

Apps for Good Proposal – Dishcovery: Your Brain, But with a Chef's Hat

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Executive Summary

Today's typical recipe apps are often frustrating for users who want to cook with what they already have at home or who need to follow specific dietary needs and restrictions. These platforms often provide long, generic lists of recipes that do not really consider the user's personal preferences or what is in their kitchen, which leads to food waste, extra trips to the store, and time wasted by filtering through irrelevant results. Some of these platforms include SuperCook, Recipe Keeper, Mealime, Yummly, and ReciMe. These applications do not provide accurate recipes that users would be satisfied with. This issue is due to the poor matching algorithms that these applications encompass. That is where this study's developed app comes in. Dishcovery is a user-friendly app that tailors recommendations based on favorite ingredients, dietary restrictions, disliked foods, and an interactive "online fridge." Our app has a smart-filtering system that is based on the user's preferences for food, and it matches it with recipes found throughout the internet. Additionally, Dishcovery encourages users to cook with what ingredients they have, which promotes sustainability and reduces food waste, which helps cooking become an environmentally friendly activity. By combining personalization with some community-based features like comments, likes, and recipe sharing, similar to that of a social media app, Dishcovery bridges the gap between a standard recipe database, and the real world needs of cooks. Dishcovery plans to build and create a vibrant community among chefs. The goal of this app is to make cooking easier, smarter, and more enjoyable for everyone looking for inspiration for a new recipe.

Introduction

Problem & Audience:

With the rising food prices, more people are resorting to home-cooking in order to save time, energy, and money (Gravalese, 2025). In fact, according to the contextual commerce advertising platform Chicory's "Annual Recipe Usage Report," 89% of people who responded to this survey indicated that they use digital recipes, which shows that online recipe platforms are a widely accepted meal-planning tool (Zboraj, 2022). Due to the rising customers in digital meal-planning, there is a demand for applications that will provide recipes that need ingredients they already have at home. Many current recipe apps provide generic recommendations without actually accounting for user preferences or their available ingredients. However, many recipe apps on the market currently do not address the user's specific preferences, and if they do, it does not make that the focus of the app, leading the user to discovering recipes that they cannot make due to allergies, dietary restrictions, or ingredients they may not have available at their house at the moment. The target audience of this app includes everyday users that are looking for easy, personalized meals using ingredients they have ready to use in their fridges and pantries.

Competition:

Popular apps that address this problem are "SuperCook", "Recipe Keeper," "Mealime," "Yummly," and "ReciMe." These are some apps that we looked into to find some features that users appreciate to help solve the problem of not being able to find recipes tailored to their taste of with ingredients they already have. These apps were also analyzed to find features that they did not incorporate, that users thought would be beneficial to their experience if they were included. Below are some of the specific information we collected for each of the apps and their features.

SuperCook

SuperCook is an app made to help users find new recipes using ingredients they already have at home. It uses an online “pantry” format where users can enter what is in their kitchen, and the app suggests recipes based on that. It also has filters to narrow down results, like removing recipes that need ingredients the user does not currently have. The creators made this app to help people “shop smarter,” meaning they would not need to buy a bunch of new ingredients for just one meal or let food go to waste. It is also meant to inspire people to try new things with what they already have.

That said, one thing we noticed the app is missing is a filter for food allergies. Just because someone has the ingredients for a recipe does not mean it is safe for them to eat. For example, a user could start making something and only realize partway through that it includes an ingredient they are allergic to. We think adding an allergy filter would be a really helpful improvement.

Recipe Keeper

Recipe Keeper is an app that is designed to organize recipes, shopping lists, and serve as a meal planner. Some of the main features of this app are that you can add recipes quickly, such as importing an image from an old cookbook onto the app so that you can access it at any time. The app focuses mainly on preserving recipes and being able to share home with friends and family. It also has a feature to create a shopping list based on the recipes you have saved and organizes it into aisles in a typical grocery store. A feature that we thought this app lacked, as well as many other users, is the idea of having the recipes already in the app, rather than importing only your recipes. Although cooking your

own recipe is good, having some other recipes, maybe even some that other people you do not know have made, using the ingredients you have, might make for a better and more interesting user experience.

Mealime

Mealime is an app that focuses simplifying meal planning for users and reducing overall food waste. The app helps users create a meal plan, with weekly personalized meals, with a designated grocery list. It also has some step-by-step instructions for specific recipes. It also allows the users to get recipes catered to their own dietary preferences. One thing that we thought this app lacked was the addition of new recipes. Many users who attempted to use this app for their meal planning but found that it did not update to new recipes. That is why we aim to create an option where the user can add their own recipes to the app, to allow other users to access those new recipes at any time. Another thing that users thought this app lacked was the fact that the user had to pay a certain amount to even be able to access more than 5 recipes. This is why we also aim to create a free app that allows the users to view any recipe, without needing to be charged for it.

Yummly

Yummly is an app that is designed to allow users to explore new recipes, as well as save them based on different dietary preferences, needs, and overall cooking skills. The app looks to consider the user's preferred cuisines, as well as any allergies. There is also a meal planner feature built into this app, where the user can plan weekly meals by adding different recipes to a schedule, which will then make a shopping list for them based off it. Some features that users thought the app lacked, were the ability to edit or modify any of the recipes that they found or saved within the app. That is why our app aims to create a platform where the users, while also being able to view other's recipes, can create their own recipes and post them for other users to view and interact with. Another feature that this app lacked

was an option to track and manage ingredients that the user already has in their fridge or pantry.

Therefore, if the user had already made a recipe using a certain ingredient, and it isn't in their pantry or fridge anymore, the app would not know about it and might offer recipes that use those ingredients anyway, leading the user to making unnecessary grocery store trips. Our app aims to fix this issue by created an "online fridge," where after the user goes to the store, they can input the ingredients that they bought. Then, the app will cater their recommendations to what they already have, not what they need.

ReciMe

ReciMe is an app that helps users organize their preferred recipes all in one place. Some features that this app has, is how it allows you to save recipes from different social media apps, such as Instagram, TikTok, Pinterest, and Facebook. You can also create grocery lists based on the recipes you saved, and allowing the user to sort ingredients to make their grocery store trips must faster. The app even allows users to create their own recipes, with corresponding pictures. However, there are some flaws with this app. Users say that after gaining access to 8 recipes, the app will not let you view more without paying for a subscription. Also, the app claims to import any recipes from third-party apps seamlessly, but users mention how only a few of the recipes were imported, and the rest of them were lost. Therefore, our app aims to fix this by including many pre-imported apps into the platform, so that users will not need to import their own. Also, there will be an option to add your own recipe, in case there is a recipe that the user wants to make that is not already in the app. That way, other users will have access to those recipes.

Specifications:

Features

Our Minimum Viable Product has several features that will allow for the user to find their preferred meals based on their dietary restrictions and preferences. First, the MVP will include a screen where the user can input their preferred ingredients, disliked ingredients, and dietary restrictions. As they first enter the application, they will be prompted with their profile page, and that is where they can enter their information and food preferences. At any time, the user can change their information if need be.

Using the user's preferences, the application will generate a feed page. This feed page will include a list of numerous recipes that were based on what the user liked, disliked, and their dietary restrictions. The recipes will show up as thumbnails of the actual recipe, but if the user clicks on the recipe, it will open to the instructions on the cooking process and the list of all the ingredients with their respective quantities.

In addition to the feed page, a search bar will be implemented. Instead of scrolling through a list of recipes, if the user wants more specific recipes tailored to their preferences, they can just search up a recipe. Moreover, the user can also just search up a specific ingredient that they want to cook with, and recipes that include that ingredient will pop up on the feed.

Feedback

When using the application, there would be multiple features that the user could test and determine if there are any bugs existing. One crucial feature of the application that would need to be tested would be the feed. As said before, the feed would provide recipes based on the dietary preferences of the user, located on the profile page. As developers of the application, we would want feedback on if the function of the feed actually is in line with the preferred ingredients. As users are using the feed function more often, they would then be prompted with a pop-up which would be asking for feedback. This feedback would be optional, but if they would agree, then they would click a link to a

google form. The google form would contain questions that would overall gauge on how the feed function works for the user. We would then use that feedback to make our application more functional and enjoyable for the users.

Another aspect of the application that could use feedback is the overall user interface. We want our application to be easy to navigate and for the user to leisurely find recipes. A similar feedback function for the feed will be implemented but for the user interface. The google form would ask for feedback on certain bugs such as features not loading, unorganized components, and more. We would then take that feedback and implement it to our application.

Potential Future Additions

We plan to implement some additional features once we are further into our project, after implementing main features of the MVP. One of these features, is the ability to add and remove ingredients from an “online fridge.” Every time the user goes to the grocery store, or they cook with a certain ingredient, essentially whenever food enters or leaves their kitchen, they can update the information here and the app will curate the feed of recipes based off what they might or might not have in their house, along with already curating based off their dietary restrictions and preferences. Next, a feature that the app will have is the ability to make your own recipe card as a “post,” essentially adding to the online database of recipes. This way, for other people using the app, your recipe can also contribute to someone else’s feed. A feature that goes off this one is the ability to like the recipe “posts” in the feed. This way, users might be more likely to pick a recipe that has more likes, meaning more people might have made it in the past and enjoyed it. It is a way for the user to access feedback on the recipes that they find on the page. Another feature that will be implemented into this app in the future is the ability to add comments to the recipe “posts” in the feed. As mentioned in the previous “liking”

feature, users might be more likely to pick a recipe that has more likes, meaning more people might have made it in the past and enjoyed it.

References

Zboraj, M. (2022, August 10). *Digital Recipes Attract High-Intent Grocery Shoppers*. Progressive Grocer.

<https://progressivegrocer.com/digital-recipes-attract-high-intent-grocery-shoppers>

Gravalese, S. (2025, March 28). *Rising prices are changing the way Americans eat-here's what's next*.

Forbes. <https://www.forbes.com/sites/stephaniegravalese/2025/03/19/why-america-is-returning-to-home-cooking-again/>