

HOUSEKEEPER RECOMMENDATION SYSTEM USING MACHINE LEARNING

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Abstract

In the contemporary digital age, the Internet plays a pivotal role in reshaping various aspects of our lives. This abstract introduces a groundbreaking concept: the Housekeeper Finder application, a versatile platform that leverages the power of on-demand services to create a profitable home service business. This innovative application covers a broad spectrum of essential services, including house cleaning, cooking, laundry, pot cleaning, baby care, gardening, elderly care, and commercial cleaning, making it a market-oriented solution for modern households. At the core of the Housekeeper Finder application is a sophisticated machine learning system. This system utilizes customer data to provide intelligent booking recommendations, tailoring service options based on users' past choices. Additionally, the platform features a robust feedback system that empowers customers to provide valuable insights, contributing to the continuous improvement of service quality. One of the most striking features of this application is its ability to enable service bookings from virtually anywhere to anywhere, offering unmatched convenience to users. The Housekeeper Finder application is poised to revolutionize the way home services are accessed and delivered, providing high-quality cleaning and assistance services with the ease and efficiency that our digital era demands.

Keywords: Housekeeper Finder application, essential services.



Published in IJIRMP (E-ISSN: 2349-7300), Volume 12, Issue 1, Jan. - Feb 2024

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INTRODUCTION

Introducing the Housekeeper Finder project, a pioneering venture that capitalizes on the ever-growing influence of the Internet in our daily lives. In an era where the digital landscape commands nearly every facet of our existence, this innovative home service application takes center stage by offering a comprehensive range of on-demand services. From house cleaning and cooking to laundry, baby care, gardening, elderly care, and commercial cleaning, it caters to the diverse needs of modern households. What sets this project apart is its reliance on cutting-edge machine learning technology at its core. This enables the platform to make intelligent service recommendations based on users' past preferences, ensuring a personalized experience. Moreover, the inclusion of a robust feedback system empowers customers to contribute to the enhancement of service quality. The Housekeeper Finder project not only redefines how essential services are accessed but also underscores its commitment to delivering high-quality, convenient, and efficient home services in a rapidly evolving digital landscape.

LITERATURE SURVEY

- N. M. Indravasan, Adarsh G, Shruthi C, Shanthi K, Dadapeer, “An Online System for Household Services”. [1] 2018 - This Paper is to design and develop a system that provides many services at your doorstep in just one click.
- Sadhana Kodali, Madhavi Dabbiru, B Thirumala Rao, “A Cuisine Based Recommender System Using k-NN And Mapreduce Approach”. [2] 2019 – In this paper we study a restaurant recommender system based on the search of user cuisine. The top-k restaurants are identified along with the ratings of the restaurants recommended. The recommendations are retrieved based on the preference of the user cuisines which is an important category which inherently defines the other features and these features are considered to provide a good service which is the novelty of this paper.
- Marwa Hussien Mohamed, Mohamed H. Khafagy, Mohamed Hasan Ibrahim, “Recommender Systems Challenges and Solutions Survey”. [3] 2019 - This paper introduces survey about recommendation systems, techniques, challenges the face recommender systems and list some research papers solve these challenges.
- Akshit Gupta, Shaurya Khanna, Arnav Tyagi, Prabhat Singh, “Urban Housekeeping Services”. [4] 2020 - This paper study on the proposed system which is the demand application for availing housing services by the users. This will significantly reduce the time and effort required to scout and hire professionals who provides services.
- Jin Shi-Ning, Zhu Yuanqing, “Research on Pleasure Experience Design of Housekeeping APP for Middle-Aged and Elderly”, [5] 2022- This paper study on the basis of the questionnaire using factor analysis method, divided into domestic APP for middle-aged and old user cheerful experience design dimensions and its correlation. In this way, it can objectively guide the pleasure experience design of housekeeping APP.

AIM & OBJECTIVES

Aim:

- The primary aim is to provide users with a convenient and easily accessible platform for a wide range of home services. The project aims to simplify the process of booking services, ensuring that users can access essential services quickly and efficiently from the comfort of their smartphones or computers.
- The project aims to cater to a broad spectrum of needs, encompassing services such as house cleaning, cooking, laundry, pot cleaning, baby care, gardening, elderly care, and commercial cleaning. By offering diverse services, the aim is to meet the multifaceted requirements of modern households and businesses.
- Leveraging machine learning, the project aims to provide personalized service recommendations to users. By analyzing past preferences and choices, it aspires to deliver tailored suggestions to enhance the user experience and streamline the decision-making process.

Objectives:

1. It offers a wide range of home services, including house cleaning, cooking, laundry, pot cleaning, baby care, gardening, elderly care, and commercial cleaning, to meet the diverse needs of customers.
2. It streamline the process of booking and accessing home services, making it more convenient and efficient for users, thus saving them time and effort.
3. It utilize machine learning to provide personalized service recommendations to users based on their past choices and preferences, enhancing the user experience and satisfaction.

APPLICATIONS

- Personal
- Appointments
- Research

SYSTEM ARCHITECTURE

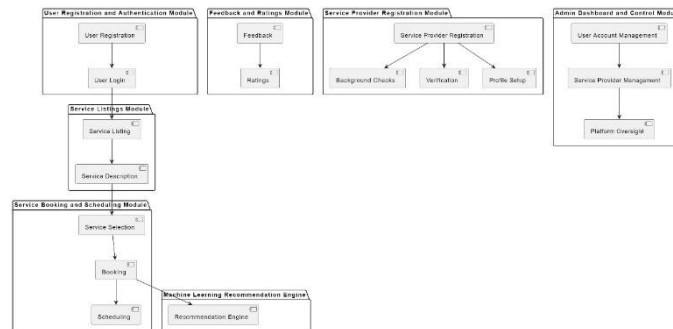


Fig -1: System Architecture Diagram

Our system consists of six modules. They are User registration and authentication module, Service listings module, Service booking and scheduling module, Feedback and ratings module, Service provider registration module, Admin dashboard and control module.

User Registration and authentication module allows user to do registration and login. Service listings module provides the list of services with it's description. Service booking and scheduling module helps user to select, book and schedule the service. This is connected with Machine Learning recommendation engine which recommends the services to user. Feedback and ratings module shows the feedback and ratings given by user to the maids. Service provider registration module is used for background checks, verification and profile setup. Admin dashboard and control module is used for user account management, service provider management and platform oversight.

ADVANTAGES

- **Convenience:** Offers users a convenient way to access a wide range of essential home services from a single platform.
- **Personalization:** Utilizes machine learning to provide personalized service recommendations based on user preferences.
- **Efficiency:** Streamlines the process of service booking and scheduling, saving users time and effort.
- **Quality Control:** Empowers users to provide feedback and ratings to continuously improve service quality.

FUNCTIONAL & NON-FUNCTIONAL REQUIREMENTS

Functional Requirements:

- **Desktop Application:** Using the desktop application the end user will be able.

- **System:** The application will provide a Graphical User Interface which will consist of several screens which the end user will be able to navigate. 5.3.2 Hardware Interfaces
- **Devices:** The applications built using the python will be deployed on LAPTOPS and tablets supporting Web application system version 2.2 and above. 5.3.3 Communication Interfaces The most important protocols for data transmission across the Internet are TCP (Transmission Control Protocol) and IP (Internet Protocol). Using these jointly (TCP/IP), we can link devices that access the network; some other communication protocols associated with the Internet are POP, SMTP and HTTP 5.4 Software System Attribute.
- **Reliability:** The applications built using the framework should ensure that the SD card is mounted on the device. Internet facility must be available for using.
- **Availability:** Shall be available and running in a stable state at all times.

Nonfunctional Requirements:

- **Performance:** The system should provide fast response times to user requests, with service bookings and recommendations generated in seconds.
- **Reliability:** The platform should have high availability, with minimal downtime for maintenance and updates.
- **Data Security:** The user data, including personal and financial information, should be encrypted and stored securely, complying with data protection laws and regulations

SYSTEM REQUIREMENTS

Software Used:

- Windows 7 or above • Vscod, Xamp • CSS • JAVA Script

Hardware Used:

- AMD/Intel i3 Processor or above Processor • 4GB RAM for application development • 80 GB or above Hard Disk

CONCLUSION

Our system will provide on demand maid service to customers. It cuts the hard work of finding the right maid. It will allow users to search for the maids, see ratings and book a maid. It will provide a quality app to find the best maids out there with the potential to revolutionize water treatment practices and benefit communities worldwide.

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