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RECOMMENDATION OF INDIAN CUISINE RECIPES BASED ON INGREDIENTS

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ABSTRACT

The same components may be used in a wide variety of Indian dishes. The abundance of fresh produce, herbs, spices, and fruits in India's traditional cuisines allows for a great deal of variation. In this work, we proposed a system that uses the user's current ingredient situation and their preferred cuisine to provide suggestions for Indian cuisines. In order to achieve this goal, we scraped the web for a variety of recipes and then used a content-based machine learning strategy to produce recipe recommendations. Using this method, you may get ingredient-based recommendations for Indian dishes.

1.INTRODUCTION

One such system is the Recipe Recommendation System for Indian Cuisines, which uses the user's previous tastes in order to suggest new, untried cuisines. Recipe ingredients that the user has already shown an interest in form the foundation of recommendations. Traditional Indian cuisine, with its innovative use of herbs and spices, has been a breath of new air for many. A large number of dishes are often served during an Indian meal. Different regions of India have their own distinct culinary traditions, which are sometimes categorized as either South Indian or North Indian. Indian cuisine, which is evocative of unity in its varied diversity, is highly praised for its diverse multi-food options available in several restaurants and hotel resorts. Indian basic foods include wheat, rice, and pulses, the most important of which is chana (Bengal Gram). In recent times, there has been significant development in the Indian palate. Bengali cuisine is known for its innovative

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use of panchphoron, a word for the five essential flavors—mustard, fenugreek, cumin, anise, and black cumin—in a variety of dishes. Traditional Gujarati cuisine places a premium on vegetables and is hence quite healthy. The traditional Gujarati thali has a variety of mouth-watering meals. There is a wide variety of flavors and preparation methods in Gujarati cuisine. There is a dizzying array of delectable vegan and nonvegetarian options in Punjabi cuisine.

2.LITERATURE SURVEY

1.A Collaborative Filtering Algorithm for Trust Models and Distributed Graph Computation for Stock Recommendation Systems

Haoyu Wang is the author.

An efficient method for addressing information overload and assisting users in discovering important content is by using a recommender system. The research utilizes a specific financial theory to convert the investment behavior of users (shareholders) into ratings and confidence in the invested stock, and then uses the distributed graph computing framework Spark GraphX to develop a dichotomous model of the interaction between shareholders and stocks. Next, we use the parallel graph computation to determine the shareholder trust and similarity graphs. Then, we analyze the A-share and SME stock market stocks using the enhanced collaborative filtering method based on the trust model. Lastly, the experimental setting demonstrates that the system has superior algorithm scalability and accuracy when compared to standard collaborative filtering algorithms.

With varying goals in mind, we analyze the challenge of ISS cosmonaut training program planning. The crew members should be assigned predetermined minimum qualification levels within the constraints of the budget, taking into account factors such as training time differences, training expenditures, and maximum training levels. The training method for cosmonauts is first described.

In order to solve the volume planning challenge, four different models are examined.

The first model's goal is to reduce the disparity in total crew preparation time; the second model's goal is to reduce training costs while maintaining a certain level of training; and the third model's goal is to maximize training level within a certain

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budget. The issue is seen as a n-partition problem in the fourth model. Next, we take a look at two approaches that address the calendar planning issue.

With varying goals in mind, we analyze the challenge of ISS cosmonaut training program planning. There should be no more than a certain amount of time or money spent on training, and all crew members should have met a minimal set of qualification standards.

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One of them is a heuristic that uses a small number of (n)operations. The second one is based on the n-partition issue technique and includes both heuristic and precise components.

Second, using ML to combine user-and item-based collaborative filtering

Written by Priyank Thakkar

It is common practice to utilize collaborative filtering (CF) to suggest products to a user based on the preferences of other users who share their interests. Two forms of CF that share the goal of predicting the target user's rating for the target item are user-based collaborative filtering (UbCF) and item-based collaborative filtering (IbCF). In this research, we investigate several approaches of integrating UbCF and IbCF predictions in order to reduce the total prediction error. This research presents a method for merging UbCF and IbCF predictions using MLR and SVR.

3. The EARS system, which stands for "Emotion-aware recommender system based on hybrid information fusion,"

Author(s): Yongfeng Qian

Ratings, reviews, and clicks are examples of implicit feedback data used by recommender

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systems to propose products to consumers. The majority of recommender systems, however, fail to take into account the user's emotional changes—which are crucial to consumption—in favor of analyzing item-to-purchase correlations. This paper presents a hybrid information fusion-based emotion-aware recommender system to improve recommender service quality. The system extensively analyzes the user's features by fusing three representative types of data: user rating data as explicit information, user social network data, and user sentiment. 4.A System for Recommendations in Financial Planning Based on Collaborative Content Analysis and Demographic Filtering Pereira, Nymphia, and Varm, Satishkumar L. were the authors. The Internet is the panacea for all problems. However, it is not easy to locate pertinent data. Visual, textual, auditory, and video content are all sorts of information that users find interesting. The recommendation system is a data filtering mechanism that tailors ideas to each individual user, allowing them to discover better goods, financial plans, and relevant information. Collaborative filtering, knowledge-based recommendations, content-based recommendations, and utility-based recommendation systems are among the several recommendation strategies. Data sparsity, the new user cold start issue, the new item cold start problem, overspecialization, and shilling attacks are some of the downsides that these solutions don't address. Nowadays, putting money aside is crucial. This paper proposes a recommendation system for budgeting and financial planning.

3. EXISTING SYSTEM

The term "web scraping" may refer to a number of different processes, but generally refers to the process of extracting data from the Internet and saving it in a table or spreadsheet format to a local file on your computer or a database. The process of retrieving data from websites is known as web scraping. A little piece of code called a "spider" does all the work. A "GET" query is first sent to a certain website. Then, using the result as a guide, it parses an HTML document. After that, the scrubber searches the report for the data you want and then converts it to the specified format.

Problems with the Current System 1) Data cleansing, also known as data cleaning, is the process of identifying and fixing (or

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removing) inaccurate or obsolete entries from a database.

2) One approach to encoding text data when using machine learning techniques for text modeling is the bag-of-words model.

3.1 SYSTEM PROPOSED

Here we go over a bunch of websites that provide Indian food. Websites are scraped. Data preparation procedures were performed to the gathered dataset due to its poor formatting. A content-based recommendation system makes suggestions according on the profile's contents. We need only a few of parameters from our gathered dataset—ingredients, actions, time to prepare, etc.—in order to suggest comparable recipes. At this point, we remove the extra characteristics and choose the column that will serve as the basis for the suggestion.

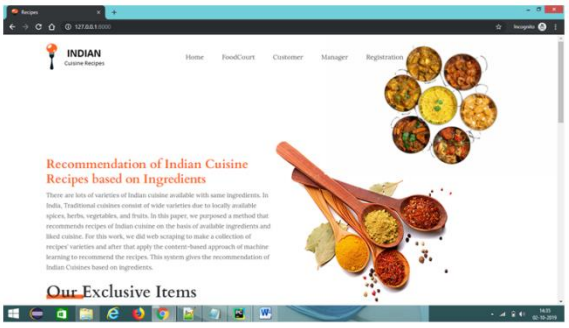
Benefits of the Suggested Approach

We have a suggestion algorithm that takes a recipe's elements into account. Consequently, we generate word bags for every recipe by selecting the ingredient column in our dataset. Each recipe's keywords are stored in a word bag, and we sort the recipes in descending order of similarity using how similar their keywords are.

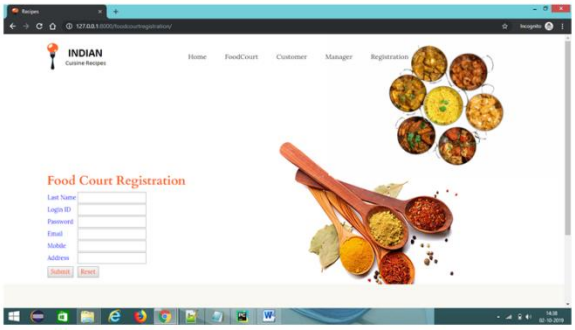
Using the recipe name as input, we were able to generate comparable recipes in the recommender component. To begin, we utilize the user-imputed recipe index to generate a cosine similarity matrix series with a similarity score. Subsequently, we get the index containing the two recipes that are most comparable and suggest them to the user.

4. OUTPUT SCREENS

Homepage:



Food court Registration:



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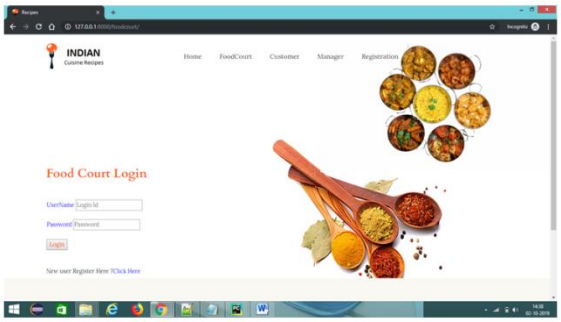
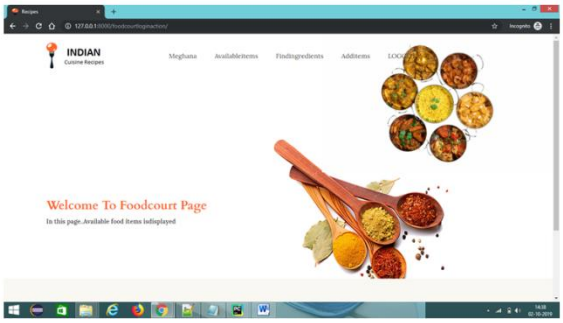
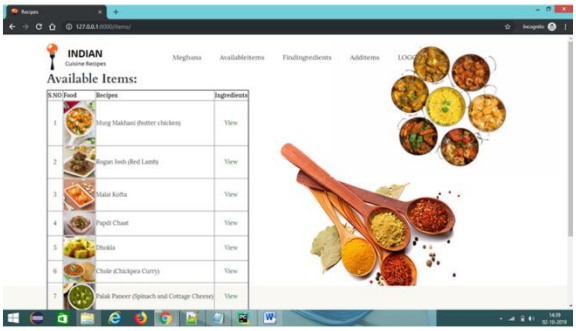
Foodcourt login:



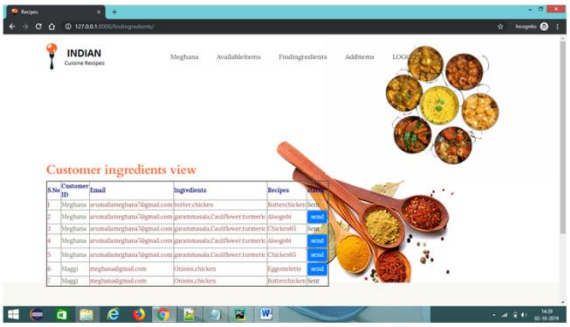
Foodcourt Home:



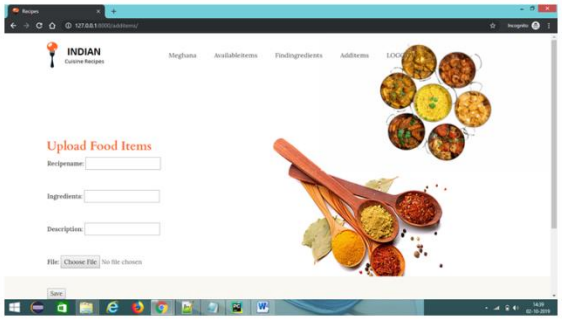
Availableitems:



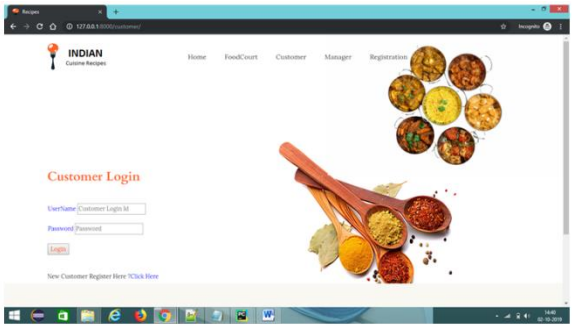
Customer ingredients view:



Add items:



Customer login:



Customer home:

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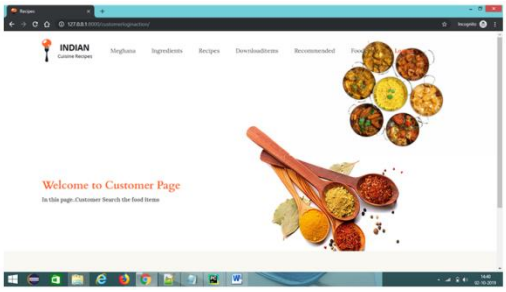

View food items:

5. CONCLUSION

Traditional Indian cuisine, with its exquisite use of herbs and spices, has been a breath of fresh air for many. A large number of dishes are often served during an Indian meal. Our strategy for recommending Indian food based on ingredient matching between cuisine and favorite foods was given in this publication. In order to compile all of the recipes and ingredient details for Indian food into a database, we scraped the web. All of the aforementioned problems, including cold start, must be resolved. One approach would be to integrate with users' social media accounts and provide recipe recommendations based on what their friends have enjoyed. Creating more effective and adaptable crawlers is one way to deal with heterogeneity. To improve meal recommendations in the future, it will be able to use a hybrid approach with web crawling algorithms that extract additional meta-data. In the future, it would be great if the app could recommend recipes based on the user's preferred chefs or the region from whence they hail. Utilizing the user's location, the system might potentially propose specialized meals from local eateries.

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