

# Abstract

Our team wants to build a system to recommend products to customers based on their needs when placing an order online. In this report, we planned and executed need-finding practice using three methods: participant observation, user interviews and post-event protocols. The need-finding activities aim to understand the thinking process of customers, who place orders on Meet Fresh's online platform. The goal is to find the pain points and challenges of using an online order system and also brainstorm ideas regarding recommendation system design for the customers that are relatively new to this brand. We believe a recommendation system will help users increase the chance of ordering the desired products and eventually help the brand obtain loyal customers. During interviews, our interviewees also gave some great suggestions for recommendation systems. Sessions below include an overview of assumptions, planning and executions of three need-finding activities and a summary of our findings.

## Assumptions Overview

### Problem Space

Meet Fresh, founded in 2007, is one of the top Taiwanese dessert chain restaurants, with multiple locations in the United States. The chain specializes in fresh Taiwanese desserts, including soft taro balls and herbed jelly.

Since the pandemic hit, online ordering has played an increasingly important role in their business. However, without a recommendation system, it could be challenging and time consuming for relatively new customers to decide what to order from an extensive menu. Poor matching between the customers and products can also lead to weak growth in sales and lower repurchase rate.

The goal of this report is to form a plan and summarize the results on finding the needs for a recommendation system of Meet Fresh's online ordering. After execution according to the plan, we hope to deeply understand the concerns of the customers who are not familiar with Meet Fresh products, which will shape the direction of our design in the recommendation system.

### User Type

**Age:** 20 - 40

**Customers Type:** Relatively new to the Meet Fresh products

**Ordering Type:** Online only for take outs

**Appetite:** Interest in desserts similar to Meet Fresh

**Experience:** Experienced in online ordering

**Income level:** Have regular budgets for desserts

In the need finding process, we would like to focus on the users who are the potential loyal customers of the Meet Fresh business. They are typically young people who have great interests in the taiwanese desserts and decent budgets to purchase similar products regularly. They may have heard about Meet Fresh products before but rarely or never tried them. They tend to order online but may easily get confused when they see the long menu with tons of good looking desserts and special ingredients.

## Needfinding Plans

### Plan 1: Participant Observation

As our team was brainstorming on ideas to plan for our need finding task, we thought back on our past experiences with online ordering as well as naturalistic observation of offline ordering in Meet Fresh restaurants and other stores. We see many types of customers. To list a few, some loyal customers who are 'regulars' can decide what to order in a matter of seconds, others may take longer to decide and ask recommendations from servers/receptionists, and some may be completely clueless and lost in a big menu selection. For the customers who are relatively new to Meet Fresh, we'd like to understand their thinking process when selecting from an unfamiliar menu, which are not easily achieved by naturalistic observation.

So our team decided to be the first customers in our study and go through Meet Fresh's website and mobile app to place our orders. We happen to have a mixture of experience levels with Meet Fresh. We have a team member who lives in a city with multiple locations and a member who lives in a city where the brand has not expanded to. Some members are familiar with the menu and are 'regulars' to the store and others not so much. So with each member going through their online ordering channels, we individually took notes of our thinking process.

### Environment Setting

- Hot afternoons on weekends when I know the stores are busy and there is a long waiting line at the storefront.
- After a long day outside, I just want to get it quickly and then go home.
- Schedule is tight, but I still crave desserts from Meet Fresh
- Pre order for later today or tomorrow without rush

### Concentrate on collecting data including but not limited to

- What do I really want in this order?
- What do I need to do to find the product I really want?
- What are my thoughts and complaints during the ordering process?
- What hacks did I use to help me finalize the order?

## Be aware of the bias

- I am just one of the new customers I am going to design the recommendation system for. I may not be representative. Some preferences could be highly subjective and unique.
- Let the observation shape the design. Don't fall into the confirmation bias trap.

## Plan 2: User Interviews

### Interview script

- Greeting and brief intro to the interview
- Get to know the user: background, occupation
- How often and when do you eat dessert/snack, and how much do you spend?
- How often do you use online ordering systems to place orders?
- What devices and platforms do you use for online orders?
- What do you look for when going through a dessert menu?  
(E.g. Ingredients, calories, ice/hot, sweetness level, allergens, pictures)
- What are the main challenges you encounter when looking at an unfamiliar menu?
- What do you think can make it easier?
- What do you think about a recommendation system?
- What expectations do you have for the recommendation system?
- Do you have any specific requirement related to the recommendation system?

We plan to use the above interview script as a guideline to conduct our user interviews. We want to keep the interview relaxed and casual. And by keeping questions general and non specific to any brand, our interviewee can hopefully freely express their thoughts in an unbiased way. After the initial interview, we will invite our interviewees to look at Meet Fresh's online ordering page and observe them placing an order. Afterwards, we will immediately follow up with post-event protocols for some more specific questions regarding Meet Fresh. More details in the next section.

## Plan 3: Post-event Protocols

When we observe the interviewees ordering online, we will ask them to think aloud. This can help us gain more insights on their thinking process of how they choose what to order. This could give us some ideas on what features are helpful in our recommender system. However, to avoid biases, we are not going to interrupt them until they finish their ordering to conduct post-event protocol interviews. This will help us and the interviewees to reflect on the ordering process right away and give us more thoughtful suggestions to help us shape our final product. We want to keep the conversations open, but below are some questions we may ask during this time.

### Questions

In which situation, do you order online instead of at the storefront for desserts?

What pain point do you have when using the online order systems?

How did you come up with the final selection in your order?

How long does it take from the Meet Fresh pickup store to your location (home, office, etc)?  
Are you going on a diet or trying to reduce calorie intake?  
Do you have any food allergies and how do you think the website accommodates your needs?

## Needfinding Executions

### Execution 1: Participant Observation

Participant Observation #1: Schedule is tight.

The context of task

This is the time when I want to quickly order something to refresh my mind. It could happen between my online meetings or right before my lunch I hope to add some desserts. I am not familiar with Meet Fresh menu but my time is very limited (3-5 mins)

What do I really want in this order?

I am not sure but I want to try their signature products which should be great most of the time.

What do I need to do to find the product I really want?

I need to quickly find what looks attractive to me from their online ordering system directly.

What's my thoughts and complaints during the ordering process?

There are too many sections in the menu but I am able to see the best sellers list on the top. That's helpful. However, there are still 6 products that I need to choose from. Their pictures are too small and look similar so it's hard to make decisions based on them. I saw multiple icons under the price of each product which are related to the allergy or if the product is hot. There is too much information to digest in a short time. It would be great if there is any filter option to help me find the hot ones only. That could help me narrow the range of products from 6 to 3.

What hacks I used to help me finalize the order?

I quickly asked one of my friends to better understand which hot products could be too sweet for me. I didn't have time but I was thinking about checking yelp reviews on their grass jelly products' tastes.

## Participant Observation #2: Pre order for tomorrow

### The context of task

This is the time when I consider ordering some desserts for tomorrow's gathering with my friends. I heard Meet Fresh desserts are tasty from my friends but I am not familiar with the Meet Fresh menu. The good thing is my schedule is relaxed so I can compare the products and make decisions in 10-20 mins.

### What do I really want in this order?

I am not certain but I am thinking about several options that my friend can choose from. Also, I want to try their latest products for the season.

### What do I need to do to find the product I really want?

I can go through the full menu on their website and check the ingredients of each good looking product. Their pictures will play an important role in my decision since I don't want to order two items that look the same.

### What's my thoughts and complaints during the ordering process?

They have a really long menu starting with dessert combos. The pictures look great and attractive. However, the list is too long to navigate easily on the website. When I scroll to the bottom I forget which ones I may be interested in the previous sections. Seasonal items are marked with a tiny "\*", which is easy to overlook. Some items are only available at participating locations but there is no input or filter that I can use to confirm if it's available in my area. During the ordering process, I found the new MATCHA series at the bottom of the list. That's inconvenient for someone who wants to add their latest products first.

### What hacks I used to help me finalize the order?

Yelp reviews are helpful to find the items I want, like how sweet they are and a sense of the real sizes of their drinks and shaved ice. I also took some notes to make sure I have one drink and one sweet for each of my friends.

### Avoid the bias

I am not representative of the major customers of Meet Fresh so I will use other need-finding methods to further explore others' concerns during the online ordering process. I tried to avoid confirmation bias by looking for signs that I am wrong and testing my beliefs empirically. Through this process I am able to identify additional needs such as notes taking for group order and more intuitive size information besides needing help to filter and navigate through the long menu.

## Participant Observation #3: Pre order for tomorrow without rush

### The context of task

I don't live close to a Meet Fresh store, so I need to preorder and have a 3rd party delivery company to deliver for me the next day.

### What do I really want in this order?

I normally crave a dessert after dinner to treat myself, but I don't want anything super filling. So I'm mainly looking for something lightly sweet and refreshing. However, I'm always up for trying new things on the menu.

### What do I need to do to find the product I really want?

I went onto the Meet Fresh website first to see what new things they have to offer and the Ube series on the front page caught my eye. I then opened the online order tab to browse the ordering page. Since I'm ordering for long distance delivery, I can't order certain things like shaved ice on the menu.

### What are my thoughts and complaints during the ordering process?

My local store doesn't have all the offerings from the official website. For example, I saw matcha series and egg waffles on the main menu that looked interesting, but those are not offered in the store I'm ordering at.

Also, I had to scroll all the way to the bottom of the menu to find the Ube Series marketed on the front page of the website. If I didn't do all the scrolling, I could have missed the new items.

### What hacks I used to help me finalize the order?

I went on the main menu page where calories are listed for some of the dishes. (I wished this information was on their online ordering page) And the information here helped me narrow down my options.

### Be aware of the bias

I'm mostly familiar with their menu selections and have a rough idea of what everything is on the menu, which may not be the case for new customers.

## Participant Observation #4: Order at Peak Time on Weekends

### The context of task

I am on the sweltering afternoon of a weekend day, sitting on my couch at home with no plan for the rest of the day but craving something vibrant and refreshing to cool myself down. After a 10mins search on Yelp, I decide to get an iced bowl from Meet Fresh and taro balls as topping, for which they are most known as mentioned in Yelp reviews. The closest store is about 30 mins drive from my place. It's their peak hour as shown on Google business popular times. There might be a long line outside of the store in the baking sun. I'm not sure but I don't want to stay there any longer than the time to just grab my food

and go home. So I go to MeetFresh's online ordering page to place an order before heading to the store. I am not familiar with their menu, but I have plenty of time to look through items on the menu and find an iced bowl, which includes taro balls as one of the toppings.

What do I really want in this order?

I want an iced bowl, which includes taro balls as one of the toppings.

What do I need to do to find the product I really want?

I'm not familiar with the menu. I will go through their menu, look for iced bowls that have taro balls, compare them, see what other toppings each bowl has, which toppings I like or dislike, etc.

What are my thoughts and complaints during the ordering process?

Menu items are categorized into several series with best sellers on the top, which is good. I can quickly go through the signature items and look for the iced ones that have taro balls. Pictures on that page are too small to see what toppings are included. I have to read the product names and ingredients below to get more details of each item. Turns out, after browsing the signature series, all of the items have taro balls. Then I think about while reading the descriptions again which ingredient will be most attractive to me other than taro balls. Taro pastes and potato taro balls sound yummy, and they narrow down my options from six to two. But I have to go through the descriptions one more time to pick one bowl from two options. I wish the pictures were larger on a mobile platform so I can see all the toppings and decide what I want to get in 5 seconds.

After I click on the item that I pick, a new page shows up that allows me to customize the order, with a long list of far more options for 20+ extra toppings, 3 ice levels, and 5 sugar levels, which increase the flexibility for picky eaters and loyal customers who know exactly what they like and dislike, but provide relatively new customers like me way too much information. Perhaps a sorting or recommendation system could help to filter information and suggest extra toppings given current selections.

What hacks I used to help me finalize the order?

Yelp pictures

## Participant Observation #5: Order online to get it quickly and then go home

The context of task

I spend most of the day at school. I want to place the order online and pick it up quickly and then drive home.

What do I really want in this order?

There is a Meet Fresh store located in my city. The closest one is about a half hour drive from the store to my home. Also, our region has a very hot climate. So, I focus on something that can keep fresh when I get home. I also want to try some desserts with taro which are heard to be the signature products of the Meet Fresh but I have never tried.

What do I need to do to find the product I really want?

I went to the Meet Fresh website and clicked the Order Now tab. Then, I chose the store in my area and then I could see the menu in that store. I put my focus on products with taro balls. What surprised me was there were dozens of desserts related to taro balls. That brought me difficulty to make a choice.

What are my thoughts and complaints during the ordering process?

As I mentioned above, it was hard for me to choose an appropriate dessert that can keep fresh till I got home. I have a lot of experience with this. Especially in summer, the temperature outside can go up to 45°C, and the taste of quite a lot of food changes much worse during a long time outside.

What hacks I used to help me finalize the order?

I had to ask one of my friends for some help. He is a loyal customer of Meet Fresh and he lives not far from my home. Finally, with his recommendation, I chose one dessert and placed the order. Therefore, a good recommendation system is very essential to customers who are not familiar with the Meet Fresh products.

Be aware of the bias

During the ordering process, I asked my friend for help. But the information from him was based on his preference which may not be suitable to me. That might be the bias.

## Execution 2: User Interviews

Our second round of need finding activities is user interviews. We found 5 interviewees total and followed our interview transcript in the planning phase to conduct these interviews. Details of the responses during the interview are recorded in the Data Inventory table in the appendix.

To summarize, all of our interviewees fit in the user type we initially planned: young and fairly new customers to Meet Fresh and who enjoy desserts on a regular basis with a decent budget. 4/5 of them mentioned best sellers and ingredients are what they look for first on a menu. Ice/hot and sweetness level also seems to be a main concern when placing an order. 3/5 would also look at pictures on the menu.

After this round of user interviews, we continued to ask our interviewees to place an online order and think aloud while we observed. Then followed with the next need finding activity, post-event protocols.

## Execution 3: Post-event Protocols

During this execution, we were able to ask more brand specific questions and acquire some really valuable thoughts and suggestions regarding the design of our recommendation system. Some main pain points that were mentioned several times are small fonts, inconsistent picture sizes, and new/seasonal products on the bottom of the menu. We will be sure to address these concerns at the design stage.

User #1:



Device: computer

Total Ordering Time: 2 minutes

Pros: Best sellers are on the top of the menu which is preferred. Allergens, iced/hot are also shown on the menu which is good. I like that I'm able to choose ice level and sweetness level.

Cons: The font and pictures on the menu are too small, even on a computer screen. He said he wished he could order from the main menu page, where ingredients are clearly shown on the high resolution pictures. The font on the ordering menu is different from the main menu, not super important but definitely noticeable.

Other thoughts: I would want to order shaved ice, but can't do that since the task was to order online and pick up to go.

User #2:

Device: phone

Total Ordering Time: 5mins

Pros: Best sellers, customizable sugar/ice levels

Cons: Promotions on the top, small pictures/text, inconsistent picture/text size, too much information, product names are confusing

User #3:

Device: phone

Total Ordering Time: 10mins

Pros: customer can easily find the information about the ingredients and be attracted by pictures of products

Cons: only list ingredients but no description of how products taste so that customers can't make a choice easily just according to the ingredients and the name of products/no seasonal or new products recommended/pictures do not match the real products

User #4:

Device: phone

Total Ordering Time: 5 Mins.

Ordered: 1. Signature Hot Almond Soup because of prior experience at other restaurants  
2. Mung Bean Cakes because I like it but it's rare to see in the U.S

Feedback: 1. Ordering is so hard to use  
2. Product's names are too similar to differentiate  
3. I wanted to order drinks but didn't. Because the ice level is confusing. I don't know the difference between regular vs  $\frac{2}{3}$  ice  
4. I like taro and tried to order taro slush but I want less ice which is not available  
5. No searching function for taro related products  
6. I like green tea flavor but I was wondering if the the taste could be very different  
7. I may order Matcha products if it is in the signature list. But it's at the bottom of the list because I didn't order that

User#5:

Device: phone

Total Ordering Time: 1 min

Ordered: 1. Fresh milk black tea only

Feedback: 1. I just want a cup of hot milk tea  
2. I don't understand the meaning of those symbols on the right side  
3. I am not sure about the size (Pictures there are not useful). I want to know if it's for one person or a group of people  
4. Only fixed sugar was marked. I am not sure if others' sugar levels can be changed.  
5. Need indications of Coffin. I don't want to stay awake the whole night because of the drink  
6. New series should be on the top. They can be easily overlooked

## Summary

After these need finding activities, we've confirmed the assumption that both the store and customers will benefit greatly with a recommendation system. It can not only help new and existing customers to quickly find items to try from an extensive menu but help the brand to obtain more loyal customers and increase revenue by increasing customer satisfaction.

We have gathered the following features that we'd like to consider in the recommendation system design.

1. Option to show best sellers and new seasonal items
2. Filter for wanted/unwanted ingredients
3. A sliding scale for customers to select
  - a. Ice/Hot
  - b. Sweetness level
  - c. Thirsty level
  - d. Hungry level (mood for light/filling desserts, calories)
4. Clear and accurate pictures for the recommended items

# Appendix

## Data Inventory

		User #1	User #2	User #3	User #4	User #5
Who	Age	32	26	32	31	29
	Gender	Male	Female	Female	Female	Female
Dessert Ordering Behavior	How Often	Once a week	Twice a month if on diet, once a week if not	Once a week	At least 3 times a week	Everyday
	How Much	\$10 - 15	< \$10	< \$15	\$100/week	\$50/month
	Familiar with online ordering	Yes	Yes	Yes	Yes	Yes
	Channel	Apps on computer, doordash/uber eats, but prefers call and pick up	Doordash or websites on laptop, order on phone if no other options	Apps on smartphones	Chowbus, Fantuan, UberEats etc apps on phone	UberEats on phone
What do you look for in a dessert menu?	New items					
	Best sellers	Yes	Yes		Yes	Yes
	Ingredients	Yes	Yes	Yes	Yes	
	Sweetness	Yes		Yes	Yes	Yes
	Allergens					
	Calories					
	Ice/Hot	Yes		Yes	Yes	Yes
	Pictures		Yes		Yes	Yes
Challenges for unfamiliar menu	User 1	When a menu is in a foreign language/bad translation and no pictures				
	User 2	No or small pictures, too much text, not include ingredients				

	User 3	No description of how products taste
	User 4	Not sure if the ingredients, flavor or size is the same as expectation
	User 5	No pictures. Not sure about size. Too sweet is common in the US.
What do you think can make it easier?	User 1	List all ingredients. Menus with pictures are helpful.
	User 2	Big pictures, small text
	User 3	Add descriptions to pictures
	User 4	List all info directly. Size should be intuitive. Customer Review.
	User 5	Pictures! Also size for how many people. Sweetness
What do you think about a recommendation system?	User 1	Will use, it's like asking a waiter at a restaurant for specials and recommendations. Will not 100% order what's recommended but will definitely increase the chance of ordering
	User 2	Don't recommend anything unless she asks for a suggestion. It's important to her that the store/waiters/app recommends in a way that makes customers feel valued and that we are thinking of them.
	User 3	The recommendation system is helpful. It is important to provide some ideas to customers. A good recommendation system can save a lot of time for customers to place an order since no one wants to waste much time on ordering.
	User 4	It would be great if it can store my historical preference since I don't want to try strange things. Keyword input can help me find products related to certain ingredients like Matcha
	User 5	It will be helpful if I don't have a strong preference. For a new restaurant I prefer to buy signature/best sellers. Pictures are important. Then size, sweet level, hot/cold, ingredients should be available for options.
What expectations do you have for the recommendation system?	User 1	Something like a Vivino sliding scale.
	User 2	Recommend based on weather or answers to random questions (like Vivino/Winc but vague questions, not taste/food related)
	User 3	An open page to show seasonal or new products
	User 4	Must have pictures. It should be able to do filtering quickly based on criteria like hot/cold

	User 5	Filter is important unless I have a look around mind. Good items should not be easily overlooked
--	--------	--