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### Partake: A product design aimed at helping individuals master the art of cooking

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# RIT

## **Partake: A product design aimed at helping individuals master the art of cooking**

By

**Zikai Meng**

A Thesis Submitted in Partial Fulfillment of the Requirements for the  
Degree of Master of Fine Arts in Visual Communication Design

School of Design  
College of Art and Design  
Rochester Institute of Technology  
Rochester, NY  
December 12, 2023

## **Committee Approval**

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**Adam Smith**

**Date**

**Chief Advisor**

Associate Professor

Director of Visual Communication Design program  
School of Design, College of Art and Design

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**Mike Strobert**

**Date**

**Associate Advisor**

Senior Lecturer

School of Design, College of Art and Design

**Thesis Approval**

Partake: A product design aimed at helping individuals master the art of cooking

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Thesis Title

Zikai Meng

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Thesis Author

Submitted in partial fulfillment of the requirements for the  
degree of Master of Fine Arts  
The School of Design | Visual Communication Design  
Rochester Institute of Technology | Rochester, New York

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## **Introduction**

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Many individuals aspire to become skilled cooks and create delectable dishes on their own. However, following recipes or tutorials can be challenging for many. This is why I developed Partake - an interactive cooking learning platform designed to provide a solution. With this app, users can learn the art of cooking in a personalized and engaging way by adjusting ingredient quantities and receiving clear instruction on culinary techniques. Partake aims to enhance the likelihood of success for those embarking on their journey to master cooking skills.

## **Keywords**

**UI/UX Design, User Research, Tablet-based, Cooking, Newbie**

## Main Body

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### Context: Problem and Solution

Many individuals embark on the journey of learning to cook for a variety of reasons, including reducing stress, improving overall health and well-being, saving money, and expressing love. Despite these motivations, it is evident that a significant proportion of people do not engage in cooking. In order to gain deeper insights into this issue, I conducted interviews with six individuals who typically do not prepare their own meals. The range of reasons provided was diverse; however, the primary challenge identified was difficulty in following recipes. Thus, my focus will be on addressing this obstacle to support users in overcoming their hesitation towards cooking.

To address this issue, I've developed a new tablet-based product design called "Partake." This innovative digital solution is designed to assist users in overcoming cooking challenges. The choice of a tablet interface aims to provide users with a more accessible way to interact while cooking. Unlike standard recipes or video tutorials, "Partake" combines the benefits of traditional methods with enhanced convenience for practicing cooking. It targets beginners in the culinary realm and seeks to facilitate an engaging cook experience through its user-friendly features. Users can begin by selecting a cuisine they are interested in, and the app will assist them throughout the cooking process. The user-friendly interface allows for precise measurements, eliminating any confusion regarding ingredient quantities. This encourages users to approach cooking with confidence. Additionally, the app provides step-by-step guidance on using kitchen appliances, making it easier for users to follow along seamlessly from start to finish. For added convenience, voice control functionality is available for users to interact with the app hands-free while busy in the kitchen.

### Methodology

After identifying the direction, I conducted user research (Appendix C, page 7) to gain insights into the challenges and obstacles faced by users. Five interviews were carried out, and an affinity diagram was used to identify recurring issues. Four common pain points emerged in relation to novice cooks wanting to learn how to cook. Based on the collected data (Appendix C, page 8), newcomers (Appendix C, page 9) often struggle with determining the right quantities of ingredients and sauces required for their recipes,

leading them to overbuy or underprepare food. Another challenge is the difficulty in finding tutorials that match their skill levels—newbies find them hard to follow while experienced chefs find them too basic. Furthermore, an important consideration for the culinary app is to address user concerns such as avoiding dirtying their hands while interacting with recipes on the screen. Additionally, users express a desire for more diverse options when selecting cuisines. For further insight, I conducted extensive research (Appendix C, page 10,) analyzing several recipe apps and studying how they tackled these challenges.

## **Results**

In this project, I created a tablet-oriented solution aimed at easing users into culinary explorations by providing tailored recipe suggestions and interactive cooking experiences. This project will demonstrate how the application effectively addresses user needs. With this app, users can access an array of recipes (Appendix C, page 14.) Users have the flexibility to choose their desired cuisine and explore alternative recipe recommendations if the initial version does not align with their preferences (Appendix C, page 15). Upon choosing a recipe, users can customize portion sizes based on their needs by adjusting the number of servings (Appendix C, page 16.) The app will then automatically calculate and display the required ingredient quantities for preparation. The app incorporates voice control for hands-free access, enabling users to interact effortlessly without the need to touch the screen. This feature allows users to simply communicate with the app and receive the necessary information they require (Appendix C, page 17.) To help users in improving their cooking skills, the app not only offers textual tips to read but also provides video tutorials for a visual understanding of cooking techniques (Appendix C, page 18.) Upon completing the dish, they can share a photo with the community.

## **Conclusion**

Throughout this project, I engaged in a comprehensive design process and conceived numerous innovative concepts aimed at enhancing users' experiences with digital tools for learning to cook. Designing systematically for visual and user experience presents its challenges, but the extensive research I conducted guided the development of both the design system and the product itself. These processes were instrumental in transforming my ideas into prototypes. Given additional time, I aim to explore an option that allows users to order ingredients for their desired recipes, providing added convenience for aspiring cooks.

## Appendix A: References

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Barroso, Joao, Arsénio Reis, Tassos Mikropoulos, J. Bernardino Lopes, and Chih-Wen Fan. 2021. *Technology and Innovation in Learning, Teaching and Education Second International Conference, TECH-EDU 2020, Vila Real, Portugal, December 2–4, 2020, Proceedings: Second International Conference, TECH-EDU 2020, Vila Real, Portugal, December 2–4, 2020, Pr.*

Cheng, Jinghui. 2022. "Understanding and supporting the design systems practice." *Empirical Software Engineering*.

Nick. 2020. *Conquering Your Fear of Cooking*. 05 18. Accessed 10 16, 2022. <https://www.macheesmo.com/conquering-your-fear-of-cooking>.

Sharma, Shubham. 2022. *Case Study: Freshly Dropped Recipe App. UX Design for Cooking and Shopping*. 01 17. Accessed 05 08, 2022. <https://uxplanet.org/case-study-freshly-dropped-app-ux-design-for-cooking-and-shopping-a19c7a00c322>.

Spinks, David. 2014. *How to overcome every possible excuse for not learning to cook*. 04 04. Accessed 10 14, 2022. [https://www.oregonlive.com/food/2014/04/how\\_to\\_overcome\\_every\\_possible.html](https://www.oregonlive.com/food/2014/04/how_to_overcome_every_possible.html).



## Appendix C: Expanded Thesis Defense Presentation

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### Appendix A

## Partake

A platform that removes barriers to entry and helps you begin your culinary journey.



Zikai Meng VCD MFA 2023  
Committee: Adam Smith, Mike Strobert

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01

# Preview



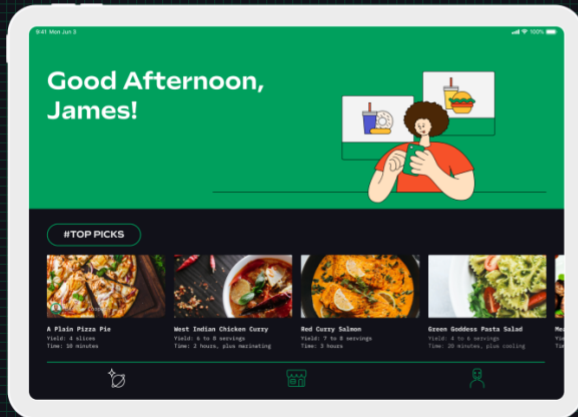
Preview-Design Brief

A platform that **introduces**  
you to the world of cooking  
without any obstacles.



## Preview

Partake - To facilitate learning how to cook more easily



Partake is a tablet-based platform designed to enhance culinary skills without causing frustration.



02

# Research



## Research - Interview

# I Conducted User Interview To Gain A Better Insight Into The Difficulties Experienced By Users

Here is the profile of the interviewees



5 People



Tech Guy



Into Cooking

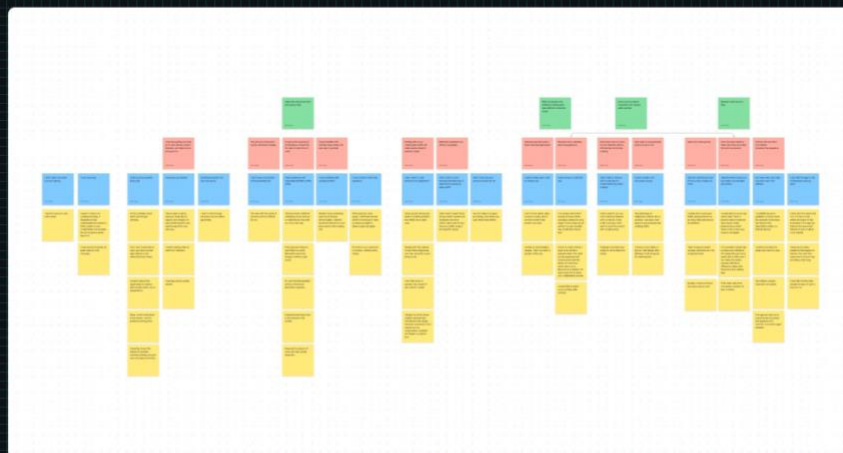


Students



## Research - Affinity Diagram

# I Conducted Affinity Mapping To Analyze The Data.



## Research - Insights

### I Got These Insights By Analyzing The Affinity Diagram

- "I Am Unsure About The Amount Of Materials And Sauces Required For Preparation."
- "I Don't Want To Use My Dirty Hands To Touch The Screen While I Am Cooking."
- "The Existing Products Available In The Market Do Not Align With My Cooking Expertise."
- "I Would Like To Have A Wider Range Of Options To Choose From When Deciding Which Recipe To Practice."



## Research - Marketing research

I took a look at the competitors to find potential opportunities and gain inspirations.



- It's good to see many recipe options
- Clarify ingredients ahead and tools ahead
- Shop ingredients in the app
- The tutorial video cannot control



- It's good to guide user step by step
- Too many words, but hard understand without pictures and videos.



- It's good to let users choose which food they are allergic to and what cooking skill level they are at.
- Guide user with both videos and text
- Require control with hand



- Have a meal plan for the user too add recipes on the calendar.



03

# GOALS



## Goals - How Might We

### How Might We To Help Users To Learning Cook Easier?

- Automatic calculation of ingredient amounts
- Let users choose the level they are comfortable with
- Voice control feature
- Rich in choices





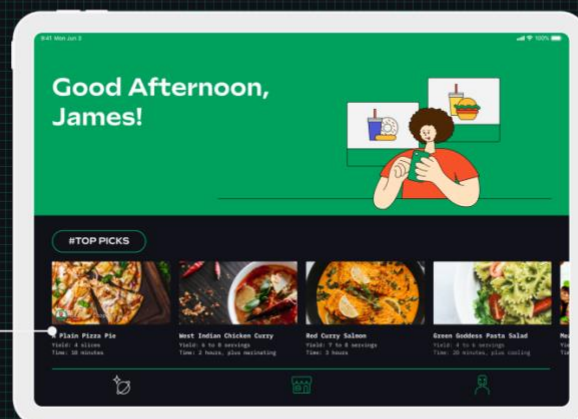
04

# Deliveries



## Deliveries - Home

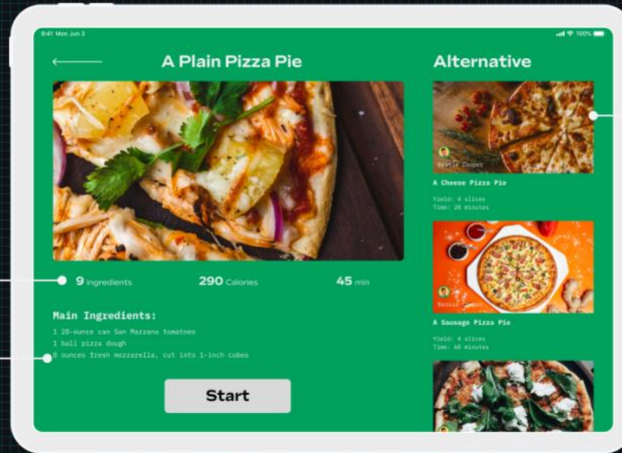
It shows different types of recipes on the home page, and the user can freely choose and start from the one they are most interested in.



## Deliveries - Detail

Give user a brief information that they are concerning most

An introduction of ingredients

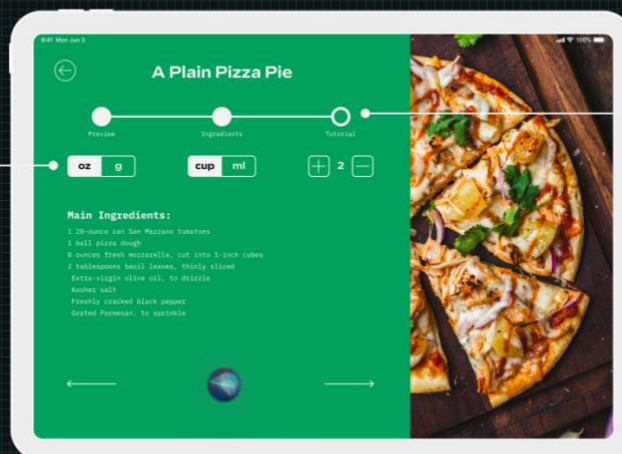


Alternative recipes recommendation for users to select.



## Deliveries - Automatic Calculate

Then users can easily know how much ingredients they need to prepare for the recipe with the app by just adjusting the amount



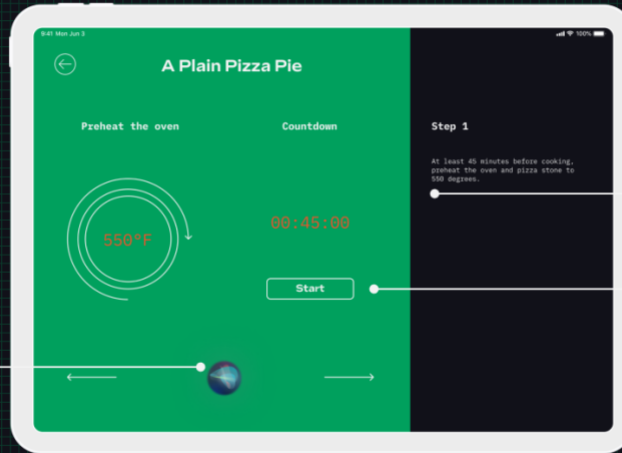
Show the learning progress





## Deliveries - Voice Control

User can use voice to interact with the app without touching the screen



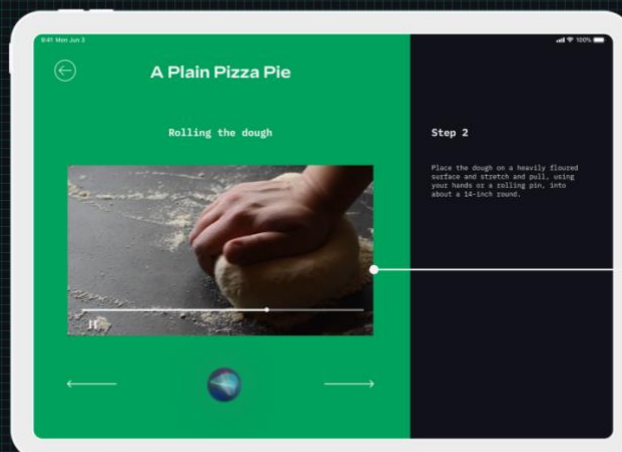
Text demonstrates the what user should do

Use graphic to guide user



## Deliveries - Video Tutorial

To help the users to have a more comprehensive understanding of cooking, the app not only provide step by step video tutorial, but also text explanation.



05

# Testing



## Testing

### I Did A Usability Testing

To determine if my design effectively assists users in achieving their objectives, I conducted usability testing.

Five individuals were tasked with navigating through my design to assess whether they could successfully complete the task without encountering any issues.

A total of eight problems were identified, and after making iterations, it finally received a passing mark.



5 People



8 Problems



100% Pass



06

# Conclusion



## Conclusion

### What I Learned

In this project, I walked through an end-to-end design process and generated several great ideas to help users have a better experience using digital products to learn cooking. It's not easy to think systematically for visual and experience design. I did much research on how to make the design system and also for this product itself. Those processes are pretty helpful for me to develop and evolve my ideas into prototypes.

If I have more time, I will explore a feature where users can order food for the recipe they want to try. This feature will bring convenience to people who want to practice cooking.