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Android Based Travel Route Recommendation Using Real Time Positioning

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ABSTRACT-We are going to develop an android application. Our application gets the input like source and destination point from the user according to their requirements. On the basis of the user requirements the application gives the output like shortest path from the source to destination, and also displays the different places in between the source to destination, the total cost required to travel, in which season the trip will be conducted, and also our application gives the Pop-Up messages likes hospitals, hotels, petrol pumps etc. while user travels from the source to destination.

KEYWORDS: Data Communication, Design Styles, Computer System Organization, Parallel Architecture, Computer Communication Network, Network Operation.

I. INTRODUCTION

Data mining is the process of analyzingdata from different perspectives and summarizing itinto useful information - information that can beused to increase income, reduce costs, or both. Datamining application is one of a number of analyticaltools for analyzing data. It allows users to analyzedata from many different dimensions or angles,categorize it, and summarize the relationshipsidentified. Technically, data mining is the processof finding correlations or patterns among dozens offields in large relational databases .Recommender systems are mostly defined as system that e-commerce websites exploit to recommend products and provide customers with information to facilitatetheir decision-making processes.Theyimplicitly assume that we can map userneeds and constraints, through appropriaterecommendation algorithms, and convertthem into product selections using knowledgecompiled into the intelligent recommender.Knowledge is extracted fromeither domain experts (content- or knowledge-basedapproaches) or extensive logsof previous purchases (collaborative-basedapproaches). Furthermore, the interactionprocess, which turns needs into products, ispresented to the user with a rationale thatdepends on the underlying recommendationtechnology and algorithms. For example,if the system funnels the behavior ofother users in the recommendation, itexplicitly shows reviews of the selectedproducts or quotes from a similar user.

In modern days there as an emerging trend most travel companies prefers onlineservices. The rapid growth of online travel informationincreases the challenges for tourists also increases. The touristwho has to choose from a large number of available travelpackages for satisfying their user needs. The travel companies haveto keep in mind tourist preferences to increase their profit. Sowhat travel companies do, they use smart travel services.The best travel services are nothing but a recommendersystem, who recommends different packages for tourist. Better techniques in recommendation system will provide better benefits to the companies and better services to user. Many companies use social media and the success of lots of photo-sharing sites, like Flickr and Picasa,the volume of community-contributed photos has increaseddrastically. Such large-scale user-contributed photos containrich metadata such as tags, time, and

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geo-locations (orgeo-tags), etc. These overwhelming amounts of context data,though noisy, are tremendously useful for many multimediaapplications including annotation, searching, advertising andrecommendation. Personalized POI recommendation isabsolutely efficient in order to help the users filter outvenues that are uninteresting according to their own taste,reduce the displeasing experience, and save their time indecision making. Collaborative filtering (CF) andContent-based (CB) are the most commonly usedmethods of personalized travel recommendation.CF,which is otherwise referred to as social filtering, filtersinformation by using the recommendations of otherpeople.

We mainly focus on the personalized recommendationframework to provide a context-aware recommendation system(i.e., mobile travel recommendation). The personalization isachieved by adopting specific user profiles with the automaticallydetected people attributes.

II. LITERATURE SURVEY

D. Chen, C. S. Ong, L. Xie [1] In this paper the tours to travelers studied various solutions of POI recommended route planning. If we consider task of recommending user of POI's that uses information about POI's and route. In this approach contain the various sources of information it can represent as machine learning algorithm. It can learn as past behaviour information of POI learn the start and end point of tour.

B. Zheng, N. J. Yuan, K. Zheng, X. Xie, S. Sadiq, X. Zhou [2] In this paper, it can contain as location positioning technique and popular location sharing services, semantic enriched data have been unprecedentedly available. While finding POI it can studied user locations and query keyword in past years. In this paper study the problem of keyword search in massive semantic trajectories. The approximate semantic trajectory returns the k trajectories that contain relevant keyword query. The main difference between AKQST and convential spatial keyword is that there is no query location AKQST that means the search cannot be localized.

W. Wang, H. Yen, L. Chen, Y. Sun, X. Zhou [3] In this paper specify the rapid development of location based social network (LASN's) spatial recommendation has a important meaning help to people to show the attractive and interesting venues and events. Especially when users travel out of town. This recommendation is very challenging as compare to traditional recommender system. A user can visit only limited or particular number of items, leading to very sparse user-item matrix. Most of item contain the user can visited short distance places from where he/she is lives.

J. Bao, Y. Zheng, M. F. Mokbel [5] Learns the preferences of the users from her location history and models the preferred ideas with a weighted category hierarchy (WCH) and further approximately calculating the similarity between the two user's preferences by calculating the similarity of WCHs between the two users. This method adds to user preference modeling and managing the data sparseness problem for location recommendation.

A. Cheng, Y. Chen, Y. Huang W. Hsu, and H. Liao [6] Focuses on the customized recommendation framework to provide not solely a context-aware recommendation system however also a route planning application before the journey is initiated. The personalization is achieved by adopting specific user profiles with the automatically detected people attributes (e.g.,gender, age and race) along with the trips undertaken.

M. Clements, P. Serdyukov, A. De Vries, and M. Reinders [7] Predicts similar locations based on the user's geo-tags in geographically remote location and view statistical enhancements over all users that visited largest cities and provides an example of efficient recommendation based on an artificial user profile and define a resemblance between the geo tag distributions of two users based on a Gaussian kernel convolution. The geo tags of most of the similar users are then combined to relocate the popular locations in the destined city personalized for this user.

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III. PROPOSED SYSTEM

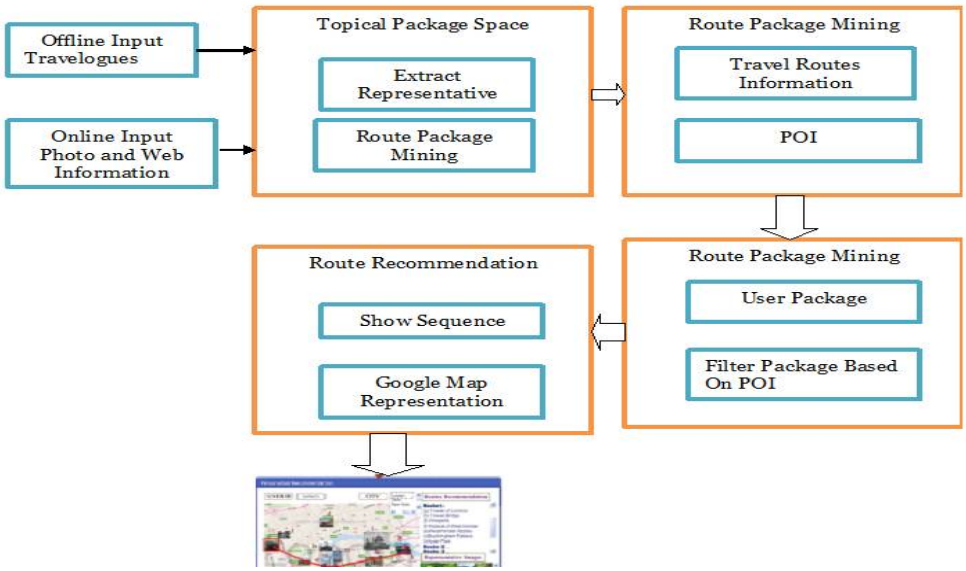

Figure1. System Architecture

This paper represents a system architecture which is combination of User input, travelogue mining, user topical package model mining, route topical package model mining. .In this system user take the in form of online services. When user want to travel we give the input source to destination. Then first we remove the meaningless symbols. We map the textual description of user community photos. After travelling the user get the feedback in forms of photos.

In this system architecture there are four main blocks User input, Travelogue mining, User topical package model mining, Route topical package model mining.

i. User Input:-

We take the input from user in the form of online. When user want to travel then user will give the online input as source and destination point, and then they will get shortest route. When user travel from source to destination then at that time user will capture the photos of different places which will be visited then that photos are use as a feedback for other user.

ii. Travelogue Mining:-

To mine representative tags, first we remove meaningless symbols and stop words. We then use term frequency inverse document frequency (TF-IDF) method to get the score of each tag. Tag score is used to reflect the importance of a tag to the topic. We define the i-th tag's score of the k-th topic as -i;k. The TF part reflects the frequency the i-th that appear in the k-th topic. The IDF part reflects how much categories contain the i-th tag.

iii. User Topical Package Model Mining:-

We map the textual description (tag) of user's community photos to the topical package space to presents the user's travel preference of different topics, which is defined as user topical interest distribution (U).We assume that if a user's tags appear frequently in one topic and less in others, the user has a higher interest towards this topic.

iv. Route Topical Package Model Mining:-

To save the online computing time, we mine travel routes and the attribute of the routes offline. After mining POI's, to construct travel routes, we analyze the spatio- temporal Structure of the POI's among travelers records. First, were move the users who only upload few photos or only take photos at one POI. Second, to each user, we construct the spatio-temporal structure of the POI's according to the “data taken”. POI with the earlier time stamp is defined as the

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"in". POI with a later time stamp, on the contrary, is defined as "out". Then we count the times of "in" and "out" from POI to others by the records of all user's after filtering. A greedy algorithm is then applied to find the time sequence of this POI's as. Thus, we finish famous routes mining and obtain famous routes of each city.

IV. MATHEMATICAL MODEL

S = (I,P,R,O) Where**,**
S is the system
Input(I)={I1,I2}
I1: Input query
I2: Online / Offline dataset
Process (P)={P1,P2,P3,P4,P5,P6}
P1: Topical package space
P2: Route package mining
P3: DOM parser
P4: Filter package based on POI
P5: Show sequence
P6: Google map representation
R=Set of rules applied on the system during it's processing
Output (O)={O1,O2}
O1: Output of travel sequence recommendation
O2: Shortest route on map

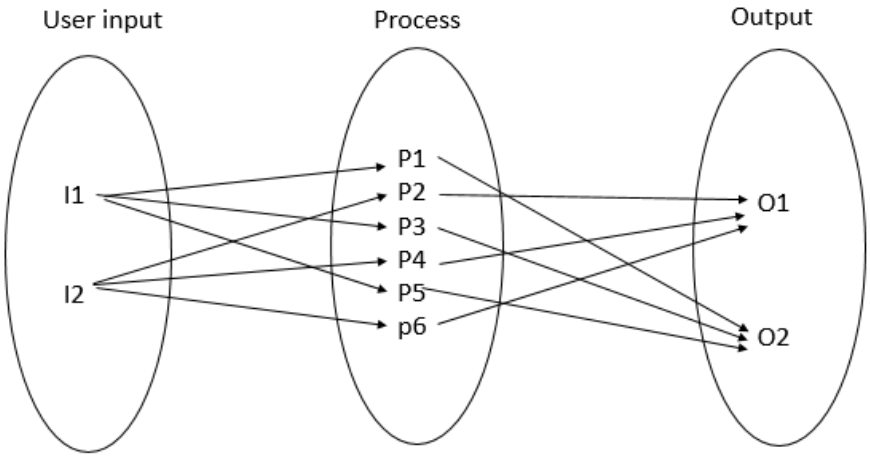

Figure2. Venn diagram

V. CONCLUSION

A personalized travel sequence recommendation system using learning topical package model from big multi-source social media: travelogues and community-contributed photos. The advantages of our work are 1) the system automatically mined user's and routes' travel topical preferences including the topical interest, cost, time and season, 2) we recommended not only
POIs but also travel sequence, considering both the popularity and user's travel preferences at the same time.

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