

SMART TOURIST GUIDE FOR PUNE CITY

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Abstract

Now-a-days Mobile is very necessary thing. So the mobile basis applications are very useful for the users. And the other hand travelling is very pleased by everyone. People love travelling. So these two things mobile and travel can be combined together. Thus developing android app for the mobile will be useful for the users who are interested in travelling in pune. This app is specifically for Pune city.

The system also focuses on developing an android application which can be used for recommending places to the user based on his current GPS location. The system will work on category and time span field for showing the places. The objective of the system is to extract information about a place and recommend user their place of interest based on system algorithm.

System will schedule a trip for the user in their given time. System will provide different categories for visiting places as like historical places, gardens etc. It also provides the route for the places using Google API. It will also show the public transport of the suggested route to user. System consider the time when visitor travel for visit the places. It will notify when time exceeds which is given by visitor. It also notifies the new place for visit when time remains. It suggests

snack centers, hotels near by the visitor. In addition user can extract the information about place by scanning QR code of that particular place.

Keywords- Google API, Android SDK, SQL, GPS, QR Scanning.

Introduction

Use of smart phones increased in day to day life because of advanced technology. Due to easy access to internet on handhelds use of location base application on mobile phone have been in trend. By tracking the GPS location list the nearby places to visit for a specific distance. For example, user can view historical places, museums, gardens etc. when in arrange of few kilometers to these places. The usage of such applications steadily increasing the number of check-in spots have also been increasing in the recent years which creates a lot of confusion amongst the users as which place to select for visit. Therefore, 'Smart Tourist Guide for Pune City' is developed to reduce the confusions of the users and helps them by recommending their place of interests.

The system will recommend the places to the users according to user's given time duration and

category. The system recommend the hotels, snack centers, coffee shops etc. When user's time exceed for the visiting one place then the system will provide the notification time exceed. If time is remaining from user's given time duration then system notify to user or suggest to user for visit another new place which nearby to the user GPS location. By providing the popup notes, system will be more helpful for user. Information will be provided for the particular locations of that place by scanning QR codes.

Motivation

1. To propose a framework for a Location based traveler recommender system
2. System will find out recommendation list of user choice places.
3. User gets QR code by scanning code user can extract information about particular place to view its details.

Literature Survey

1. Laura Sebastia, Inma Garcia, Eva Onaindia, Cesar Guzman "e-Tourism : a tourist recommendation and planning application", 20th IEEE International Conference on Tools with Artificial Intelligence in 2008.

This paper represents e-Tourism tourist recommendation and planning application to assist users on the organization of tourist agenda. This system shows list of visiting places as per his area of interest. This list takes into account by the user demographic classification, the user likes in former trips

and the preferences for the current visit. Then, system arranges the suggested places as per the temporal characteristics and system also determines how and when to perform the recommended activities as per user's choice.

2. Sunil Singh, Rajwant Gupta, Sheena Panjabi, Ashish Tribhuvan, Jaya Jeswani "Place Recommendation System" Student, IT, Xavier Institute of Engineering, Maharashtra, India.

The project developed an android application for recommending places based on the current location. This system use user based collaborative filtering algorithm which evaluates places based on user's current location, check-ins and preferences. This algorithm is used for recommending nearby and popular places. For the purpose of recommendation, system uses a self-driven database for information of places which incorporates real-world check-in spots.

3. Prof. P. A. Manjare, Miss P. V. Ninawe, Miss M. L. Dabhire, Miss R. S. Bonde, Miss D. S. Charhate, Miss M. S. Gawande "Recommendation System based on tourist attraction" International Research Journal of Engineering and Technology (IRJET) in 2016.

In this paper user-based tourist attraction recommender system is developed. In which the recommender system developed as an online application which generates a list of places for the tourist. In this system modern

technologies of classical recommender system, such as collaborative filtering are used for the effective result. On the basis of collaborative filtering principle, the recommendation process of tourist attractions divided into three steps, representation of user information, and generation of neighbour users and the generation of attraction recommendations. In order to calculate the similarities between each user, the cosine method is used during the process of the generation of neighbours. And then the recommendations of attractions are generated according to the visiting history of the user's neighbours.

4. Somanna P D, Suraj S Rao, Vinaykumar, ShuvamPrakash, G S MadhanKuma, “ **Smart City Traveller**”, International Research Journal of Engineering and Technology (IRJET) in April 2018. In this context, this application aims to identify the main computing needs to support the improvement of tourist point of promotion for the traveler, by the means of a mobile application proposal. However, most of recent tourist and travelers think that they want to know the local charm peculiar to the land as well as a famous sightseeing spot. In order to achieve this, writers propose a system that can automatically show a sightseeing route and plan in set time.
5. Akil H. Sayyad, Santosh A. Shinde, “**Augmented Reality Based Mobile Tour**

Guide System” International Research Journal of Engineering and Technology (IRJET) in May 2016.

This system presents a mobile tour guide system with augmented reality, called Tour Guide System. The system enables tourists to have more informative, interactive and user specific experiences with augmented information by tracking the contents of an off-line tour booklet. For a standalone mobile system demanding low computational cost, an image matching technique. This system is also applicable to many more areas like education, entertainment industries.

6. Shan Xue, Song Liu, “**Algorithm Research of Individualized Travelling Route Recommendation Based on Similarity**” Matec web of conference 22, 01013 (2015).

The system proposes improved algorithm by combining multi-similarity and the element similarity algorithm which give more better results than traditional system. The results which are generated from the experiments, shows the improved algorithm which is the advantages of this system in comparison with the traditional system.

7. Ying Xu, Tao Hu, Ying Li, “**A Travel Route Recommendation Algorithm with Personal Preference**” 2016 12th International Conference on Natural Computation, Fuzzy

Systems and Knowledge Discovery (ICNC-FSKD).

In this paper, an improved personalized route recommendation algorithm has been proposed to improve the calculation of recommendation matrix by adding the path real time congestion situation and the preference level of spots. The path planning for tourism is a challenging problem, due to some personalized requirements, such as the travel time and budget, and other resource constraints, including the capacity of the spot, the congestion at the spot or on the link, etc.

8. G. Hemanth Kumar, Dr B SrinivasRao, **“Open Source Solution for Mobile GIS and Location Intelligence”** International Research Journal of Engineering and Technology (IRJET), 2017. The application provides contents related to latest tourism information, favourite attraction points of interest, or offers from some service providers.

9. ZhiyangJia, Wei Gao, Yuting Yang, **“User-based Collaborative Filtering for Tourist Attraction Recommendations”**2015 IEEE International Conference on Computational Intelligence & Communication Technology.

In this paper user-based tourist attraction is recommendation system is developed . The system is constructed as an online application which is capable of generating a personalized list of preference attractions for the tourist. On the basis of collaborative filtering principle, the recommendation process of tourist

attractions divided into three steps, representation of user information, generation of neighbour users and the generation of attraction recommendations. In order to calculate the similarities between each user, the Cosine method is adopted during the process of the generation of neighbours.

10. D. Gavalas, M. Kenteris, C. Konstantopoulos,G. Pantziou, **“Web application for recommending personalised mobile tourist routes”** Published in IET Software on 3rd September 2011.

The system deals with the problem of deriving personalised recommendations for daily sightseeing itineraries for tourists visiting any destination. The authors approach select the places based on the user's and suggest better route to visit nearby places for each day of traveling. The places of potential interest are selected based on user preferences. In this paper method enables the planning of customised daily personalised tourist itineraries considering user preferences, time available for visiting sights on a daily basis, opening days of sights and average visiting times for these sights.

Paper Name	Ideas						
	Mobile GIS	Recomm- endation	GPS	Locat ion identi fication	Rou ting Algo rithm	Info rma tion Filte ring	Collab orativ e Filteri ng
Recommendation System Based on Tourist Attraction.		✓					✓
e-Tourism: a tourist recommendation and planning application.		✓					
Augmented Reality Based Mobile Tour Guide System.	✓					✓	
Smart City Traveller.	✓		✓	✓			
A Travel Route Recommendation Algorithm with Personal Preference.		✓			✓		
Algorithm Research of Individualized Travelling Route Recommendation Based on Similarity.		✓			✓		
Information Filtering: Overview of Issues, Research and Systems.						✓	
User-based Collaborative Filtering for Tourist Attraction Recommendations		✓					✓
Location-Based Mobile Tour Guide Services Towards Digital Dunhuang.	✓	✓	✓	✓			
Web application for recommending personalised mobile tourist routes.	✓	✓					
Recommendation and Location Based Android Application for Tourist.	✓	✓	✓	✓	✓	✓	✓

return is big superiority. In the existing User guide system, user is necessary to input an individual visit. Therefore, it is necessary for the traveler to prepare for sightseeing spot beforehand. Traveler can only visit the places which he is aware of. If the place is popular then only user can check it on a traveler book or the Internet. However, if it is not a famous place, but there are a lot of attractive places the traveler will not be aware of it.

Disadvantages of Existing System

1. Recently lots of tourist application of mobile. But the application on these mobiles works slow due to continues acquisition of the bandwidth[3].
2. Besides, once paper-based booklet is printed and distributed, it is hard to update frequently so the latest information cannot be provided for the Users[3].

Existing System

In the existing system, it is necessary for userto input the name of the destination exactly. If sightseeing place is decided users do not have any problem (Google Maps)[71]. But, if the user wants to explore new places which he is not aware of then this system is not desirable. Current system shows only famous and the well-known locations around the user. But, the user has to choose the places he wants to visit and search routes for each place separately[7][2]. Furthermore, Google map displays it only to the route of the destination. On the other hand, in this system, the point that can propose a sightseeing route and sightseeing plan in the planned time to

Proposed System

An android application is proposed for user to efficiently manage their trip based on the time spam and category fields. Firstly with the help of mobile application system will find current location of user then asked user for the time spam and category, where times pam must have to be in hours as well as not more than 24 hours i.e. one day and category references by the place, which type of places user want to visit. Then based on information entered by user, system will find the nearby places to visit. For showing route and places Google API will be used. The public transport route is shown for places and system

will also suggest the snack center and restaurants for lunch, dinner and snacks.

User can get the information by scanning the QR codes fixed on the different locations of that particular place.

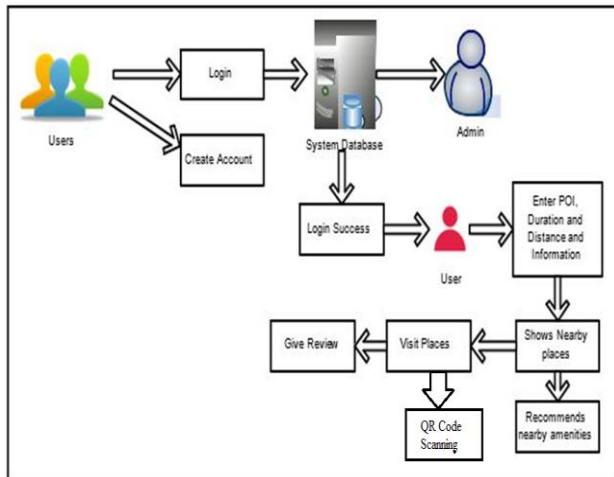


Fig. System Architecture

Advantages of Proposed System:

1. User can decide their journey duration and places that can be visited within that duration.
2. User can get information about place with QR scanning of that particular place.
3. Also recommends User at every point where the hotels, restaurants and local transports are that user might need on the way of travel.

Conclusion

The proposed system is a location and recommendation base for user. With the Development of android application user can get all information about places to visit based on their point of interest and duration of travel. All the information of user visit can be stored into database so that they can revisit the same places or the same places of interest again in future. The

information about that place is also shown by scanning QR code fixed at that place.

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