation mechanisms relying on social graphs in existing social networking services, Friend book extracted life styles from user-centric data collected from sensors on the smart phone and recommended potential friends to users if they share similar life styles. We implemented Friend book on the Android-based smart phones, and evaluated its performance on both small scale experiments and large-scale simulations. The results showed that the recommendations accurately reflect the preferences of users in choosing friends.**

***Keywords*: Algorithms, Measurement, Performance, Reliability, Security, Standardization, Theory, Verification.**

1. INTRODUCTION

The friend book has rapidly grown in recent years.It is same as a facebook. According to Facebook statistics, a user has an average of 130 friends, perhaps larger than any other time in history. One challenge with existing social networking services is how to recommend a good friend to a user. . According to these studies, the rules to group people together include: 1) habits or life style; 2) attitudes; 3) tastes; 4) moral standards; 5) economic level; and 6) people they already know. In our everyday lives, we may have hundreds of activities, which form meaningful sequences that shape our lives. we use the word activity to specifically refer to the actions taken in the order of seconds, such as "sitting", "walking", or "typing", while we use the phrase life style to refer to higher-level abstractions of daily lives, such as "office work" or "shopping". For instance, the "shopping" life style mostly consists of the "walking" activity, but may also contain the "standing" or the "sitting" activities. To the best of our knowledge, Friend book is the first friend recommendation system exploiting a user's life style information discovered from smart phone sensors. We propose a unique similarity metric to characterize the similarity of users terms of life styles and then construct a friend-matching graph to recommend friends to users based on their life styles.

2. LITERATURE SURVEY

2.1 Easy Tracker

To use Easy Tracker, a transit agency must obtain smartphones, install an app, and place a phone in each transit vehicle. Our goal is to require no other input. This level of automation is possible through a set of algorithms that use GPS traces collected from instrumented transit vehicles to determine routes served, locate stops, and infer schedules. In addition, online algorithms automatically determine the route served by a given vehicle at a given time and predict its arrival time at upcoming stops.

2.2 Probabilistic Mining of Socio-Geographic Routines From Mobile Phone Data.

We propose a model, called bag of multimodal behavior,that integrates the modeling of variations of location over multiple time-scales, and the modeling of interaction types from proximity. Our representation is simple yet robust to characterize real-life human behavior sensed from mobile phones, which are devices capable of capturing large-scale data known to be noisy and incomplete. We use an unsupervised approach, based on probabilistic topic models, to discover latent human activities in terms of the joint interaction and location behaviors of 97 individuals over the course of approximately a 10-month period using data from MIT's Realits Mining project.

3. Latent Dirichlet Allocation

We describe latent Dirichlet allocation (LDA), a generative probabilistic model for collections of discrete data such as text corpora. LDA is a three-level hierarchical Bayesian model, in which each item of a collection is modeled as a finite mixture over an underlying set of topics. Each topic is, in turn, modeled as an infinite mixture over an underlying set of topic probabilities. In the context of text modeling, the topic probabilities provide an explicit representation of a document. We present efficient approximate inference techniques based on variational methods and an EM algorithm for empirical Bayes parameter estimation. We report results in document modeling, text classification, and collaborative filtering, comparing to a mixture of unigrams model and the probabilistic LSI model.

4. PROBLEM STATEMENT

Face book relies on a social link analysis among those who already share common friends and recommends symmetrical users as potential friends.The rules to group

people together include:Habits or life style Attitudes Tastes Moral standards Economic level;and people they already know-Most of the friend suggestions mechanism relies on pre-existing user relationship to pick friend candidates.

Existing social networking sevices recommend friends to users based on their social graphs, which may not be the most appropriate to reflect a user's preferences on their selection in real life.

For example, Facebook relies on a social link analysis among those who already share common friends and recommends symmetrical users as potential friends. It does not meet the user neds.It is not appropriate method to recommend friends

5. Proposed system

The feedback mechanism allows us to measure the satisfaction of users, by providing a user interface that allows the user to rate the frie list-Recommended potential friend to users if they share similar life styles. Similarity metric to measure the similarity of life styles between users, and calculate users

1.Impact in terms of life styles with friend-matching graph.We integrates a linear feedback mechanism that exploits the user's feedback to improve recommendation accuracy.

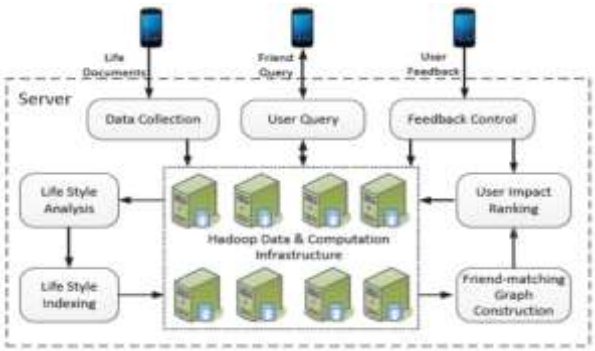
2.Our proposed solution is also motivated by the recent advances in smart phones, which have become more and more popular in people's lives.

Advantages:

1.Friendbook is the first recommendation system exploiting a user's life style information. It use the probabilistic topic model to extract life style information of users.

2.In spite of the powerful sensing capabilities of smart phones, there are still multiple challenges for extracting users life styles and recommending potential friends based on their similarities. First, how automatically and accurately discover life styles from noisy and heterogeneous sensor data? Second, how to measure the similarity of users in terms of life styles

Architecture:-



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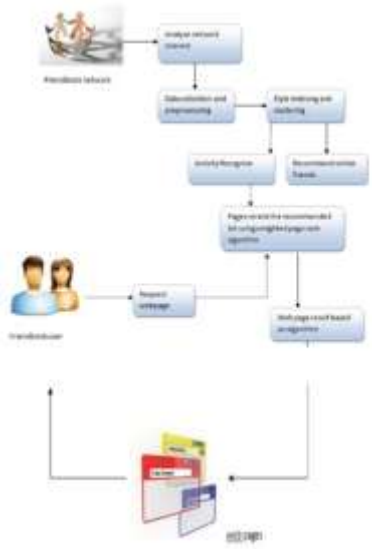
Our proposed system addresses the problem of computing large amount of data and scalability. In our proposed method, we use incremental computation of Page Rank, can be implemented incrementally (or) distributively for large scale evolving graphs. Additionally, we propose a novel algorithm, WeightedPage Rank algorithm which distributes rank score based on popularity of the pages and we set threshold for eachedge & it can represent the similarity relationship of
friend-matching graph.

Friend book discovers life styles of users, measures the similarity of life styles between users, if their life styles have high similarity it recommends friends to users. User's daily life is modeled as life documents, from which users life styles are extracted by using the Latent

Interacting Friend Book



7. Modules:

Life style modeling

Life styles and activities are reflections of daily lives at two different levels where daily lives can be treated as a mixture of life styles and life styles as a mixture of activities. This is analogous to the treatment of documents as ensemble of topics and topics as ensembleof words. By taking advantage of recent developments in the field of text mining, we model the daily lives of users as life
documents, the life styles as topics, and the activities as words.

Friend matching graph construction

To characterize relations among users, in this section, we propose the friend-matching graph to represent the similarity between their life styles and how they influence other people in the graph. Based on the friend-matching graph, we can obtain a user's affinity reflecting how likelythis user will be chosen as another user's friend in the network. We define a new similarity metric to measure the similarity between two life style vectors. Based on the similarity metric, we model the relations between users in real life as a friend-matching graph. The friend-matching graph has been constructed to reflect life style relations among users.

8. CONCLUSION AND FUTURE WORK

Friendbook would be scalable to large-scale systems. Third, the similarity threshold used for the friend-matching graph is fixed in our current prototype of Friendbook. It would be interesting to explore the adaption of the threshold for each edge and see whether it can better represent the similarity relationship on the friend-matching graph. At last, we plan to incorporate more sensors on the mobile phones into the system and also utilize the information from wearable equipments (e.g., Fitbit, iwatch, Google glass, Nike+, and Galaxy Gear) to discover more interesting and meaningful life styles. For example, we can incorporate the sensor data source from Fitbit, which extracts the user's daily fitness infograph, and the user's place of interests from GPS traces to generate an infograph of the user as a "document". From the infograph, one can easily visualize a user's life style which will make more sense on the recommendation. Actually, we expect to incorporate Friendbook into existing social services.

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