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Implementation of Online Mess Recommender System using Sentiment Analysis

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Abstract: ***In this research paper we proposed mess recommender system using sentiment analysis. We proposed Wordnet based sentiment analysis. Users will submit ratings and reviews for mess as per their experience; our model will analyse the submitted reviews and find out the polarity of the review. Based on these reviews and ratings, user profile like city, area, likings etc. our proposed system will recommend appropriate messes to the user.***
Keywords: Sentiment Analysis, Sentiment Dictionary; Recommendation-System, Text Mining.

I. INTRODUCTION

With the evolution of new web technologies, the recommender systems (RS) are getting significant attention by the business people as well as customers due to its role in better e-commerce, refined business strategy, improved customer's satisfaction, etc. The success of modern e-commerce systems and online booking and reservations systems heavily relies on the customer's satisfaction and trust. The particular interest of this research is related to mess recommended system since this type of business has increased considerably due to the COVID-19 pandemic. For that reason, it is essential to generate methodologies for mess recommendations. The recommendation system helps customers to identify finest mess from an overwhelming group of options by matching customer preferences as much as possible. For mess business person, the recommendation system helps them make free advertising and increase their turnover. Most food-delivery services are applications designed to be used on mobile devices, where the use of recommendation systems is critical since, with small screens, it is essential that what is shown is genuinely relevant for customers to help them in the decision process. However, these systems are generic and process only homogenous data; whereas nature of most of the data on web is heterogeneous that is a major bottleneck in the performance of hotel recommendation systems. The heterogeneity of data affects the performance of the RS directly. In this era of competition, complex information causes overload problems which in turn are time consuming and affects the overall performance. Due to the various forms of data (numeric, textual, etc) in heterogeneous form over the web, the performance of RSs requires more attention towards its improvement.

II. LITERATURE SURVEY

1) In the last 16 years, more than 200 research articles were published about research-paper recommender systems. We reviewed these articles and present some descriptive statistics in this paper, as well as a discussion about the major advancements and shortcomings and an overview of the most common recommendation concepts and approaches. We found that more than half of the recommendation approaches applied content-based filtering (55%). Collaborative filtering was applied by only 18% of the reviewed approaches, and graph-based recommendations by 16%. Other recommendation concepts included stereotyping, item-centric recommendations, and hybrid recommendations. The content-based filtering approaches mainly utilized papers that the users had authored, tagged, browsed, or downloaded. TF-IDF was the most frequently applied weighting scheme. In addition to simple terms, n-grams, topics, and citations were utilized to model users' information needs. Our review revealed some shortcomings of the current research. First, it remains unclear which recommendation concepts and approaches are the most promising. For instance, researchers reported different results on the performance of contentbased and collaborative filtering.
2) Recommendation system is a data filtering technique. They are used to provide suggestions to the users according to their interest and need. It is a very popular technique in recent years and used by many commercial websites and other platforms to recommend news, books, movies, shopping items, novels, music and much more that is why recommendation system has become a hot topic. Recommendation systems are the subset of data filtering systems. The different types of recommendation systems are used in different platforms and have become an important part of various applications.

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It is a decision making process that will help the users to buy items in which they are interested. Recommendation systems are very useful and effective technique of filtering the data. This paper is a review of recommendation systems that will describe recommendation system, how it works and helps in different platforms, and the different types of it with their merits and limitations.

3) Recommender systems have grown to be a critical research subject after the emergence of the first paper on collaborative filtering in the Nineties. Despite the fact that educational studies on recommender systems, has extended extensively over the last 10 years, there are deficiencies in the complete literature evaluation and classification of that research. Because of this, we reviewed articles on recommender structures, and then classified those based on sentiment analysis. The articles are categorized into three techniques of recommender system, i.e.; collaborative filtering (CF), content based and context based. We have tried to find out the research papers related to sentimental analysis based recommender system. To classify research done by authors in this field, we have shown different approaches of recommender system based on sentimental analysis with the help of tables. Our studies give statistics, approximately trends in recommender structures research, and gives practitioners and researchers with perception and destiny route on the recommender system using sentimental analysis. We hope that this paper enables all and sundry who is interested in recommender systems research with insight for destiny.

4) Recommender systems have become an important research field since the emergence of the first paper on collaborative filtering in the mid-1990s. In general, recommender systems are defined as the supporting systems which help users to find information, products, or services (such as books, movies, music, digital products, web sites, and TV programs) by aggregating and analyzing suggestions from other users, which mean reviews from various authorities, and user attributes. Many of articles were excluded because the articles such as Conference papers, master's and doctoral dissertations, textbook, unpublished working papers, non-English publication papers and news were unfit for our research. We classified articles by year of publication, journals, recommendation fields, and data mining techniques. The recommendation fields and data mining techniques of 187 articles are reviewed and classified into eight recommendation fields (book, document, image, movie, music, shopping, TV program, and others) and eight data mining techniques (association rule, clustering, decision tree, k-nearest neighbor, link analysis, neural network, regression, and other heuristic methods). The results represented in this paper have several significant implications.

III. SYSTEM DIAGRAM

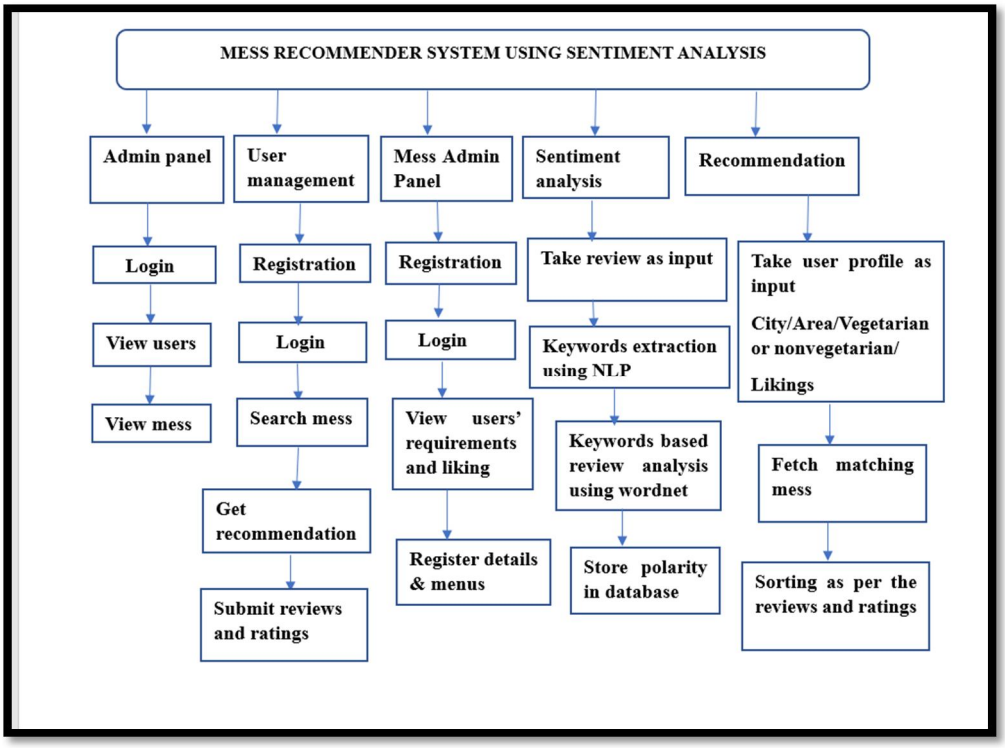

Fig: System Diagram for Mess Recommendation System

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IV. TECHNOLOGY USED

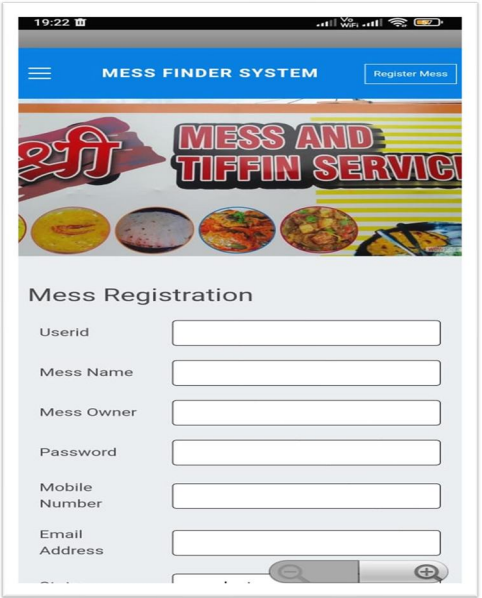
1) Deployment Platform : Windows
2) Application Server : Apache Tomcat
3) Technology : Java EE (java17)
4) Development Tools : JSP,Java Beans
5) MVC framework : Spring boot
6) Database technologies : MySQL 8,JDBC
7) Web Development : XML, HTML, DHTML, Javascript,AJAX
8) Development Tool : Eclipse IDE 2022-06

V. SCREEN SHOTS

A. *Home Page*

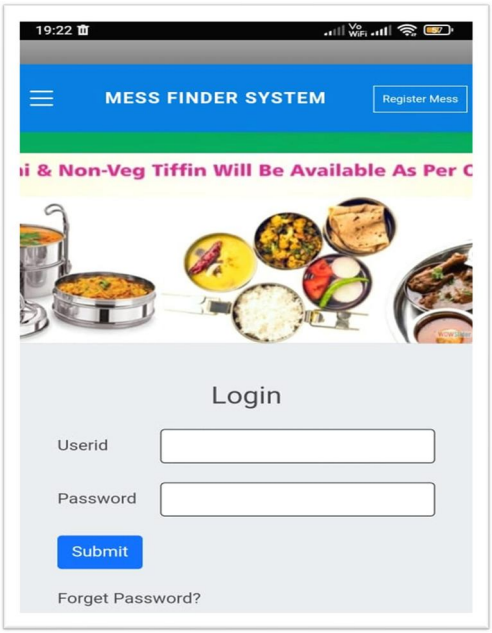
Snapshot 1: Home Page

B. *Registration Page*



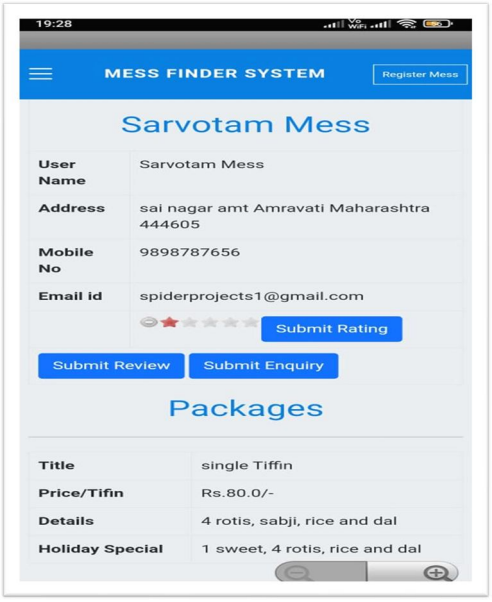
Snapshot 2: Registration Page

C. Login Page



Snapshot 3: Login Page

D. Result Page



Snapshot 4: Result Page

VI. CONCLUSION

This paper proposed a recommendation system for a delivery mess food application based on orders. In this system the user can directly search, rate and provide feedback for the mess packages and the mess owner can use the dashboard with different available functions. The research of new mess recommendation systems is very important. Many consumers tend only to order in restaurants they know because they fear disappointment and do not explore other options. Therefore, this recommendation system is vital for consumers since it can give an excellent suggestion on where to join next mess with high accuracy based only on clients' previous join. The recommendations will satisfy the clients, and mess business can increase their sales. Hybrid systems overcome the limitations of both content based and collaborative filtering systems, improve the result and make the system accurate.

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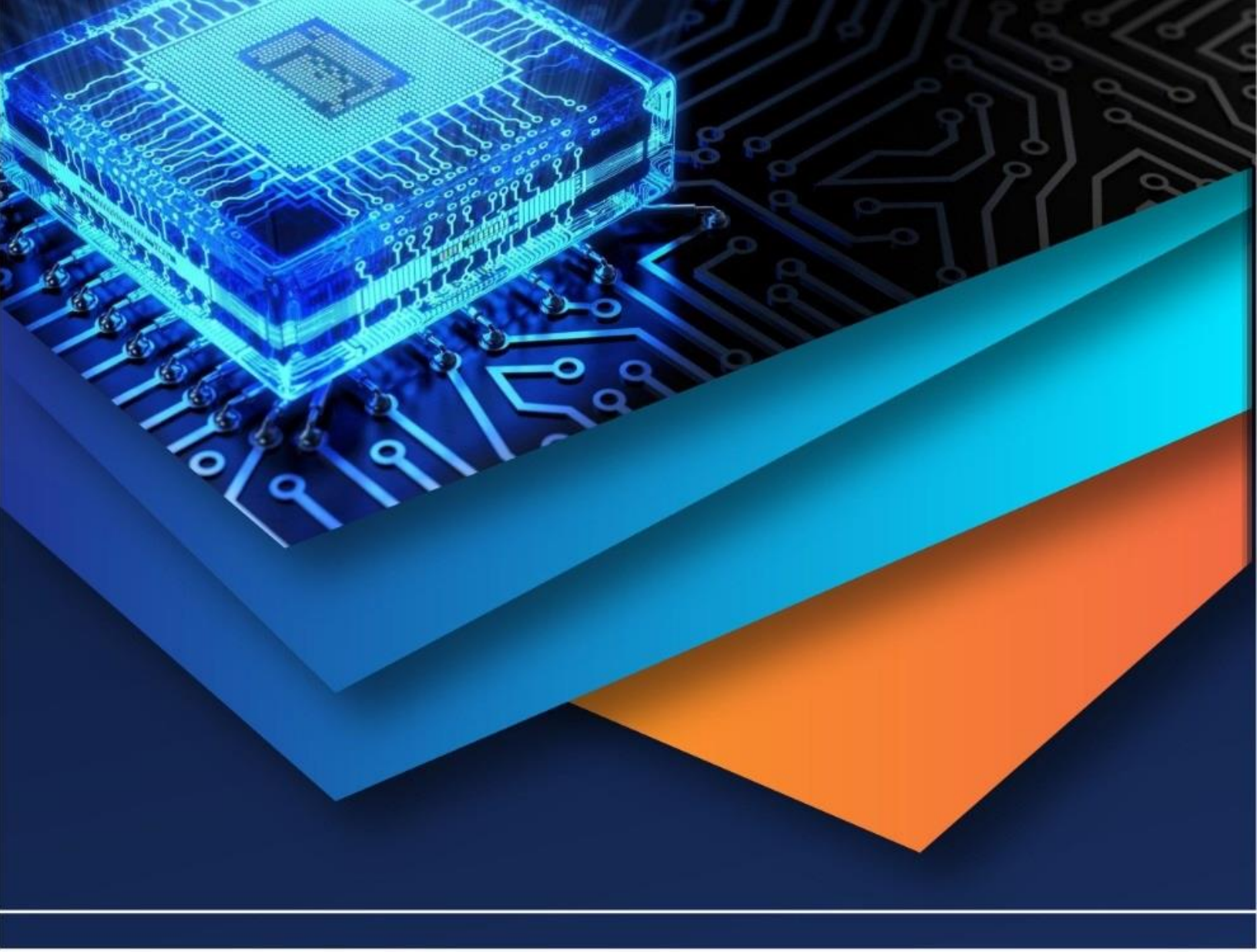

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