

# Online Recommendation System for Offline Service Providers

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*Abstract* — Understanding user preferences, gathering and classifying service provider data, and guaranteeing real-time information are all necessary for developing a digital platform that links users with offline service providers. The system customizes suggestions based on user preferences, historical interactions, and user profiles, surveys, and behavior tracking. The platform keeps an extensive database of service providers, complete with information about their services, locations, costs, ratings, and reviews. The accuracy and applicability of this material are ensured by frequent revisions. In order to achieve seamless integration and improve user experience, cooperation with service providers is essential. The system's capacity to quickly adjust to shifting user requirements is essential to its success since it allows users and nearby service providers to interact in a tailored and effective manner.

**Keywords:** Collaborative Filtering, QoS, Ratings

## I. INTRODUCTION

In the contemporary landscape, the fusion of digital technology with traditional offline services has ushered in a new era of convenience and accessibility. This paradigm shift prompts the exploration of creating an innovative platform that seamlessly connects users with offline service providers. Understanding the nuanced preferences of users becomes paramount, driving the need for robust data collection mechanisms. Categorizing this data aids in tailoring recommendations, ensuring a personalized experience for each user. Real-time information on a diverse array of service providers, encompassing aspects such as location, services offered, pricing, reviews, and ratings, forms the backbone of this digital ecosystem. Collaborating closely with service providers not only facilitates smooth integration but also enhances the overall user experience. The success of this endeavour hinges on its ability to adapt dynamically to changing user needs, fostering a symbiotic relationship between users and the myriad of local service providers at their disposal.

## II. LITERATURE SURVEY

**An Android Application for Home Services** Author: Hegde Sharaj Bhaskar Shyamala, Krishnamoorthy Rao, Padmanabha Bhandarkar, Prateek Prakash Vetekar, Geetha Laxmi Description: This paper is focused on how on-demand apps have disrupted majority of traditional industries. The main aim is to develop an android application for home services. People will use this application to find the exact home service providers they want.

**Web Application Based on Demand Home Service System** Author: K. Aravindhan, K.Periyakaruppan, T.S.Anusa, S.Kousika, A. Lakshmi Priya Description: The on demand home service system is incredibly useful for

everybody who wants to urge home services like plumbing, electronic repair, gas range repairing, RO servicing and electrical maintenance. The web home service project consists of the many categories and services as mentioned before. Users who are in need of services can register with this website and look for service providers by mentioning the situation. The service provider's therein particular locations are listed to user with contact number and therefore the user can contact them. By this users can easily avail the needed home services with none difficulty and delay.

**A Recommendation Approach in Social Learning Based on K-Means Clustering** Author: Sonia Souabi, Asmaâ Retbi, Mohammed Khalidi Idrissi, Samir Bennani Description: In the recommendation system we use the k-means algorithm to classify learners, then we calculate the recommendations for each cluster by referring to our old recommendation system proposed in one of our previous works. The global system is thus based on three essential points: k-means, correlation and co-occurrence. We then evaluate the performance of our proposed system in order to show its performance compared to the system that does not consider the k-means algorithm.

**Collaborative Neural Social Recommendation** Author: Le Wu, Peijie Sun, Richang Hong, Yong Ge, and Meng Wang Description: Collaborative filtering (CF) is one of the most popular techniques for building recommender systems. To overcome the data sparsity in CF, social recommender systems have emerged to boost recommendation performance by utilizing social correlation among users' interests. Recently, inspired by the immense success of deep learning for embedding learning, neural network-based recommender systems have shown promising recommendation performance. Nevertheless, few researchers have attempted to tackle the social recommendation problem with neural models.

## III. OBJECTIVE

The aim of this endeavour is to create and execute a digital platform that is centered around the user and facilitates the seamless connection of users with offline service providers. The main objectives are comprehending and meeting user preferences by means of efficient data gathering and classification. The platform incorporates important factors like location, services offered, price, reviews, and ratings in order to deliver up-to-date information about a wide variety of service providers. Establishing cooperative relationships with service providers is another goal in order to guarantee current and accurate information. By providing tailored recommendations based on user preferences and promoting a dynamic, effective, and mutually advantageous relationship between users and local service providers, the overall objective is to improve the user experience.

#### IV. ARCHITECTURE

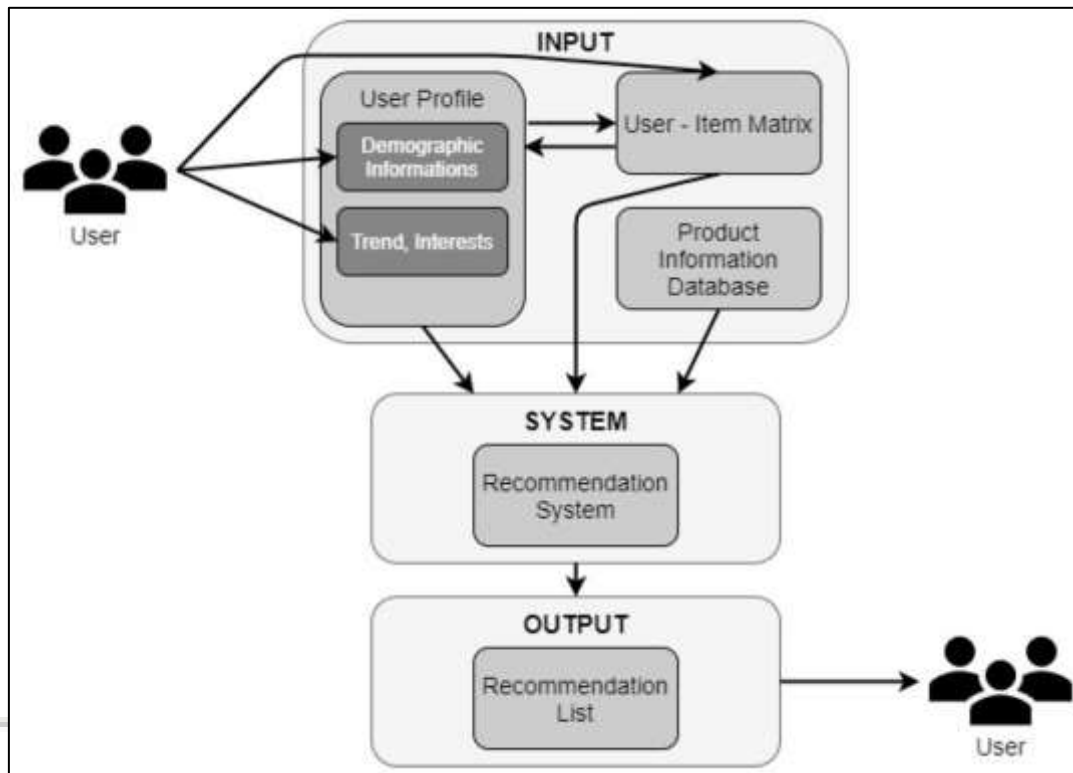


Fig. 1: Recommendation System for Service Providers

#### V. PROPOSED SYSTEM

The proposed system is an online platform for recommendations that links customers with nearby offline service providers while providing a seamless and tailored experience. Users can set up profiles, establish their preferences, and use a powerful search and recommendation engine to find the best service providers for their needs based on their location, previous information, and desires. Through the platform, service providers can advertise their offerings, accept reservations, and showcase their availability. The system enables appointment booking, rating and review functionality, and user-service provider matching. It provides mobile accessibility, maintains security and privacy compliance, and continuously enhances suggestions through data analysis, finally offering a complete solution to connect customers with reliable local service providers.

#### VI. EXPECTED RESULT

- 1) Enhanced User Experience: Users will gain from a practical and user-friendly platform that makes it easier for them to identify and reserve nearby service providers, saving them time and effort.
- 2) Trust and Transparency: By enabling users to base their judgments on the experiences of others, the platform's rating and review system will promote trust and transparency.
- 3) Improved Service Provider Visibility: Local service providers will have easier access to prospective clients and more visibility, which will help them develop their clientele and their businesses.

- 4) Personalized Recommendation: Users will receive individualized recommendations from the recommendation engine, ensuring that they are connected with service providers who best suit their unique needs and interests.
- 5) Increased Revenue for Service Providers: Service providers will have the chance to bring in new clients and broaden their clientele, which could result in higher earnings and company expansion.

#### VII. CONCLUSION

In conclusion, there is a great deal of opportunity to change the convenience and accessibility environment through the creation and deployment of a user-centric digital platform that links consumers with offline service providers. The platform aims to provide a personalized and effective experience by giving priority to user preferences and utilizing up-to-date information on service providers. The accuracy and applicability of the information supplied are further enhanced by the cooperative efforts with service providers. As this effort develops, user satisfaction will be monitored along with the formation of a mutually beneficial relationship between users and the variety of local service providers, as well as the smooth integration of technology and offline services. In the end, this project seeks to close the gap that exists between traditional services and digital innovation.

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