ISSN(Online): 2320-9801
ISSN (Print) : 2320-9798

International Journal of Innovative Research in Computer and Communication Engineering

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Website: www.ijircce.com

Vol. 6, Issue 3, March 2018

Novel Approach to Recommend the Places by Using User's Social Media Preference from Facebook

Yash Pabuwal, Shwet Saoji, Lalit Mishra, Shubham Shinde, Prof. B. N. Vyavahare

Dept. of Computer Engineering, Smt. Kashibai Navale college of Engineering Vadgaon, Savitribai phule Pune University, Pune, India

ABSTRACT: A personalized travel sequence recommendation system to uses users Facebook data Interest (POIs), topical interest, cost, time and season to recommend places . This work propose an uses Topical Package Model which learns users travel preferences from text descriptions associated with geo-tagged photos. This paper presents a personalized travel sequence recommendation from both travelogues andcommunity-contributed photos and the heterogeneous metadata (e.g., tags, geo-location, and date taken) associated with thesephotos. Proposed approach is not only personalized to user's travel interest but also able to recommend a travel sequence rather than individual Points of Interest (POIs). Topical package space model consists tags, the distributions of cost, visiting time and visiting season of each topic, is mined for user travel preference and travel routes.System uses travelogue and community-contributed photos. We map both user's and routes' textual descriptions to the topical package space to get user topical package model and route topical package model (i.e., topical interest, cost, time and season).User can apply filter for city like historical,Religious,Entertainment,Garden.User can view mined places route on map.

KEYWORDS: Geo-tagged photos, Social media-Facebook API, Multimedia information retrieval. Online interest, Travel recommendation,

I.INTRODUCTION

Automatic travel recommendation is amain issue in both research and industry. Big media, especially the flourish of social media (e.g., Facebook, Flick, Twitter etc.) offers great opportunities to address many challenging problems, for instance, GPS estimation and travel recommendation. These data are not only usefulfor reliable POIs (points of interest) mining [4], travel routesmining, but give an opportunity to recommend personalizedtravel POIs and routes based on user's interest.There are two main challenges for automatic travelrecommendation. First, the recommended POIs should bepersonalized to user interest since different users may prefer different types of POIs. Second, it is important to recommend a sequential travelroute (i.e., a sequence of POIs) rather than individual POI. It is far more difficult and time consuming for users to plan travel sequence than individual POIs. Because the relationship between the locations and opening time of different POIs should be considered. Existing studies on travel recommendation mining famoustravel POIs and routes are mainly focused onfrom four kinds of big social media, GPS trajectory, check-in data geo-tags and blogs (travelogues).

II.EXISTING SYSTEM

Existing system on travel recommendation mining famous travel POIs and routes are mainly from four kinds of big social media, GPS trajectory, check-in data, geo-tags and blogs (travelogues. However, general travel route planning cannot well meet users' personal requirements. Personalized travel recommendation recommends the POIs and routes by mining user's travel records. The most famous method is location-based collaborative filtering (LCF). To LCF, similar social users are searched based on the location co-occurrence of previously visited POIs. Then POIs are ranked based on similar users' visiting records.

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Disadvantages of existing system:
1) Route mining with automatically user travel interest.
2) User interest on mining but without considering other attributes.

III. REVIEW OF LITERATURE

1.We propose a dynamic topic model (DTM) and matrix factorization (MF) based travel recommendation method. A DTM is used to obtain the temporally fine-grained topic distributions (i.e., implicit topic information) of users and locations. In addition, a large amount of explicit information is extracted from the metadata and visual contents of CCGPs, Check-ins, and POI categories datasets. The information is used to obtain user-user and location-location similarity information, which is imposed as two regularization terms to constraint MF [1].
2.We presents a probabilistic approach, which is highly motivated from a large-scale commercial mobile check-in data analysis, to ranking a list of sequential POI and POIs .The approach enables users to plan consecutive activities on the move[2].
3. In this paper, we focus on the problem of *time-aware POI recommendation*, which aims at recommending a list of POIs for a user to visit at a given time. To exploit both *geographical and temporalinfluences* in time-aware POI recommendation, we propose the Geographical-Temporal influences Aware Graph (GTAG) to model check-in records, geographical influence and temporal influence. For effective and efficient recommendation based on GTAG [3].
4. In this paper, an author topic model-based collaborative filtering (ATCF) method is proposed to facilitate comprehensive points of interest (POIs) recommendations for social users. In our approach, user preference topics, such as cultural, cityscape, or landmark, are extracted from the geo-tag constrained textual description of photos via the author topic model instead of only from the geo-tags (GPS locations) [4].
5.In this paper, to generate visual word groups by mean-shift clustering. To improve the retrieval performance, spatial constraint is utilized to code the relative position of visual words. We proposed to generate a position descriptor for each visual word and build fast indexing structure for visual word groups [5].
6. In this paper, we propose a data-driven framework to discover functional zones in a city. Specifically, we introduce the concept of latent activity trajectory (LAT), which captures socioeconomic activities conducted by citizens at different locations in a chronological order [6].
7. In this paper, we focus on sentimental attributes of location and propose a POI (Point-Of-Interest) Mining method. Firstly, we use SPM (Sentiment-based POI Mining) algorithm to mine the POIs (Points-Of-Interest) with obvious sentimental attributes, and then recommend the POIs to users by using SPR (Sentiment-based POI Recommendation) algorithm [7].
8. In this paper we present an approach for summarizing a collection of landmark images from diverse viewpoints [8].
9. This paper proposes an unsupervised image GPS location estimation approach with hierarchical global feature clustering and local feature refinement. It consists of two parts: an offline system and an online system [9].

IV.MOTIVATION

There are many people who travel to different places. Generally before travelling these people have to go through a lot of websites to search for reviews about the places, ratings, how to travel. A lot of time is wasted in doing this, and hence we thought about developing a system that could reduce their efforts. This project focuses on developing a system that will recommend them places they might be interested in visiting by keeping a track of their interests, the places they have already visited and the ratings collected about the place from different websites. First, the recommended POIs should be personalized to user interest since different users may prefer different types of POIs. Second, it is important to recommend a sequential travel route(i.e. sequence of POIs)rather than individual POI. It is far more difficult and time consuming for users to plan travel sequence than individual POIs. Because the relationship between the locations and opening time of different POIs should be considered.

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V.PROPOSED SYSTEM

SYSTEM OVERVIEW-

Propose the system automatically mined user's and routes' travel topical preferences including the topical interest, cost, time and season. Admin login to system and can add places for each place in city. He can view the user's details as well as each user's interest. User register to the system with its Facebook developer access token that used to get users Facebook data and from that we are mining user's preference by Aho-corasick algorithm .To generate Facebook token user have to create developer account. User can add travelogs detail and his community contributed photos. Travelogs details are used to get user preferred season for travelling .From dataset travelogs are mined to get time season cost for each place. When user enters the query to search places use get details according to his preference which is get at the time of registration. User can give rating, comment to each place. User can get optimized package according to his preference of similar user. User can view places recommendation by Rating, Online interest, Preference, activity, Season .He can view his package that contain best season, cost, and preference package detail. User can view online interests package. User can view places on map. User can view multiple preferences package detail. User can view places on map.

ADVANTAGES-

1 It recommends places by mining user online point of interest and show package by mining user interest from Facebook data.
2 It also give recommendation using similar user interest and according to that gives recommendation to user.
3Applies filter on searching places.

PROPOSED SYSTEM ARCHITECTURE-

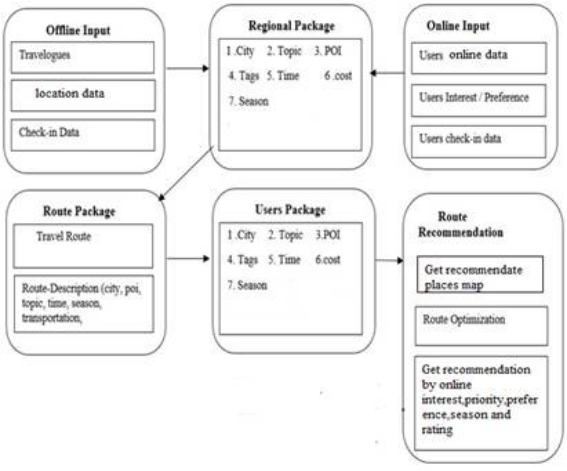

Fig.1: System architecture

Offline Input: This input is taken from users who are not available on any social networks. Input consists of Location data and Check in data. The user may even add travelogues in offline mode.
Online Input: Majority of this input is mined from user's social network accounts. A data mining algorithm is applied in this part of the architecture. Other than this, user can add interests/preferences for more accurate search results.Regional Package: The input from offline as well as online blocks is then passed to the regional package. The

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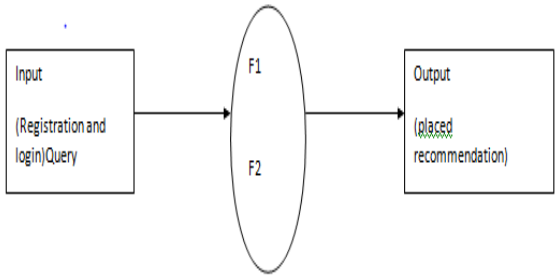
recieved input is then analyized to show the critical factors of the tour such as City, topic, POI, tags, time, cost, transport and accommodation.
Route Package: Once a regional package is selected by the user, the system analyses the route for the journey.
This route crafts a way through cities, POI, etc. It also considers the time, season and transportation available.
User Package: As the Route package is determined, the system uses its resources to find the perfect package for the user. These User Packages consists of Tour City, POI's, time of travel, cost for the trip, season best to visit.
Route Recommendation: After the data is processed in the first four blocks, the system recommends the route for the travel. This is possible using algorithms like Optimized Routes Planning (OPT) and Ranked Famous Routes Planning (RFA).
System working:The system we proposed is a personalized POI sequence recommendation system which could automatically mine user's travel attributes such as topical interest, consumption capability and preferred time and season.

V. MATHEMATICAL MODEL



Let us consider S as a system for automatically recommend places.
S= {……
INPUT:

- Identify the inputs

F= {f_1, f_2, f_3 ….., f_n| 'F' as set of functions to execute commands.}
I= {i_1, i_2, i_3…|'I' sets of inputs to the function set}
O= {o_1, o_2, o_3….|'O' Set of outputs from the function sets,}

S= {I, F, O}
I = {Query submitted by the user, i.e. query}
O = {Output of desired query, i.e. Places recommendation}
F = {Functions implemented to get the output, i.e. Aho-corasick algorithm, POI Mining}

1. Point of interest of each user:

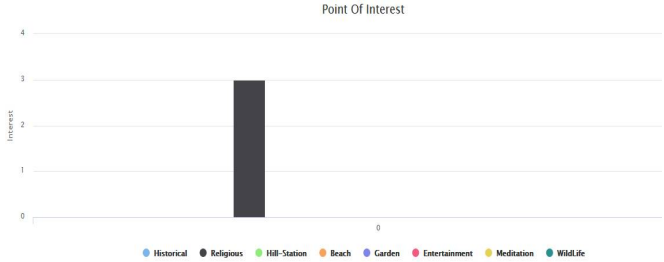


Fig.03]Graph show point of interest of each user for each preference.

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2. Searching city of each season:

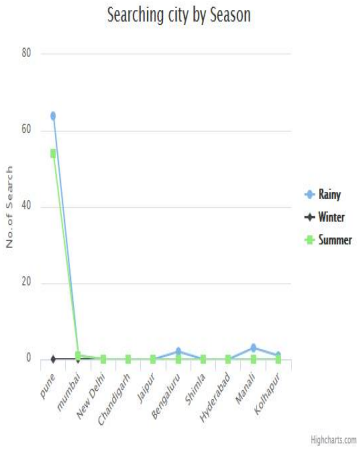

Fig 04 Graph shows no. of searches of each city in particular season.

VI. CONCLUSION

This paper proposed a personalized travel sequence recommendation system by learning regional package model from social media with Facebook. It work on check-in and user post on Facebook. Proposed system automatically mined users and routes travel topical preferences including the regional interest, city, topical interest, cost, time and season. System recommended not only POIs but also travel sequence and considering users travel preferences, activity, and online interest at the same time. It Provides map of travel sequence. System mined places based on user POI. User can add his own travelogues in system and also store his private photo in system

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