FOOD HUB

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ABSTRACT

The advancement in data and communication technology has greatly influenced the business transactions. In earlier days, food industry has lagged behind alternative industries in adopting new technology. But speed advances in technology and heightened expectations of customers and have forced the food industry to bring automation within the method. The business and services in restaurants are often improved with the online food ordering system. The competition in restaurants with regard to business has redoubled with the advancements in food ordering techniques. A Food Hub system is proposed which is able to keep track of user orders and have implemented some data mining techniques for analyzing the data with respect to future perspective. Here data mining algorithm such as a-priori has been applied for the frequently used food item combination .

Keywords: *automation , a-priori.*

1. INTRODUCTION

Over the years the world wide web (www) has been an excellent medium for a number of benfits of mankind. In today's fast world everyone is looking to save time and a hassle free food delivery. Online food ordering makes both things possible. The system is benificial for both customers as well as restaurants as it eliminates manual task for placing and receiving the order and processing the payment. It also avoid the long queues of customers waiting at the counter for ordering food . The proposed system eliminates the issue of wastage food from the restaurant by providing leftover food to the NGO so that it can be utilized by poor people.

2. Modules

This system needs an implementation of three modules :

1. Customer: Customers are actual users of the system who gets benefits of the services by ordering food. Customer can order food by selecting food according to by Types, Restaurants and by Ingredients.

2. Restaurants: Restaurants are also users of the system who will add their information about food in the system to increase their sales and popularity.

3. Admin: Admin handles the overall system by controlling customer and restaurants requests , accept customer order, add-update-delete information about food and restaurants.

Study Duration: 12 months.

Sample size calculation: For working of the system, this modules needs to develop. Restaurants will add their information about restaurants and food items by registering to system. The customer order the food by either selecting restaurants, or by breakfast-lunch-dinner type or by searching ingredients.

Inclusion conditions:

1. Operating system required is windows 7 or Linux
2. Java programming language is used
3. Database MySQL is used**.**

Chrome, Mozilla Firefox, Opera etc. browsers supported.

3. PROCEDURE METHODOLOGY

3.1 A-priori algorithm

Association rule generation is usually split up into two steps:
1. First, minimum support is applied to all frequent item- sets in a database.
2. Second, these frequent item sets and the minimum confidence constraint are used to form rules. Apriori uses breadth first search and a tree structure to count candidate item sets efficiently. It generates candidate item sets of length k from item sets of length k 1. Then it prunes the candidates which have an infrequent sub pattern. According to the downward closure lemma, the candidate set contains all frequent k-length item sets. After that, it scans the transaction database to determine frequent item sets among the candidates.

3.2 KNN:

K nearest neighbors is a simple algorithm that stores all available cases and classifies new cases based on a similarity measure(e.g., distance functions). KNN has been used in statistical estimation and pattern recognition already in the beginning of 1970's as a non-parametric technique. A case is classified by a majority vote of its neighbors, with the case being assigned to the class most common amongst its K nearest neighbors measured by a distance function. If K = 1, then the case is simply assigned to the class of its nearest neighbor.
Steps:
1. Determine parameter K = number of nearest neighbors.
2. Calculate the distance between the query-instance and all the training samples.
3. (re)Sort the distance and determine nearest neighbors based on the Kth minimum distance.
4. Gather the category of the nearest neighbors.
5. Use simple majority of the category of nearest neighbors as the prediction value instance.

3.3 Feature points and Region of Interest

3.1. Order food online according to Restaurants, Types,Ingredients.

3.2. Regions of Interest are as follows:

- Tracing restaurants location
- Order food according to Types, Restaurants, Ingredients
- Pay Online
- Manage customers information
- Manage Restaurants information

4. DISCUSSION

Online food ordering is considered as a best way to order food for those customers who live away from house. People who don't know how to cook or either they don't get time to cook a home like working people. Food ordering is the best option for these people. The advancement in data and communication technology has greatly influenced the business transactions. In earlier days, food industry was lagging behind as compared to other industries in adopting new technologies. But speedy advances in technology and increased expectations of customers have forced the food industry to bring automation in the process. The business and services in restaurants are often improved with the online food ordering system. The system uses Computerized Ordering System. The system view a notification that the order has been received based on the requirement of the system. Orders received goes to inventory system monitor the products. The system has the database that stores all the orders information of the customer. The system helps users to easily add and take orders .When the new orders come in, some general information about the new order inputted such as item from the menu, the price of each item, time and date. Only the Administrator has an account on the system that can edit, modify, add, view menu and view reports.

5. CONCLUSION

This system is liaison between customers and restaurants making the food ordering convenient and managing the data effectively .Also can avoid wastage of food from restaurants by donating poor through NGO. Considering the future scope, Food hub system can also be developed for Android OS. In future more techniques can be combined to form hybrid model for more precised data processing which will help in development of food ordering mode base done the increased data mining approaches**.**

6. REFERENCES

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