Individualized Travel Recommendation by Mining People Ascribes and Travel Logs Types from Community Imparted Pictures

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Abstract- Leveraging community imparted data for personalized recommendation is one of the active research problems since there are rich contexts and human activities in such explosively growing data. We focus on personalized travel recommendation and show promising applications. We conduct personalized travel recommendation by considering specific user profiles or attributes. We propose a personalized travel recommendation model considering users' attributes as well as their group types and the knowledge mined from travel logs .We investigate the association of people attributes such as time, popular landmarks, etc., We also recommend the nearby location suggestions in mobile using android. *Keyword* – data, travel recommendation, location suggestions.

I. INTRODUCTION

With the prosperity of social media and the success of many photo-sharing websites, like Flickr and Picasa, the volume of community-contributed photos has increased drastically. Such large-scale user-contributed photos contain rich metadata such as tags, time, and Geo-locations (or Geo-tags), etc. These overwhelming amounts of context data, though noisy, are tremendously useful for many multimedia applications including annotation, searching, advertising and recommendation.travel recommendation is especially attractive to many researchers because of the importance and the intrinsic relationship with people's everyday lives. For the generic recommendation, it contains the suggested travel information the destination given by the user when he/she is planning a trip; Millions of human sensors capture different aspects of the spatial-temporal information. In order to mine the travel Knowledge automatically, a focus of recent interest is the use of usercontributed resources, including the textual travelogues (i.e., blogs or logs) and photos taken during trips Through the photos gathered from various communities, such rich person's attributes and travel group types can be automatically detected and provide other important aspects in terms of travel demographics. Rather than the plain travel frequencies from or to certain locations, we can further investigate the demographic distributions in these trips via the statistics of detecting people attributes and group types. For the sparseness issues, some travel landmarks may lack rich historical travel photos for analysis; therefore, the statistics are less reliable. To deal with this problem, we utilize smoothing methods to relieve the deficiency; for example, considering travel location, popularity in the whole city for background smoothing we are conducting experiments on more people attributes and adjust the probabilistic model for such diverse attributes to address more capabilities in personalization. Besides, the more competitive recommendation models need to be investigated as well. We also want to expand our model with more contexts such as travel durations, traveling seasons.

We believe such location- and individual-aware models are promising for further applications such as advertisement. To our best knowledge, this is the first research work that uses the additional contexts in the photo, i.e., people attribute and travel group types, to support the personalized recommendation framework. We leverage these automatically detected people attributes in the largescale photos for social media mining and uncover the differences in travel behaviors across demographics.

- We propose to predict the travel group type of a photo stream by using the person's attributes and social contexts shown in these photos.
- We propose a probabilistic personalized travel recommendation model considering users' attributes as well as their group types and the knowledge mined from travel logs. Such scheme is promising to apply in a mobile environment.
- We conduct the experiments on 19 major cities in the world and show that using people attributes a travel group type have the potential to improve the personalized travel recommendation, especially in the location where people have diverse choices of the next stops.
- We investigate the association of a person's attributes and more contexts (e.g., time, popular landmarks) and show the benefits for profiling human activities.



II. EXISTING SYSTEM

In the existing system solely consider the travel logs and ignore the richness of a person's attributes in photo contents. However the previous works only focus on the statistics of travel logs such as the popularity of locations, but neglect the important and rich dimension of a person's attributes.

III. PROPOSED SYSTEM

We propose a probabilistic personalized travel recommendation model considering users' attributes as well as their group types and the knowledge mined from travel logs. Such scheme is promising. We investigate the association of a person's attributes and more contexts (e.g., time, popular landmarks) and show the benefits for profiling human activities. The first research work that uses the additional contexts in the photo, i.e., people attributes and travel group types, to support the personalized recommendation framework. We leverage these automatically detected people attributes in the large-scale photos for social media mining and uncover the differences in travel behaviors across demographics. We also recommend the nearby location suggestions in mobile using android.

IV. RELATED WORK

Trip mining and recommendation have been shown important in recent years. Generally, the data sources for learning to recommend can be roughly classified into three categories: GPS trajectory data, travelogues (i.e., blogs), and Geo-tagged photos. GPS trajectory data obtained by GPS receivers are mainly used at the early stage. Zheng utilizes GPS trajectory data to extract the interesting locations, classical travel sequences and provide a personalized friend and location recommender using the similarity of users in terms of their location histories. The main obstacle for trajectories-based method is that the data are not easy to be obtained from a large number of people.Some studies provide location-based travel recommendation which analyzes the blogs to obtain triprelated knowledge.Emphasizes on the mining of city landmarks by a graph-based method. Proposes a probabilistic topic model which discovers topics from travelogues and then represents locations with appropriate topics for further destination recommendation and summarization. The goal is to automatically recognize and rank the landmarks for travelers. They use Geo-tag information, metadata of photos and user knowledge in Yahoo! Travel Guide to identify and rank landmarks for any locations specified by the travelers.

The travelogue-based method has a difficulty in determining the exact location of Travelogues which are usually unstructured and contain much noisy metadata. They only play a role of destination recommendation which merely shows the information about a location. Recently, there is an increasing tendency to adopt the information from Geo-tagged photos. Crandall systematically adopts large-scale photo database to discover important landmarks. They evaluate on many cities and indicate that the time-stamped and Geo-tagged photos will construct the typical pathways of peoples' movements. Arase define the problem of photo trip pattern mining and show an application with which users can search frequent trip patterns given some preferences (e.g., destination, visit duration, trip theme). Although they also provide a similar route planning framework, the recommended level is intercities, while our work is based on the intra-cities level for a one-day trip recommendation in a specific city. Most of all, we can further recommend travel routes satisfying the designated user profiles (e.g., gender, age, race or even travel groups such as family, friends) by leveraging people attributes in the user-contributed photos; for example, the most popular one-day trip in Manhattan for Asian girls.

Another similar work is which uses Geo-tagged photos and textual blog information on landmark generation, path discovering, and route planning. They merge incomplete paths inside a destination to suggest tourists with the typical travel paths and duration in a destination. For route planning, they model as a graph analysis problem and use dynamic programming as the solver. We also have the similar processes for extracting travel patterns from pictures. The major differences between our work and other related studies are that we bring in the concept of people attributes in the travel photos and consider this demographic information with the movements of photographer into a personalized travel recommendation framework. Besides, we have fundamentally different definitions on the travel patterns. That is, the travel patterns in this study are measured according to the facial attributes (i.e., gender, age, race) extracted from the travel photos. By this novel aspect, we can mine more human attributes for effective travel personalization. For example, we will have the travel preferences about Caucasian males or Asian kids. Additionally, in the previous studies the travel patterns are defined over travel objects such as landmarks, events only.

In the next section, we will demonstrate that such automatically detected people attributes are informative for mobile travel recommendation. The preliminary results have been published in and the contributions are presented as a whole. The extensions in this work include automatically predicting the travel group type of a photo stream by using the people attributes and social contexts shown in these photos, extending personalized recommendation framework feasible for group travelers, expanding the observation data from 4million to more than 10million photos, which involves 19major cities around the world and investigating the associations of people attributes and more contexts (e.g., time, popular landmarks) for profiling human activities.



Fig 2: The sampled attribute-oriented travel movements in our data set in Manhattan. In this example, the width of an arrow denotes the travel frequency between the two locations originating from Rockefeller Center. The color regions are proportional to the percentages of genders male (blue) and female (red). Through the minded knowledge (e.g., the popular landmarks, the distribution of attributes associated a travel route), we can suggest the best route for travelers according to their attribute profile.

V. MODULES

There are three modules are available in this project they areSocial Networking Profile Creation, Travel recommendation site creation, Personalized Mobile recommendation.

a) Social Networking Profile Processing:

In our first module we are creating a social networking profile that is specifically concentrated on users pictures. Users will upload their pictures in to the social networking site. Users are willing to share photos for the purpose of organization and (social) communication – especially for travel photos. Meanwhile, such photos can be treated as the *social pixels* by travelers' cameras among travel locations. It is convincing to gather demographics by detecting important people attributes from such freely available user-contributed photos.

b) Travel Recommendation Site Creation And Processing

In our second module we are creating a travel recommendation site . And the public pictures uploaded from the social networking profile is taken by the travel recommendation site and process the images for getting the information that are tagged in them. Using Geo-tagged and time-stamped photos from social media as a resource for travel information mining have demonstrated many promising results. The large amount of photo trajectories not only reveals the users' travel movements, but is also promising for mining the demographic information about the locations by detecting people attributes of the faces in the photos. Promising results of facial attribute detection, which has reached reasonable accuracy for further applications. Therefore, we propose an approach to enable personalized travel recommendation by directly and automatically mining the parameterize factors from the community-contributed photos- especially emphasizing the (automatically) detected people attributes from the photos

c) Personalized Model Recommendation:

In this work, we utilize people attributes of the travel preference of users. Therefore, we construct a mid-level feature bank based on those facial components for providing better generalization capability to deal with various facial attributes. From the images extracted from social reworking profile, and by considering particular user profile we will recommend travel destinations for the user. Probabilistic personalized travel recommendation model which exploits the automatically mined knowledge of the travel photo logs as well as the detected person attributes and travel group types in photo contents. By informationtheoretic measures and experiments we confirm that person's attributes are effective for mining demographics for travel landmarks and paths, and thus greatly benefiting personalized travel recommendation. The nearby location suggestion in mobile also implemented in this module



VI. CONCLUSIONS

In this work, we propose a probabilistic personalized travel recommendation model which exploits the automatically mined knowledge of the travel photo logs as well as the detected people attributes and travel group types in photo contents. By information-theoretic measures and experiments with more than10 million photos from 19 major cities, we confirm that people attributes are effective for mining demographics for travel landmarks and paths, benefiting and thus greatly personalized travel recommendation. Meanwhile, people attributes are orthogonal to the travel logs alone and can further vield more satisfactory results especially in more challenging recommendations. Moreover, we propose to exploit social contexts in travel photo streams predicting their travel group types. The experiments demonstrate that travel group type prediction can substantially improve group recommendations by mining travel preferences of different group types.