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Smart Travel Scheduler: An Expert System for Tourists: A Survey

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Abstract: Now a day's tourism industries are more profitable. Everyone wants to plan tours for their relaxation. But the majority of people face the issue in time management and improper schedule. So they need some system which helps them to schedule their trip with proper time management. Such a system can help the user to get all the information related to the place.
This paper gives a survey of various methods used by the researcher to enhance the traveling system for tourist location tracking and abstract view of the system which we are going to implement.
Keywords: Travel Scheduler, Trip Location, Nearest Visiting Places, Place Recommendation.

I. INTRODUCTION

Sightseeing is one of the fastest growing Industries [6][1] in India. If a person wants to make a trip to some new place which he is unaware about that place, then the user will search on the internet about all places. As he is unaware about that place there are possibilities of getting wrong information about that place.

Previously approximately the entire the travel related bookings and other travel related terms like accommodations or for traveling options such as buses, trains, etc. were done manually [6]. This process is extremely hectic for the customers that every time they have to find the bookings and do all the processes related to travel manually.

To overcome this problem the concept of smart traveler scheduler are implemented. The proposed system helps in scheduling the trip with time constraint for the users. The user can use the android application.

In the proposed system users only enters the place which he wants to visit and it will display all the details about that particular place and their nearest visiting places. The system helps user too simply by knowing about that place instead of searching the entire internet for the trip he is going to make. The system also recommends nearby visiting places to the user. After that system generates the schedule of the trip with the time constraint. Admin can also manually add the place details like their GPS locations, nearest visiting places, visiting time etc. Also, they manage the place information and user accounts. The collaborative filtering is used to recommending near places. The Dijkstra's algorithm calculates the time and distance for the entered place.

II. LITERATURE REVIEW

Vaishnavi Bheemarao Joshi et al. [1] developed a web application that can be made in Karnataka for people for the people who want to visit the places they are unaware off and having the desire to travel around. A web application classified various tours on their type. Using this system user can avoid searching the whole internet for the trip, he is planning for. Also, a tour manager/guide can manually book the trip for the user which encloses lodging, food and travel expenses depending on the user's requirements.

Yu-Ting Wen et al.[2] suggest an proficient Keyword-aware Representative Travel Route framework that bring into play knowledge extraction from users' historical records and social interactions. The keyword extraction module classifies the POI-related tags, for effective matching with query keywords. A route reconstruction algorithm is also implemented to route candidates. The extensive experiments are conducted on real location-based social network datasets, which give good performance compared to state-of-the-art works.

Xiaoyan Zhu et al.[3] suggest FineRoute, a personalized and time-sensitive route recommendation system to mine users' first choice and convenient time to provide routes information. Three factors that user' first choice, suitable visiting era, and moving time are taken concerning for the route planning. Kullback-Leibler divergence is used to measure the eminence of a direction for appropriate visiting month and the suitable visiting time. A route generation algorithm is used by lengthen the classic longest path algorithm.

Wan-Ting Hsu et al.[4] reflected on some parameter related to the travelling like , such as the visiting time information of POIs and the set of query points, in retrieving travel routes. The system can fulfill two requirements i. e.: 1.) Travel direction should contain all those query points specified, and 2.) travel routes should be within the spatial range Q. Skyline travel routes are returned as the query result. Skyline travel routes could give more multiplicity in the query result of trip route recommendations.

Z. Chen et al.[5] provide the solution on difficulty of searching the k Best-Connected Trajectories from a database by means of a set of locations with or without an sequence restriction. A simple IKNN algorithm is used to analyze the efficiency of different variants. As a conclusion, the BF-O achieves the best query performance although involving a risk of high memory usage. The pure DF-C algorithm give assurance for low memory expenditure performs poorly inefficiency. Therefore, additional devise the DF-D-M and DF-D-M-O is used to get better the DF-C for fewer R-tree node accesses and shorter query time, and finally, their performance is theoretically and experimentally confirmed near to that of the BF.

K.Palaniammal et al.[7] proposed an approach for semantic search in e-tourism which gives a sorted order of tourism domain which makes the search and retrieval time for the user to retrieve the data easier. This system also has a planning feature which plans the trip according to the user's requirement.

Ali Akbar Niknafs et al.[10] proposed a method on case-based reasoning approach where the best suggestion for a new tour is constructed based on an old tour and also the specifications that are given by the user and also on their similarity and the suggestions that are provided from the previous tour.

III. PROPOSED APPROACH

This system facilitate in scheduling the trip with time constraint for the users. The user can use the android application. The application users only enter the place which they want to visit and it will display all the details about that particular place and their nearest visiting places. Figure 1 gives the architecture of the proposed system followed with detail working of the system.
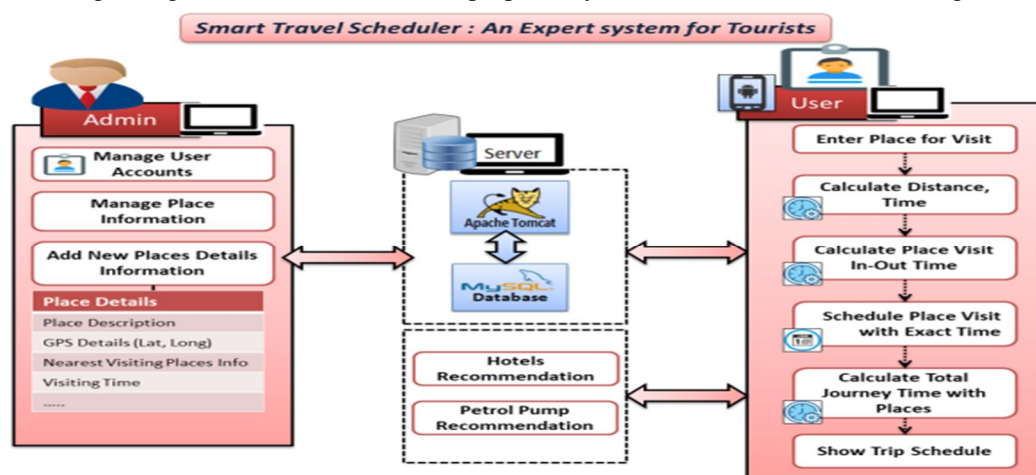

Figure 1: System Architecture

A. Users Activities
1) *Places Recommendation:* The system will provide a recommendation for new tourist places to the users.
2) *Explore New Trip Locations:* Any user can search for new interesting locations that he wants to visit. The user will just need to enter the trip location and the system will provide all the necessary details to a user about that place.
3) *Estimate Distance and Time for The Trip:* Users should be able to see the estimated time and distance required for visiting the trip location (In-Out time of the place).
4) *Explore Nearest Visiting Places:* The system will provide details all the details about that particular place and their nearest visiting places.
5) *Schedule The Trip:* Users should be able to schedule the trip/tour with exact time using the Android Application.
6) *Display Trip Schedule:* Users will be able to view and track the trip schedule and will receive notifications on their Smartphone devices.

B. Administrative Activities
1) *Manage Users Accounts:* Admin should be able to manage user's accounts which include user's details, users Authentication, etc.
2) *Manage Places Information:* Admin should be able to manage information about various places, adding new places with details like the description about the place, GPS location, nearest visiting places, visiting time of the places, etc.

IV. CONCLUSION

This paper gives the survey of different methods used by the researcher to implement the Travel Scheduler system. In the proposed system users only enters the place which he wants to visit and it will display all the details about that particular place and their nearest visiting places. With the help of this system user can easily find out the place instead of searching the whole internet for the trip he is going to make. The system also recommends nearby visiting places to the user. After that system generates the schedule of the trip with the time constraint. Admin can also manually add the place details like their GPS locations, nearest visiting places, visiting time etc. Also, they manage the place information and user accounts. We have two techniques that are Dijkstra's algorithm and collaborative filtering. The collaborative filtering is used for recommend near places. The Dijkstra's algorithm calculates the time and distance for the entered place.

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