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Targeted Advertisement using Behavioral Data and Social Data Mining

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***Abstract*: The volatile growth of social media networks has led fruitful availability in customer tastes and opinion. This data can be volatile to serves customers better and offers them related advertisements on the basic of customer interest they would be pleasure to see. To serves relevant advertisements to customers, firstly consider the location of customers as well as the offers shown to them are easily available in surrounding area. In this paper, we propose a model combining those ideas of social data and users interest we providing targeted advertisements. This social data is acquiring through global Twitter tweets and location of customer is found with the help of GPRS location. This model is providing opportunity to the local shop owners to Advertise as well as sell their product online. User can also add his/her interests. When the user passes by a shop the users interest is matched with the items sold in that shop the user will be notified automatically about the product. The user can also check a particular products rating through global tweets data on the basis of positive or negative response. It will help user to buy product nearby his/her surroundings. The user will have to no longer wait for the product delivery they can just visit the shop and buy it.**

***Keywords*: Targeted, GPRS Location, Interests, Notified, global tweets.**

1. Introduction

Users today are flooded with irrelevant and extraneous advertisements and offers, which might result in dissatisfaction of the customer. If the process of recommending advertisements to users which they find interesting could be provided it would open plenty of new opportunities for business and increase customers. Users today share everything be it with their preferences in food or clothes with the help of social networks on regular basis. The project is implemented by developing two android application in which one is for the vendors and another application is for the customers. Both modules have two main modules in it. With an explosive increase in user's interests, likes and dislikes it becomes

Necessary that the user is satisfied in a better manner by offering them the advertisements as per their interest and preferences. Collecting recommendations from reliable sources is an important part of the nature of a customer's decision making. With today's advancement in the field of technology it has now become necessary for an enterprise to collect large chunks of negotiable data which allows a wider scope for analysis of how a consumer base interacts with the space of product offerings. This application is implemented in order to fulfill the natural binary need of customers and shop owners by automatizing the generation of recommendations based on consumers interests and consumers location. The main aims and objectives of the project are: Making use of twitter tweets for obtaining the reviews of a particular product. To offer relevant recommendations to the consumer based on behavioral analysis. It provides the local vendor's an opportunity to advertise and sell the products on a bigger platform by using Location based marketing and sales of various deals in nearby areas i.e. location oriented. Behavior analysis is improved by Using Association & Naïve bayes algorithm. Association algorithm –provide information about same object. Naïve bayes technique- provide the internal link of several object. User Location Used to Calculate Location Based Marketing & also helps for accessing the location of user by using GPS satellite. The working of this project in which we use the concept of GPS which provides high Quality data range. Along with GPS, social data is also referred with the help of twitter through global tweets. This allows owner to recommend the advertisements to the customers in an easier way.

2. Literature survey

The [1] discuss in details the about the introduction to marketing and its techniques, [2] in this paper the author has written about taking data from different social media sites, [3]in this published paper the author has written about beacons which provides a part of the mix in getting context information to mobile devices., [4] the paper discuses about the recommendation system which uses social data and (BTS) for location based advertising, [5] In this paper, we propose a data mining framework that utilizes the concept of social network for the targeted advertising of products, [6] in this paper they have done targeted advertising using social data and user location and developed algorithms for searching nearby.

3. Problem Statement

Today's generation of Location Based Services offer recommendations based on the user distance only and not taking under consideration user preferences. There are not many systems in use currently which employ the combination

of location data and user interest data to provide recommendations to user.

How the current generation of location-based services fail to provide personalized recommendations and only suggest the nearby the point of interests (POIs). To overcome such a limitation, they realized a social recommender system able to identify user preferences and information needs, thus suggesting personalized recommendations related to possible POIs in the surroundings. In this system use a specific one type of recommendation technique so the recommendation is poor.

The approach taken to target advertisements was to analyze a historical database of previous transactions of the customers, with the help of some methodical tools and identify a list of customers who are most likely to respond to the advertisements of the product. Personalization and recommender systems can potentially reduce the omnipresent information overload in our networked world, though a promising and possibly complementary approach is to utilize context, but this has been rarely applied in personalization systems so far.

4. Proposed system

In proposed System shop owner login the application and fill the details of the product with an image and track the location with the help of GPS. In this application shop owner also change the existing product details and delete the old product detail. User can login the application and get the product details on app. By entering the interest, the user can get notification about the interested product (i.e. Product name) the customer location is continuously tracked all the time product string matches to the shopkeeper's product details. When the string matches and location is nearby the shop then product details are sent automatically to the customer's mobile device in the form of notification.

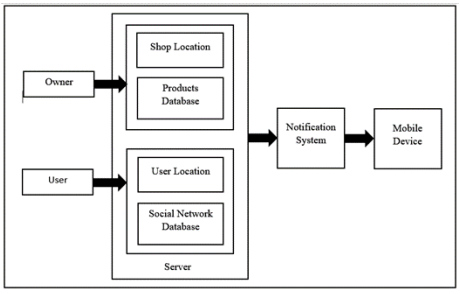

Fig. 1. Block diagram of proposed system

- Vendors and consumer have to login in their particular systems.
- After the vendor login he has to add products details that he wants to sell the shop location is also taken by the application.
- After logging in the consumer can search for the product he is looking for and get to know whether that product is available in any shops nearby.
- Consumer can also add the products they would like to buy in the add interest.
- Then the consumer's location is tracked when the consumers passes by the shop the location is matched and it checks whether the user interested products are available in the shop.
- If the product matching the user interest is present in the shop the consumer is notified about the product.
- The user then by clicking on the notification will be taken to the product details in the application.
- Then the consumer adds that product to the cart, which will show the vendor that a consumer is interested in buying that product.
- The consumer can get the shop location in the product details. The user can visit the shop as it is nearby.
- Consumer can buy the product directly in the shop, which will save the consumer's time of buying the product online.

A. Application systems

It has three main parts,

- *Owner Module:* It takes all the information from the Vendor which will help the vendor in increasing their sales.
- *User Module:* This module takes consumer information like the consumer interests providing the user with notified advertisement of the interested product.
- *Server:* The server does the work of tracking and matching the user location with the shop location and then matches the products and user's interests. If both location and Interests match the.

5. Future Scope

The systems for targeted advertising existing today provide suggestions considering only user's interests. To solve this problem, we have proposed a model which uses combination of social and spatial data. Such models are capable of obtaining user's preferences and based on their current location, they provide more appropriate advertisements. In future instead of giving advertisement only about products we can provide advertisement about Movies in theaters when you pass by a theater, Food dishes in the hotels nearby. This concept can also be carried out in many of the fields which proves to be helpful in making advertisements famous.

For E.g.: In a touristic place, suggested model can be used to find entertainment places like, parks and restaurants or art museums and concerts being held in that area.

6. Conclusion

A novel idea for the targeted advertising of products. Personalization process is completed using the information obtained from the user's social network. Spatial information is obtained using Bluetooth Low Energy devices. The systems

for targeted advertising existing today provide suggestions considering only user's interests.

To solve this problem, we have proposed a model which uses combination of user Interest and Location data. This model is capable of obtaining user's preferences and based on their current location, they provide more appropriate advertisements model or a similar stack can be used in providing the information for better recommendation services available in user's vicinity according to his/her needs and in the case of ticket counters at airports to provide the best deal available.

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