

# Targeted Advertising Application using Location – based Social and Spatial Data

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**Abstract:-**The world today is totally dependent on the mobile phones and especially the services which are provided by the different Applications. The application works on the recommendations and reviews by the user. The upcoming newly application which has more innovative services will be used up by the crowd. We are preparing a model which collects the social as well as spatial data. The model is based on location based services. The important feature is that we are clustering number of services in one Android application for providing better efficiency to the user. The system is totally based on GPS i.e. Global Positioning System.

**Keywords:-** Targeted Advertisements, Android, Mobile Phones, GPS, Social Recommended System.

## I. INTRODUCTION

Smart Phones provides a helping hand to the humans. Nowadays phone is not only used for communication but is used for many purpose like watching videos, capturing images ,storing data ,recommendations, but most importantly it is used for updating status on social media. Our application provides five different location based services which runs on GPS (Global Positioning System). GPS is based on the 24 artificial satellites which are placed at fixed orbit in the space and they send the useful information in the form of signals to the earth. Advertisements plays a key role in providing services to the user based on their choice and so that the product is made available in that targeted location. The best feature of our android application is that we are providing a security to the women's. If any women are found in distress she has to just click dashboard button and that SMS will be provided to her beloved ones with the location and also the image of the user. The Android Application is straightforward to access just by doing the Registration on the system.

## II. PROBLEM DEFINITION

Location based services provides a services to the user anytime and also anywhere. In business we can easily do the marketing based on behavior of the user and behavior can be analyzed by social data that can be collected through social networks. But many a times a user is afraid to share their particular location and henceforth services can't be provided

to them. So we are proposing a model which will collect the data through social sites for eg: Facebook, Instagram etc and also provide the user their security with the help of spatial data. Clustering many services together in the model and providing it to the user is the main gene of our Application. Location based marketing as some users are hesitated to share their location. So our application is based on social and spatial data to provide location based services.

## III. LITERATURE REVIEW

*A. Social Tagging for Personalized Location Based Services. [1]*

In this paper, author proposed the advertisement which is targeted based on product requirements. This is achieved by peeping into the social account of the user.

*B. Personalized Recommendations Based on Users Information Centered Social Networks. [2]*

In this paper, author proposed the availability of highly recommended based networks which are working on recent geographical satellites.

*C. Gateway to the Internet of Things. [3]*

In this paper, author proposed the advertisement which are published on the networks are easily available to the customer if and only if he is sharing the location.

*D. Context-Aware Recommended Systems for Learning: a Survey and Future Challenges. [4]*

In this paper, it is explained that there are many services available on the basis of social data but there are yet not many model based on social and geographical data.

## IV. METHODOLOGY

In the existing system based on different computing functions many overwhelming services are provided to the users. She/he gets confused on account which is the better ones. This can be easily manipulated using recommendation process and reviews can also be helpful in this process. Suppose if any kind of data or advertisement is published on the social network, user based on their choices will review it accordingly. All that data can be collected and is analyzed for providing services. Large data can be collected through social sites and that can be concluded in the useful information

forum which will be required for the future actions. In recommendation system collaborative filtering plays a crucial role. People who had review something in the past should accept it in the future as well. Based on matching the similarity services are provided and if the user is not accepting it then it is time-wasting and also services cannot be provided to them on some case. In this user has also involved that based on the likes and dislikes using social media we can provide the services.

A. Proposed Architecture with Suitable Description

➤ Proposed System

The solution that we are proposing in the model is that user can get better services in that particular area. User’s spatial data can be collected through GPS system and their needs

can be collected through social data (profile). Using both data i.e. social and spatial we provide deals and offers to the user.

• Features

- ✓ The user if suppose passing by shopping mall will get a special offer notification.
- ✓ The user can manually enter the budget in a particular location and henceforth restaurant and cafe will be highlighted on a map.

➤ Flowchart

It is shows flow of the system. The diagram shows how our application is work step by step procedure shown by this diagram.

• Budget Manipulation Outcome(Hotel & Restaurant)

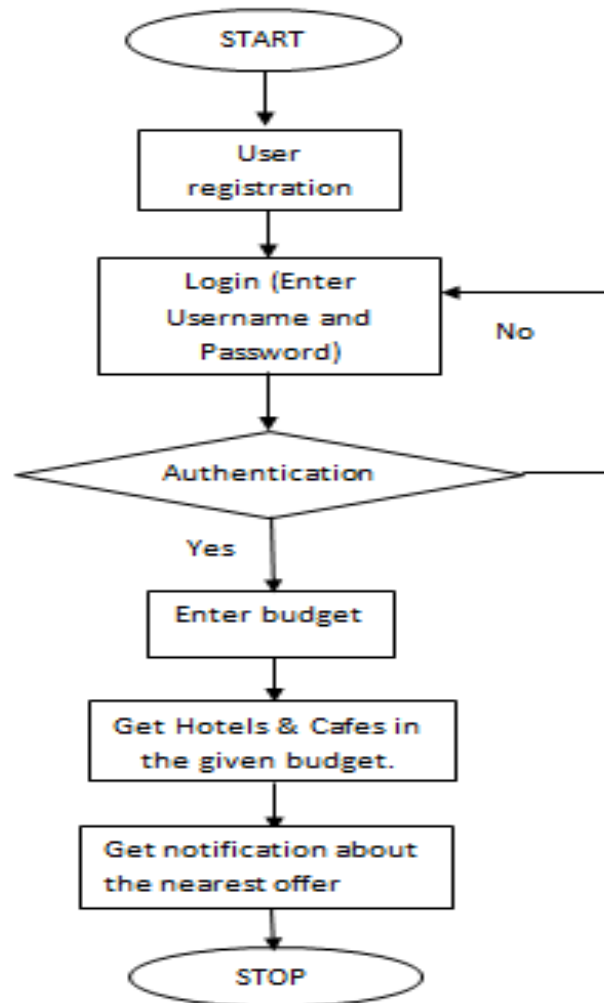


Fig 1:- Budget Manipulation & Special Offer Notification (User) Flowchart

In the above flowchart how the first feature work step by step procedure is shown by this diagram. It is for users used in this feature user registration is done after successfully

registered. User can login the page after login user can entered budget for hotel according their budget nearby location will be popped on the map.

- *Special Offer Notification (Mall & Shops)*

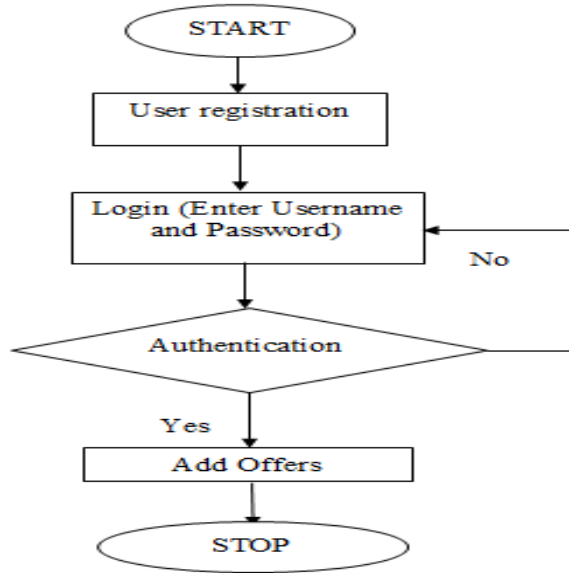


Fig 2:- Special Offer Notification (Admin) Flowchart

In the above flowchart how the second feature is work step by step procedure is shown. It is only used by admin and users get only notification if offer is available. In this feature admin first registration the form after successfully registered the form admin is ready for login credentials. After login admin can change the offer, delete the offer and add the new offer. User only get notification regarding offer which is near by user’s locations. Then users will decide based on their offer where he/she go.

*B. Expected Outcome*

In this we will shows the output of our application how its look and done. The below fig shows the output of our application.

➤ *Budget Manipulation Outcome (Hotel & Restaurant)*

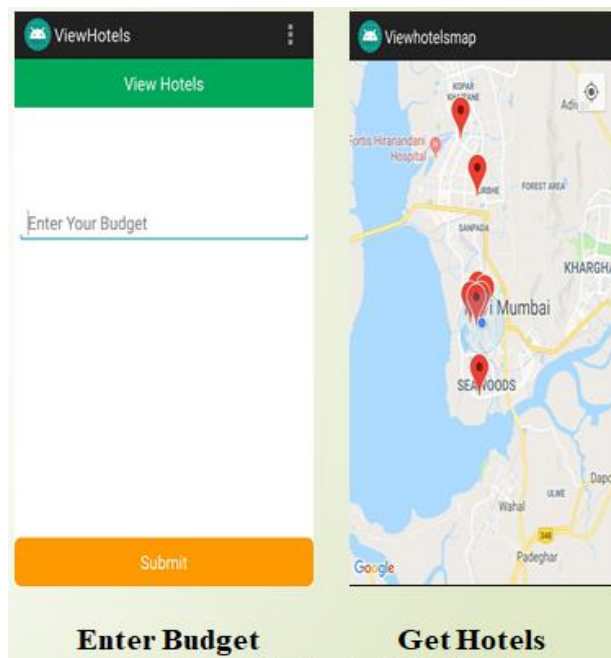


Fig 3:- Output of budget manipulation

After registration and login successfully done by the user. The user can enter their budget for the hotel and all the hotels in the budget entered by the user that are in the nearby area are popped up on the map. So the user can easily find the location based on their budget. This is shown in above diagram.

➤ *Special Offer Notification (Mall & Shops)*

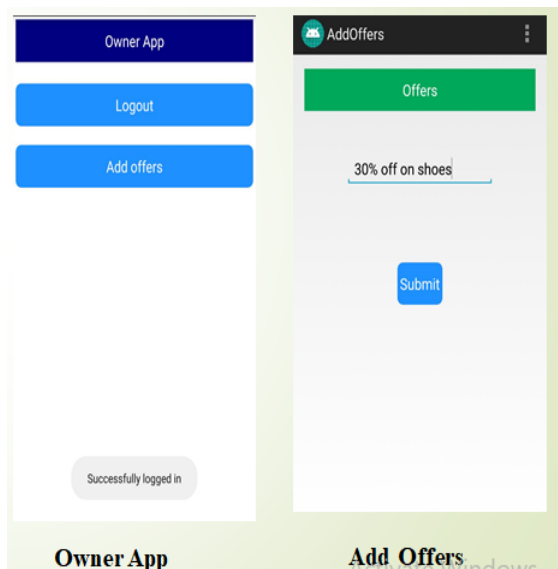


Fig 4:- Output of Special Offer Notification

After successfully registration and login done by the admin. Admin can add the offer after the login and also updating the upcoming offer. Users only get notification of the nearest offer. This is shown in above diagram.

## V. CONCLUSION

The idea of targeted advertising has now reached on much heights. Traditionally beacon receiver where used on every places and if the signals where generated and received then only the services where provided .So, we build a model using two types of data that is social and also the spatial data and taking users location into consideration provides the bestest services available in that area. Customer satisfaction and making availability of the services is the main target achieved.

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