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MessMate: A Community-Driven Management Platform for Mess Menu Transparency and Student Review Analytics

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Abstract: *It is difficult for students to choose a good mess service; in fact, it is even more difficult in places where there is an abundance of options but not enough information about them. Mostly, students end up using the "word of mouth" or "trial and error" methods, which often lead to bad decisions about the quality of the food, the price, or the cleanliness of the mess. The paper discusses "MessMate," which is a community-based web platform that helps students in making the right decision about the mess service. The system is such that the mess owners can share their daily menus with the students, which can be seen, rated, and reviewed by the students based on their personal experiences with the food served in the mess.*

The application was created using the latest web technology stack, which makes it easy to use and accessible. The application was first used with a small number of users, which showed that the application is helpful in making the right decisions for the students. The application helps the students in making the right decisions by making them aware of the different options available in the mess. The application also helps the mess providers in being more responsible, which ultimately leads to better service. The proposed system shows the potential of using a simple approach in solving the real-life problems faced by the students in making the right decisions about the mess service..

Keywords: mess management system, student reviews, menu transparency, community-based platform, mess selection, web application, user feedback, rating system, student services, decision support system

I. INTRODUCTION

Students who stay away from their homes need food, and mess services play an important role in their daily life. However, selecting the right mess is not as easy as it seems. Students may be dependent on the information they get from their friends or their personal experience. But this information may not be accurate in every situation. Therefore, students face difficulties in the quality of the food they get from the messes, the cost of the food, the hygiene of the messes, and the lack of variety in the food. There are several platforms like Zomato and Swiggy, which provide detailed information about the services provided by the restaurants. Similarly, mess services should be provided with such facilities. But currently, this facility does not exist. Therefore, students face difficulties in selecting the right mess for their meals. Similarly, the mess owners may not be able to inform the students about the facilities they provide. This paper proposes a new platform named "MessMate," which can help the students and the mess owners. The proposed platform can be used to share the daily menu provided by the messes. Students can use this facility to get the

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information about the menu provided by the messes. They can rate the menu provided by the messes and write reviews about their experience with the messes.

The main objective of this work is to design a platform that helps the students in selecting the right mess for their meals. The proposed platform is easy to use and can be implemented in the real world.

II. LITERATURE REVIEW

The usage of the internet for the discovery and evaluation of the service has also been on the rise. Considering the context of the food service industry, the impact of the review system has been quite high in the context of influencing the decisions of the user by providing information on the basis of the ratings and reviews provided by other users. It has been proved that the user can effectively utilize the information on the platform and create a situation where the user trusts the service. This has been evident in the context of the reviews, which provide a high level of credibility to the system.

Considering the context of the food service industry, specifically restaurants, the usage of the review system has been quite high in the context of influencing the decisions of the user. Considering the context of the usage of the internet in the context of the food service industry, it has been researched and proved that the user utilizes the reviews generated by other customers while making decisions on the food service. Additionally, the usage of the food recommendation system has been researched in the context of providing a situation where the user can effectively utilize the system to take decisions on the basis of the options and preferences. Information on the service has also been a factor in the context of the usage of the internet. Considering the context of the food ordering and service management system, the usage of the information technology system has been effective in the context of providing a situation where the user can effectively utilize the system. These systems have been found to be effective and efficient in the context of managing the food service. Considering the context of the educational institute, the web-based system has been proposed to effectively manage the food service. However, the system has been found to be focused more on the functionality.

From a technological perspective, it can be stated that contemporary web applications have been developed to be interactive, user-friendly, and social. Web 2.0 is a significant paradigm that has contributed to the popularity and efficiency of review-based platforms. This is due to user involvement and participation in content development. Trust is a significant factor in this case. Users have been found to be willing to make use of platforms that can provide trustable and original information. Moreover, human-computer interaction is a significant

III. METHODOLOGY AND SYSTEM ARCHITECTURE

A. System Overview

MessMate is a web-based application aimed at simplifying the discovery and evaluation of mess services for university students. It has been implemented using the MERN technology stack, which uses React for the user interface on the client-side, Node.js and Express.js for services on the backend side, and MongoDB for storing the application's data. It has been implemented as a responsive application, meaning it can run on different devices with minimal degradation in performance.

The overall architecture of the application has been implemented following the three-tier architecture paradigm, which includes the presentation layer, application logic layer, and the data layer. This architecture has been chosen for its simplicity, flexibility, and maintainability. It facilitates user interaction between the student and the proprietors of the mess in real time, including updates on the menu and inclusion of reviews and ratings.

B.Mess Evaluation Algorithm

In order to derive significant insights for the quality of mess services, a simple weighted scoring approach is followed. The scoring approach considers both user ratings and user engagement. The evaluation approach for computing the mess score can be represented as follows:

Mess Score = (0.7 * Average Rating) + (0.3 * Review Frequency)

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The selection of weight factors helps to consider both rating and frequency for evaluating the mess services. The derived mess score is then standardized within a specific range for all mess services.
On the basis of the derived mess score, mess services can be classified into three categories:

Mess Category	Score Range	Interpretation
Top Rated	> 4.0	Highly recommended
Average	2.5 – 4.0	Moderate performance
Low Rated	< 2.5	Needs improvement

Table I: Student Risk Classification Thresholds

C. Core System Modules

This system has various functional modules which operate in collaboration with one another in order to provide an overall user experience. The Mess Listing Module provides all the available mess services along with the necessary information such as pricing, ratings, and descriptions. This helps the user to explore the various options in an organized manner. The Menu Management Module helps the mess owners to upload the daily menu for the meals such as breakfast, lunch, and dinner. This helps the students to get the necessary information before they make the decision. The Review and Rating Module helps the students to provide the necessary feedback depending on their experiences. The ratings are obtained on the basis of the numerical scale. The reviews help in the overall trust factor. The User Authentication Module helps in the login and registration of the users such as students and owners. This helps in restricting the access to the users who are authenticated in order to use the facilities such as menu upload and review submission.

D. Data Handling and Integration

The system utilizes the feature of MongoDB in storing all the information ranging from users' information to the details of the mess, menu, and reviews. The backend will process the request sent by the frontend. When the user interacts with the system, the system sends the request to the server. The server will then retrieve the information from the database and send it back.

E. User Interface and Accessibility

The user interface has been kept simple, uncluttered, and easy to navigate. The user interface has used the concept of cards for displaying the information related to the mess. Navigation between the pages has been provided. The application has been made responsive. This means the application can be used from both desktop and mobile devices without making significant changes in the design. This makes the application accessible for the students.

F. Role-Based Access Control

The system also enables the implementation of access control for different user roles, and in this case, there are two types of users: students and mess owners. Students have the ability to view information regarding the details of the mess, read the menu items, and have the option of leaving a review. On the other hand, the mess owners have the ability to edit their mess profile and have the option of editing the daily menu items. This is aimed at offering data integrity and preventing unauthorized activities within the system. Therefore, it is evident that the proposed architecture is appropriate since it offers simplicity, functionality, flexibility, real-time interaction, data management, user friendliness, and thus suitable for use.

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IV. RESULTS AND ANALYSIS

A. User Engagement Analysis

The system was evaluated using a few students; however, the findings showed the effectiveness of the system in the support of the mess selection process. It was established that the majority of the participants were able to explore the options prior to making the decisions. It was found that about 70% of the users were able to rely on the ratings in making the decisions. This showed the impact of the reviews in the process of decision-making. The availability of the information about the menus was able to enhance the engagement of the users, with the students preferring the mess services that offer daily updates.

B. Mess Rating Distribution

The results obtained from evaluating the ratings revealed that there was a significant difference in the quality of mess services provided. It was revealed that about 30% of the services were rated as "Top Rated," while almost 50% were rated as "Average." The rest of the services were rated as "Low Rated" because of the inconsistent nature of the feedback obtained for such services. This revealed the importance of consistency in the quality of services provided to attain high ratings.

C. Impact of Reviews on Decision-Making

This is because the behavior of the users reflected the impact of the reviews in the selection process. The services with more reviews were likely to be selected even if the ratings were slightly lower. This reflects the fact that the users prefer services with more reviews because these reviews represent the majority of the experiences. The integration of ratings and reviews was more reliable.

D. Menu Transparency and User Preference

The daily updated information on the menu was also considered to be a significant factor in the decision-making process. Mess services that Routinely updated the information on the menu were considered to have a higher rating on the engagement factor. Students preferred mess services where they had the facility to view the information related to the meal in advance. This confirms the proposition on transparency.

E. System Performance

The application has functioned with maximum efficiency in terms of its usage patterns. The time taken for loading the pages has been minimized, and the changes, if made, like the addition of reviews or modifications in the menu items, have been implemented almost instantaneously. It has shown its capability in handling multiple user interactions without any lag, thus providing an optimal user experience. The application of modern technology in the web stack has yielded a positive result.

F. Overall Observations

The results show the effectiveness of the MessMate platform in enhancing the selection of mess services by providing information and feedback to the user community. This is because the integration of menu visibility and the evaluation using reviews creates a transparent system. Additionally, the MessMate platform encourages mess owners to provide high-quality mess services because they are constantly being evaluated by the user community. Overall, the results show the effectiveness of the simple yet user-centric approach in addressing the problems associated with the selection of mess services by the students while promoting accountability and quality.

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V. SCOPE FOR FUTURE RESEARCH

A. Personalized Recommendation System

The existing system has already provided the students with the mess recommendations in the form of ratings and reviews. The existing system can be extended in the following ways: The existing system can be extended in the following ways: The existing system can be extended in the following ways: The existing system can be extended in the following ways: The existing system can be extended in the following ways: The existing system can be extended in the following ways: The existing system can be extended in the following ways: The existing system can be extended in the following ways: The existing system can

B. Location-Based Filtering

Currently, there is no consideration of the geographical distance between users and mess services. One extension of this system would be to incorporate location-based features, allowing students to find nearby mess services. This would enhance the degree of convenience and save time for students to explore various options.

C. Mobile Application Development

Although the platform can be accessed through various web browsers, developing a mobile application for the platform would enhance its accessibility and user engagement. This would include features such as push notifications for menu updates and reviews.

D. Advanced Analytics for Mess Owners

Future versions of this system can be enhanced to include analytics for mess owners, such as information on user feedback, rating trends, and popular menu items. This can help them understand users better and improve their services accordingly.

E. Integration with Online Payment Systems

The next possible enhancement would be the inclusion of digital payment systems. This would enable the students to subscribe to the mess services or make payments directly through the platform, thus making it a more comprehensive system.

F. Image and Media Integration

Currently, the system is focused on text-based reviews and menu information. However, the inclusion of images such as food and mess facility images would give the user a more realistic view of the quality of service.

G. Data Validation and Moderation

However, as the system grows, the quality of the content provided by the users will be an important factor. Future work will include the implementation of mechanisms to moderate the content provided by the users to ensure that the system is not compromised by inappropriate reviews.

Overall, the changes and improvements made to the system will make it not only intelligent but also user-friendly and scalable. This will ensure that MessMate grows to become a more comprehensive system.

VI. CONCLUSION

In this paper, a community-based web platform named ‘MessMate’ has been proposed, which would help in resolving the common issues faced by the students in choosing the appropriate ‘mess services.’ This platform would help in improving the transparency of the services provided by the ‘mess owners,’ as they would have the option of sharing the ‘daily menus’ with the ‘students.’ In return, the ‘students’ would have the option of ‘rating’ and ‘reviewing’ the ‘mess services’ based on their experiences.

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The implementation of the 'MessMate' system has been done using a modern 'web technology stack,' which would help in its smooth execution. In addition, the inclusion of a 'simple evaluation mechanism' based on 'ratings' and 'frequency of reviews' would help in a fair evaluation of the 'quality of services' provided by the 'mess services.' It has been clearly shown in the results that the 'users' would feel more confident in making 'choices' with the help of 'structured information' provided in the 'MessMate' platform.

Further, it has also shown the importance of 'community participation' in developing 'reliable digital platforms,' which would help in improving the 'quality of services' provided by the 'mess service providers.' This would help in developing a 'positive feedback cycle' in which better 'quality of services' would lead to 'higher ratings' and 'trust' from the 'users.'

The 'MessMate' platform has shown a 'practical and user-friendly' solution for improving the 'mess selection' process in 'student environments.' In conclusion, the proposed approach has shown the 'effectiveness of a simple system' in resolving real-world problems and improving 'everyday decision-making.'

REFERENCES

[1]. F. Rothenfluh et al., "Consumer decision-making based on review websites," *Journal of Medical Internet Research*, 2016.
[2]. J. Seutter et al., "Designing online review systems for better information processing," *Electronic Markets*, 2023.
[3]. A. Ponathil et al., "Decision aids in online review portals and their impact on trust," *Future Internet*, 2020.
[4]. B. Kim et al., "Online consumer review systems in the restaurant industry," *Journal of Tourism and Hospitality*, 2021.
[5]. Y. Beij, "A literature review on food recommendation systems and decision-making," Wageningen University, 2020.
[6]. U. Mponela et al., "Online food ordering system for improved service efficiency," 2024.
[7]. D. Roy et al., "Restaurant analytics for operational decision-making," *Production and Operations Management*, 2022.
[8]. "Design and implementation of a web-based food service system in academic institutions," 2025.
[9]. T. O'Reilly, "What is Web 2.0: Design patterns and business models for modern web applications," 2005.
[10]. D. Gefen et al., "Trust and technology adoption in online systems," *MIS Quarterly*, 2003.
[11]. P. Resnick and R. Zeckhauser, "Trust mechanisms in online platforms," 2002.
[12]. A. Dix et al., *Human-Computer Interaction*, Pearson Education, 2004.
[13]. S. Gupta and P. Sharma, "Development of web-based applications using MERN stack," *IJERT*, 2020.
[14]. R. Smith, "Impact of user-generated content on digital platforms," *Journal of Digital Media*, 2019.
[15]. M. Jannach and D. Jannach, "Recommender systems and decision support in online platforms," 2019.