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Efficient Route Recommendation System Based On Keyword Using Candidate Route Generation And Travel Route Exploration

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ABSTRACT

Social media like Facebook and Flicker are most popular in these days, so that sharing of images and visited records by users can be easy. The system aim to make an easy trip planning based upon travel history of users records. Users have their own views, requirements and preferences for their planning trips. So that here introducing text description as keywords instead of limited queries. Also different set of travel route recommendations are needed. Large amount of recorded data mining and ranked preferences are the main expanded version of already existing system to get an automatic system.Therefore, proposing an Efficient Travel Route Recommendation System Based On Keyword that uses data from users trip and travelling records. So in this system for the classification of places of interests uses a keyword extraction module, for accurate and matching with query keywords. An algorithm called route reconstruction is developed to make route of candidate preferences. To get the results, the system used Skyline routing concepts. And for the verification of genuinity of rated locations here introducing NER method.

Key words : Candidate Route Generation, Keyword Aware Representative Travel Route (KRTR), Location Based Social Network (LBSN), Name Entity Recognition (NER), Travel Route Exploration.

1.INTRODUCTION

LBSN services [10], [8], [12] allow users to perform checking and share their recommended data with their friends. When a person is travelling, photos and tag information will be the check-in data. Mobility prediction and traffic management are the main areas were this method plays a special role.

Method here showing giving importance to planning trip and compare different travel recommendations of users (figure 1). Previous works giving an interface [15], [18], [28], [29], [32] for the easy trip planning by giving location and total time for the same by user. But system check the specified preferences with keywords.

The ranking method of existing systems [20],[43],[44],[45] is based on popularity and the number of routes uploaded. This is the results of query. Because of this method , the works already existed given a scoring function and for this the score is according to its special features and mostly the results for the queries will be having routes of similar types.

Ranking is too similar in different systems but the skyline query results give a different results. Usually the ranking results of existing systems are by popularity and number of times the route is recommended. This existing ranking systems will give scoring function and each score is based on routes.

Social media like Facebook and Flicker [19],[21],[25], [26] are most popular in these days, so that sharing of images and visited records by users can be easy. The system aim to make an easy trip planning based upon travel history of users records.

Users have their own views, requirements and preferences for their planning trips. So that here introducing text description as keywords instead of limited queries. Also different set of travel route recommendations are needed. Large amount of recorded data mining and ranked preferences are the main expanded version of already existing system to get an automatic system.

This project will collect data from social media and find several scoring features and recommending a special and unique data set of routes for travel. After this KSTR joins and develop a route for the candidate from segments of routes (figure 2). As an addition to the resources it uses different passive data like photos were tagged by GPS. This will help KRTR to look forward efficient and scalable large inputs.

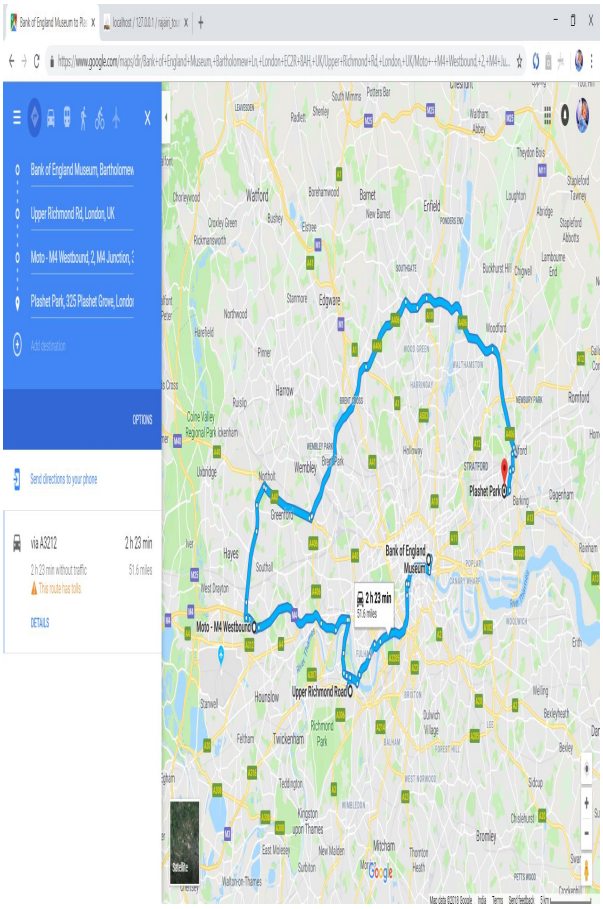

Figure.1: Travel route path recommended by proposing system

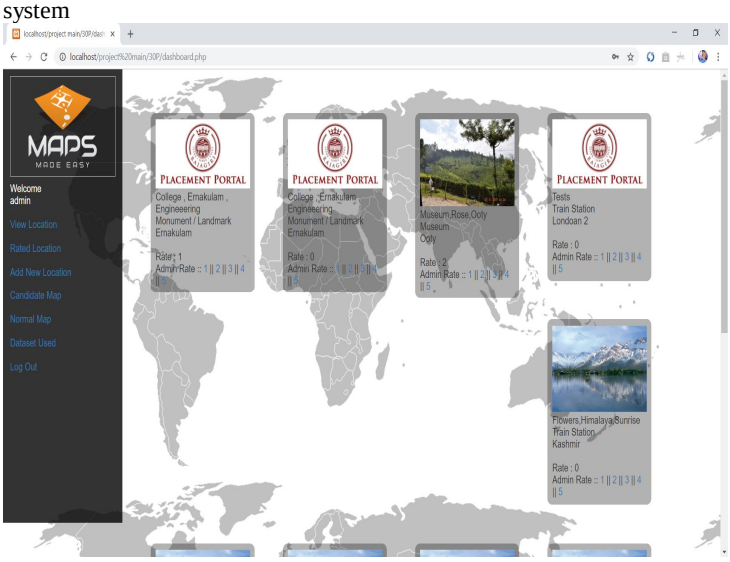

Figure.2: Places of interests from rated locations in users screen.

2.LITERATURE SURVEY

In the past decade, different authors with their own advantages and disadvantages based on travel route recommendation systems are presented. Some of the works are reviewed and discussed below. The [2] first paper surveyed here giving route choices (figure 3). It's a multi model system considers different situations and characters of individuals. Considering situations for route recommendations system are existing ones in different projects. Transportation methods like biking will mainly depends on the features like climate and traffic blocks. As an importance of this paper introduces the FAVOUR method to give situation specific route recommendations. starting with stage of initialization which provides limitation in information like personal data. Second based on preference priority making. Third is the profile is frequently modified.

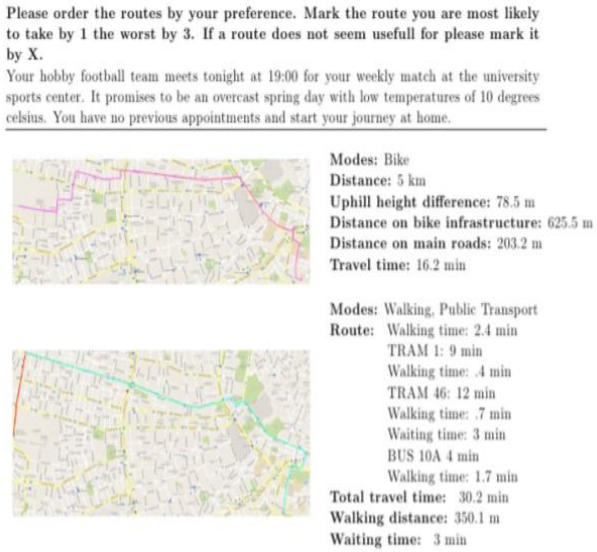

Figure.3: Sample from Survey

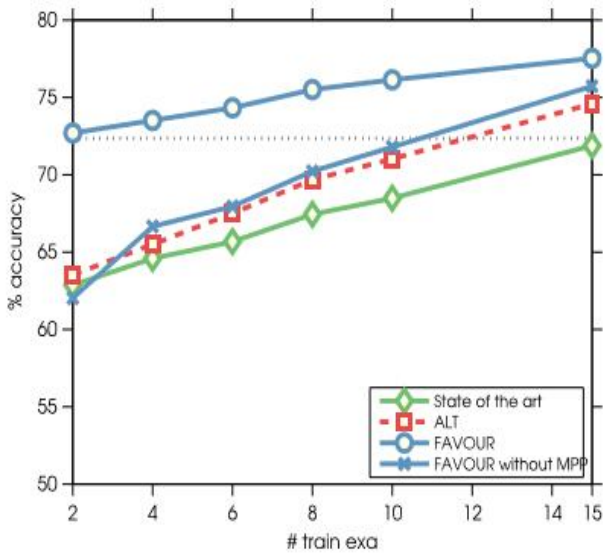

Figure.4: Curves of Different Learnings

Benefits of Transfer Learning[2], this method of learning uses a large number of training examples in increasing way of numbers of training set. The learning curves for different methods are shown in the above figure(4).it uses various training examples.

The paper [3]showing an sequence of travel recommendations which are personalized individually. It using both travelogues and [33], [34] community photos, tagged images, location, and date etc. Unlike existing approaches, this approach is recommending a travel sequence were will not only taking individual interests but also the time of visiting and seasons etc, so that the travel gap between different locations can be avoided. The different travelogues and photos[30], [38] from different social medias were taking into consideration. Contributions of this paper includes these points(1)Personalised travel recommendation system, (2)instead of individual places of interest here chooses personalized places of interests, (3)ranking of routes based on packages, (4)package of topical model, (5)It will help to avoid user preference and attribute gap.

Figure.5: System with Route Personalization"[3].

In the system [4] propose a LBSNs give people, an interface to share their updates about current place and give space to review writing. The digital footprints are collected from different shared. The approach uses data collected to models and will find user preferred places by using filtering method collaboratively.

Figure.6: Main challenges of route recommendation based on personalization[4]

The [5] large growth of urbanization and life leads no time to manage routes. The best route management will help to minimize the time and energy of cost. Because of the different mobile devices users will get different way of management of routes. Here as an initial step the three dimensional tensor is creating which represents the basic knowledge of trip. And as a next step collecting the time of visiting. This system uses Kullback Leibler divergence to measure the quality of a route. Finally proposing a route generation algorithm from the expansion of classic longest path algorithm.

Contributions of this above system [5]shows a different way of route recommendation instead of time sensitive method. Here uses coarse-grained visiting time. Proper visiting time for the required and preferred locations based on personalization is the main speciality of this system.

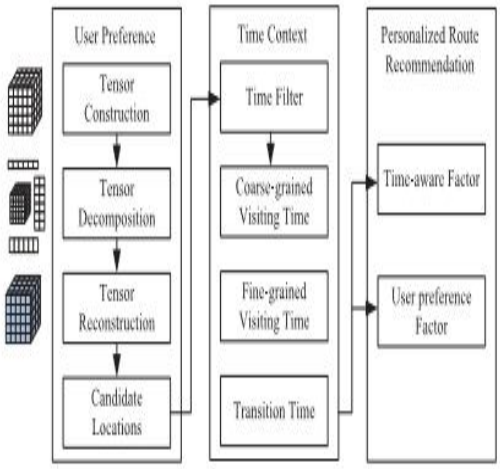

Figure.7: The framework of FineRoute[5].

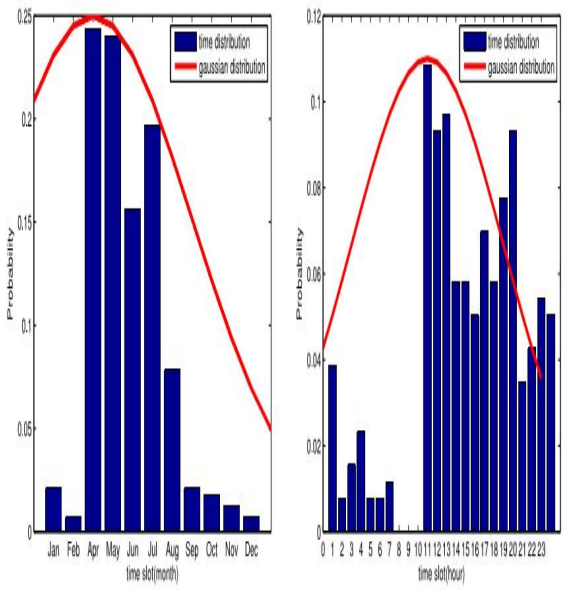

Figure.8: Divergence between distributions of coarse grained and time[5].

3.PROPOSED SYSTEM

Social media like Facebook and Flicker [19], [21], [25], [26], [30], [38] are most popular in these days, so that sharing of images and visited records by users can be easy. The system aim to make an easy trip planning based upon travel history of users records. Users have their own views, requirements and preferences for their planning trips. So that here introducing text description as keywords instead of limited queries.

Also different set of travel route recommendations are needed. Large amount of recorded data mining and ranked preferences are the main expanded version of already existing system to get an automatic system. Therefore, proposing an Efficient Travel Route Recommendation System Based On Keyword that uses data from users trip and travelling records. So in this system for the classification of places of interests uses a keyword [6], [7], [35], [36], [37] extraction module, for accurate and matching with query keywords. The system computing all the possible keywords shared by users and going to develop an "Efficient Travel Route Recommendation System Based On keyword" to retrieve several recommended routes. The dataset for the route formed from the collection of raw shared data.

This project will significantly uses[9], [22], [23], [27], [40] different data for the scoring features, and these data are from shared reviews and all. Then the system will constructs travel routes from different segments of routes were generated in candidate route generation method. As an addition to the resources [41], [42], [47] it uses different passive data like photos were tagged by GPS . This will help KRTR to look forward an efficient and scalable results.

The contributions based on base paper are summarized as follows (1)The framework called KRTR which [16], [35], [37] users can include keywords and other questions.(2)Check-in data are mined from passive checking. The data include GPS-tagged photos.(3) A route reconstruction algorithm is using to segmenting the route based on different features of locations. (4)Skyline query is for the multidimensional result and the greedy algorithm is for the efficiency of the proposed system.

The framework comprised of basically two modules and four sub; offline pattern discovery and scoring module and the online travel route exploration module. Online module have the entire dataset ,initially analysing the places of interests and the keywords . online module will help as an user interface for the quering and keyword matching online module will retrieve the range and time and stay in time period. Then matching score will compute to get how much it is connected to the keyword. Then the online module will give back the apt and efficient routes using the feature scores .

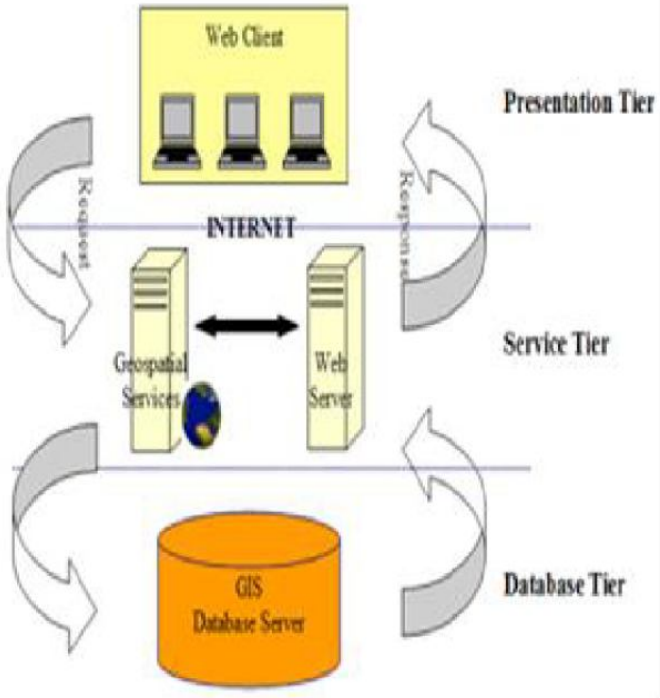

Figure.9: Architecture Diagram [31].

Offline module will compare the places of interests and find the meaning and semantics of keywords all the three (geo specific, Temporal and attribute)were comparing. Online module will give or act as an user interface in between user and the system. After getting time and range ,this module compute the data within the time period and get a matched score between keyword and route .And then it develops from historical trajectories. The design flow is shown in figure 10.

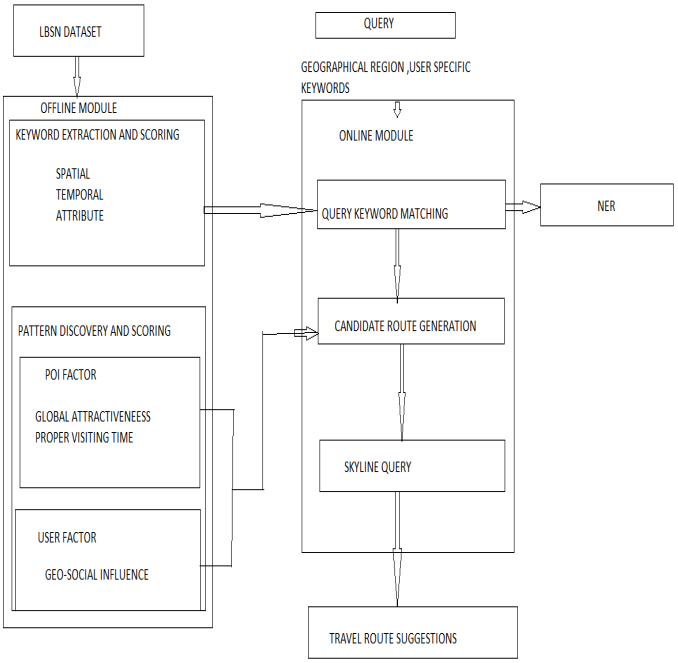

Figure.10: Design Flow

4.IMPLEMENTATION DETAILS

In this proposing system the feature scoring method is based on pattern discovery. Ranking of each places of interests is giving from the scoring method. The reviews of each places of interests will provide the preferences for each location and its recommendations.

Semantic meaning of keywords is extracted by keyword extraction module, then will compare with dataset and from there it will uses it and generate the candidate route. The keywords are quantified using geo-specific and temporal meanings. The temporal keywords are like sunset ,sunrise etc.

Passive Check-Ins, here extraction is based on synonyms and extracting a semantically similar or equivalent words. There is a scoring or ranking method adopted as a metrics. This is the phase one of this check-in method. Second phase is a collective extraction using clusters of photos and all. Ranking and scoring of features helps to better recommendations of routes. It will help to get globally attracted places and their preferable time and their social influence.

The segmented routes from candidate route generation help to combine routes with large varieties. The candidate routes are developed from historical trajectories. Here first uses pre-processing then use that result and help to reconstruct the route, then at last using a DFS process to find all possibilities. Here using skyline routes[11], [13], [14], [17], [24],[39], [46] and keyword dataset. The NER system is for the genuinity identification of all recommended locations.

The project checks the accuracy of an algorithm to create a planner for effective, efficient, and simple keyword aware recommendation system. Hence the project has to be done on a very large amount of data. These require a large processing power and RAM space. The data which are used to identify matching among keywords will require large collection of user historical routes, almost all words. Hence this data should also require a separate storage. Thus a larger storage and computational requirement is required for successful completion of the work. Need to reduce the computational cost by recording the queries.

5.CONCLUSION

In this work aim to make an easy trip planning based upon travel history of users records. Users have their own views, requirements and preferences for their planning trips. So that here introducing text description as keywords instead of limited queries. Also different set of travel route recommendations are needed. Large amount of recorded data mining and ranked preferences are the main expanded version of already existing system to get an automatic system. Therefore, proposing an Efficient Travel Route Recommendation System Based On Keyword that uses data from users trip and travelling records. So in this system for the classification of places of interests uses a keyword extraction module, for accurate and matching with query keywords.. Three algorithms using in this project. Candidate map generation, route reconstruction and greedy algorithm. At last the verification of genuinely by NER method.

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