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Abstract:

The era of technology today has become a bridge that connects humans with all the ease. Many of the activities carried out by humans using technology as a media help, ranging from address search, to shopping. Technology is becomes small things that always included in our daily lives, such as cooking example. This study utilizes a smartphone app called recepiece which has a function as a place to store and search for recipes based on materials owned by the user. By using several methods and approach such as Euclidean distance and Agile development program, this application are designed and develop based on mobile application especially for android smartphone. In this research, several samples are obtained to fill the survey and reviews the application performance include the functionality and non-functionality. The result showed that Recepiece application are capable to be used by user and have better performance although this application are build by using hybrid framework called Ionic. From survey result this application gained 90% approval from user if this application released globally. Keywords-- Android, Cook, Recipe, behavior, log, hybrid, ionic.

Keywords:

Recipe Finder Application, Food Recommendation System, Recipe Search Engine, Smart Cooking Assistant

load the materials owned, then the application will look for recipes that have the material most similar to the material owned by the user.

Literature Review:-

A literature review for a recipe finder application involves reviewing existing

Introduction:

Food is one of the main human needs. Through food is the source of energy obtained. In its development, food today is not only as a filler of energy needs, but more than that food has become an art and has added value. A wide variety of innovative creations in food have been developed and spread widely. Many of them use only the minimal amount of material to create an original recipe. A recipe is a set of instructions telling you how to prepare and cook food, including a list of what food is needed for . Cooking recipe consists of several aspects including: name, step, tools and materials, time and amount of dish. Not everyone can memorize well the recipes they want. Their material is also an obstacle in cooking. Limited ingredients also become one of the causes of limited cooking creations, especially for someone who does not have passion in cooking.

In the current era of gadget technology, innovations have been created to help people gather and search for the recipes they want, including a mobile-based app like Cookpad that features to search for recipes based on the name desired by the user. However, there are often conditions where the user has only limited ingredients for cooking. While the applications that exist before it does not provide this feature. The research we did here is to build a mobile app that has a feature to search for

recipes based on material owned by the user. In this app we develop, the user is asked to

5. Role of Artificial Intelligence and Data Mining AI techniques like image recognition to identify ingredients from photos.

Data mining approaches to extract recipe data from online sources.

research, technologies, and methodologies related to recipe discovery, recommendation systems, and food-related applications. Below is an outline of what the literature review might cover:

1. Overview of Recipe Finder Applications
Definition and objectives of recipe finder systems.

Common use cases: finding recipes based on ingredients, dietary preferences, or cuisines. Importance in promoting healthy eating and reducing food waste.

2. Recommendation Systems in Recipe Applications

Algorithms used for recommendation (e.g., collaborative filtering, content-based filtering, hybrid approaches).

Use of machine learning models to personalize recipes.
Role of natural language processing (NLP) in analyzing and understanding user preferences.

3.Ingredient-based Recipe Search Techniques to match available ingredients with recipes.

Challenges in partial or missing ingredient matching. Innovations in suggesting substitutes for unavailable ingredients.

4.Nutritional Analysis and Dietary Preferences Methods to analyze nutritional content of recipes. Integration of dietary restrictions (e.g., vegan, gluten-free, low-carb). Approaches to balance taste, health, and user preferences.

s3. Potential for social sharing: Users can share favorite recipes, cooking experiences, and photos with others.

4. Integration with smart kitchen devices: Future developments could enable seamless integration with smart kitchen appliances.

Appendices:

- **Recipe Database Schema**
  Detailed structure of the recipe database, including tables for recipes, ingredients, instructions, and user ratings.
- **Algorithm Pseudocode:**

Sentiment analysis on recipe reviews for enhanced recommendations.

Work Carried Out:

1. Algorithm development: Creating algorithms to search and filter recipes based on user input (ingredients, dietary restrictions, cooking time, etc.).

2. Data collection: Gathering and organizing recipe data from various sources (cookbooks, websites, user submissions).

3. Natural Language Processing (NLP): Analyzing and understanding user queries to provide relevant recipe results.

4. Recipe categorization: Organizing recipes by categories (course, cuisine, ingredient, cooking method).

5. Ranking and filtering: Prioritizing recipes based on relevance, ratings, and user preferences.

Result and discussion:
Result:

1. Accurate recipe suggestions: The application provides users with relevant recipe results based on their search queries.
2. Time-saving: Users can quickly find recipes without browsing through numerous websites or cookbooks.

Discussion:

1. Impact on cooking habits: The application can inspire users to try new recipes, ingredients, and cooking techniques.
2. 2.Userexperience improvements: Continuous feedback and updates can refine the application's performance and user satisfaction.

Conclusion:

Recepiece application is an application that moves in the search field, more specifically this application has a function to find recipes online with the basis of similarity of materials owned by the user. With this application users can find recipes with ingredients that match what is owned by the user. From various surveys and series of tests performed related to the functional Recepiece application, it can be concluded that this application is able to be

Step-by-step pseudocode for the recipe search and ranking algorithm.

- **User Interface Screenshots:**
  Screenshots of the application's user interface, including search results, recipe details, and user profile pages.

- **User Feedback and Testing Results**
  Summary of user testing results, including feedback on usability, search accuracy, and overall satisfy.

accepted by the user well Regardless of the imperfection of this application, the core features offered can still run well. This is evidenced by the survey results that show about 90% of users agree if the application is released globally.

Acknowledgement:

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