

FOODSPERT (DYNAMIC NEWS FEED AND REAL TIME TRACKING FOR A FOOD DELIVERY ANDROID APPLICATION)

Shuchi¹, Shivendra Singh², Bhat Geetalaxmi Jayram³

¹Department of Information Science and Engineering, The National Institute of Engineering, Mysore India

²Department of Information Science and Engineering, The National Institute of Engineering, Mysore India

³Department of Information Science and Engineering, The National Institute of Engineering, Mysore India

Abstract

A proactive recommender system pushes suggestions to the client when the present circumstance appears to be proper, without unequivocal client ask. Imperative research questions incorporate whether clients would acknowledge proactive recommendations, how to display suggested things and perhaps tell clients. Our situation is a context-aware recommender for Android mobile phones. Also, our UI incorporates a perception of prescribed things and takes into consideration client input.

Categories and Subject Descriptors: H.4 [Information Systems Applications]: Miscellaneous; H.3.3 [Information Search and Retrieval]: Information Itering; H.5.2 [User Interfaces]: Evaluation, Graphical user interfaces (GUI)

General Terms: Design, Experimentation, Human Factors

Keywords: Recommender System, Mobile, Proactivity, Evaluation, Personalization, Context-aware, User Interface, Usability

1. INTRODUCTION

Conventional recommender frameworks more often than not take after a demand reaction design, i.e. these frameworks just return thing suggestions when a client makes an express demand. In portable recommender frameworks, clients can't peruse effortlessly through many list items and experience the ill effects of different limitations in the client encounter. This is so on account of constraints in the UI, for example, little show sizes or missing consoles. In portable conditions, client experience could be enhanced by conveying proposals with no client demand or question. Consider the accompanying situation: A mobile restaurant manages running on a cell phone proposes a restaurant to the client when she is strolling close to the restaurant that suits her inclinations exceptionally well, while additionally calculating in the time and other setting qualities assessed in a study among clients. At long last, the last segment gives some finishing up comments and bearings for future research.

2. RELATED WORK

A lot of research and functional applications exist on recommender frameworks, portable registering, setting awareness (see e.g. [4]) or area based administrations, and also any blend of the above ranges. For instance, Kenteris et al. as of late overviewed the field of portable aides [8]. However, proactivity has not increased much consideration in personalization and recommender frameworks inquire about. Most frameworks require the client to play out some

sort of activity to trigger the era or recovery of prescribed things.

For instance of proactivity in a current framework, Hong et al. [7] proposed an operator based system for proactive personalization administrations. This approach proposes a model

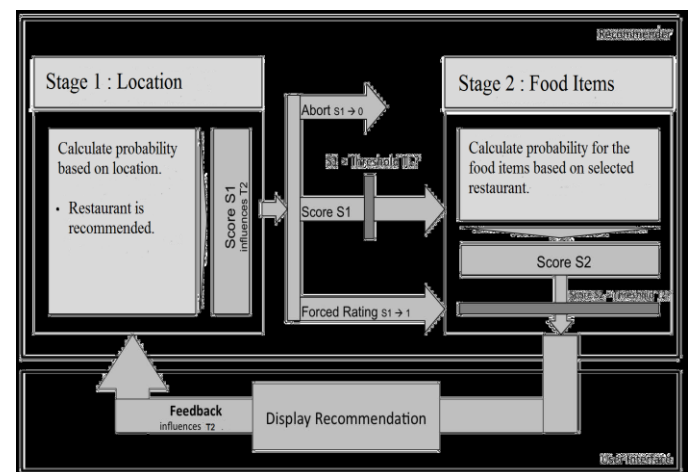


Fig 1: Proactivity Model

as per which a client professional model is derived from a client's setting history. The model empowers proactive suggestions later on. Nonetheless, preparing time is critical in the proposed show.

Ricci talks about proactivity in versatile recommender systems in his study. A few frameworks make utilization of the dog lease client conduct, position and other setting data to enhance personalization on cell phones and in ubiquitous registering all in all. Ricci reasons that none of the current inspected frameworks is able to proactively intrude on the client action with spontaneous however significant recommendations and proactive recommendations can change the part of recommender frameworks from point arranged data chasing and basic leadership apparatuses to data disclosure and engaging buddies.

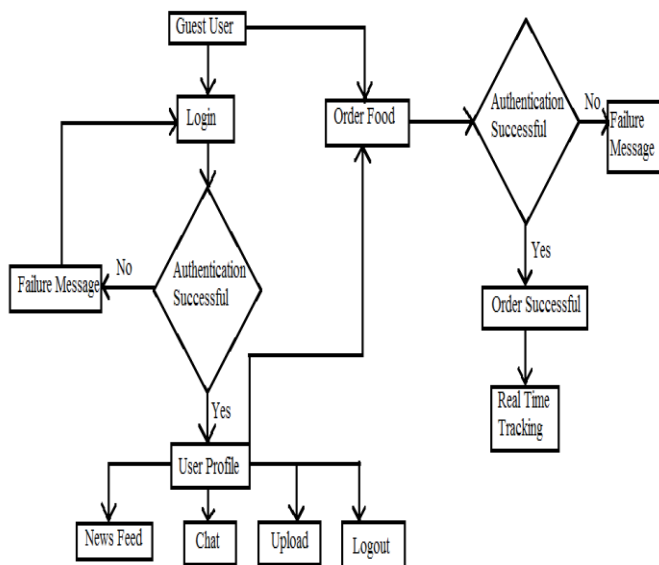


Fig 2: Data Flow Diagram

3. LITERATURE SURVEY

3.1 Existing Systems

- Regular updated notifications in the form of a news feed are not yet available in any of the present food applications.
- Interaction of the users with chefs and food experts is not yet available in any of the food applications.
- Some of the applications update about the food processing stage, without a real-time tracking technology.

3.2 Proposed System

- Our application features cloud storage, keeping all the account credentials, wallet money, and transaction history safe.
- Real time tracking allows the user to track the deliverer using integrated navigation system, along with an optimum path.
- A dynamic news feed updating each time a user uploads a new video, or a restaurant posts a new offer, etc.
- Implements machine learning by learning and optimizing it's suggestions on user preferences.
- End-to-end chat of the users with the chefs and the food experts.

4. A PROACTIVITY MODEL FOR MOBILE RECOMMENDER SYSTEMS

4.1 Process Overview

Stage 1: Location

The probability of suggesting restaurants is calculated based upon the user's location, according to which nearby restaurants are recommended. The preferred restaurant can also be selected by the user after applicationly filters.

Score S1: This score tells the probability of which restaurants are near to the user according to his/her location. This influences score T2.

Score T2: This score tells the threshold probability.

If the score S1 is greater than the threshold score T2, then this implies that there are restaurants near to the user, and they are displayed accordingly.

If the score S1 is 0, then there aren't any nearby restaurants, so the process has to be aborted.

If the score S1 is a forced rating, which is a default rating, then in the case of probability being 0, then the customer is suggested a few restaurants based on their demand, if no nearby restaurants can be found.

Stage 2: Food Items

When S1 is greater than the threshold T2, that is, the restaurants are recommended according to the user's location, then the most demanded food items of those restaurants are recommended to the customer. The resultant probability is named S2. This recommendation is displayed.

According to the feedback given by the customer, T2 is changed, and the future suggestions are modified according to the customer preferences.

6. DESIGN AND IMPLEMENTATION OF THE ANDROID APPLICATION

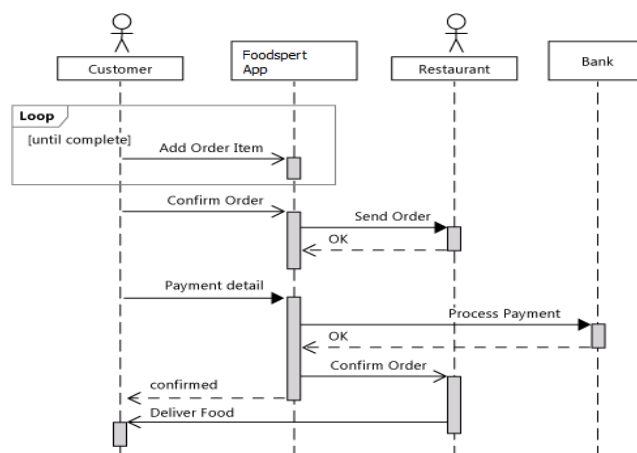


Fig 3: Sequence Diagram

Under a loop, the customer orders the food item through the Foodspert application, then after the order is finalized, it is sent to the concerned restaurant, the restaurant then confirms the order in return to the application, then the order is confirmed from the user, and payment details are confirmed, then the payment is made through gateway to the bank, then the food is delivered from the restaurant to the customer.

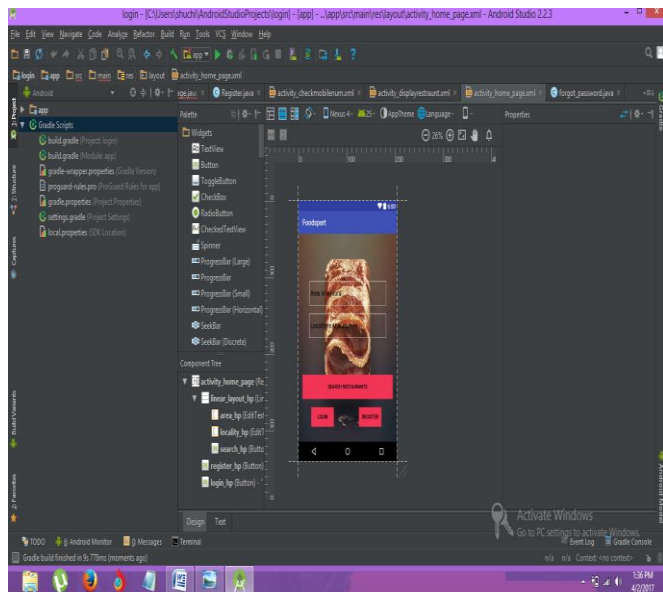


Fig 4: Home Page

Figure 4 shows the home page of the application, in which the user has to feed in his area and locality, and search for restaurants accordingly.

Existing users can log in and new users can register.

6. CONCLUSION AND FUTURE WORK

The features of dynamic news feed and real time tracking make the user experience hassle-free, unlike the stagnant notifications and absence of tracking mechanisms in the earlier systems. Through the help of machine learning the user's preferences can also be tracked and accordingly the suggestions are filtered. The user credentials and critical information are backed up using cloud, and hence the data is not lost permanently in the instances of damage, theft or misplacement. The end-to-end user conversations with the food experts and the chefs help the user make a better judgment, whether it is regarding the food or the restaurant. The offline feature in the application makes the services available to the user 24x7, so that even in the absence of an internet connection, the user will be able to order food from his selected restaurant.

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