



MyMealMatch

Group 5:
Alex Ackler, Emily Chang,
Mili Gupta, Erin Halper

32,000,000 Americans

have food allergies (AAFA, 2022)

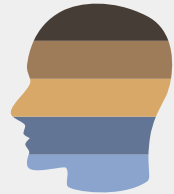
~10% of American adults

identify as vegetarians (OSU, 2022)

Project Overview: Problem Space/Motivation



- ◆ Most of us know a friend, family member, or colleague with a food allergy or other dietary restriction
- ◆ People with dietary restrictions who want to dine out have difficulty finding diverse options and being able to make safe and informed choices about their food consumption
- ◆ Restaurants in the US often lack ingredient transparency and accurate allergen warnings on their menus, which can result in severe consequences



Project Overview: Solution



- ◆ **MyMealMatch mobile application** (for customers) and **web application** (for restaurant managers) prototypes
 - ◇ Mobile app is similar to Yelp, but with added features designed for our **target users: people with dietary restrictions who dine out in the DMV geographic region**
- ◆ **Focus points:**
 - ◇ Providing detailed **ingredient**, potential **contamination**, and **preparation process** information for restaurants' menu items
 - ◇ Creating a quick and intuitive way to gauge how dietary restriction friendly/accommodating a restaurant is
 - ◇ Enabling users to quickly and intuitively filter and view restaurant searches

Development Process



Brainstorming ideas and project proposals

- ◇ Determined and analyzed problem space
- ◇ Identified the target participants and stakeholders



Design research plan and execution

- ◇ **Virtual/in-person semi-structured interviews** (primary research method), design ethnography, and survey (was modified after GA03 critique)
 - ◇ Selected a diverse group of participants of varying ages, genders, ethnicities, cultures, dietary restriction types, dining preferences, and tech savviness
- ◇ Learned about the **challenges** individuals with dietary restrictions face when eating out, and **tools** they currently utilize to navigate their search
- ◇ Took away **key insights** into potential features that would be most beneficial and important to our target users

Development Process



◆ Key Tasks

- ◆ Using data from our design research, we **explored design solutions** by determining six key tasks to potentially support:
 - ◆ Increasing **information transparency** by displaying comprehensive details on ingredient lists, potential contamination, and food prep process
 - ◆ Conveying **information accuracy** by displaying the date the menu details were last updated
 - ◆ Enabling restaurant **“favoriting” feature** for easy access and recognition

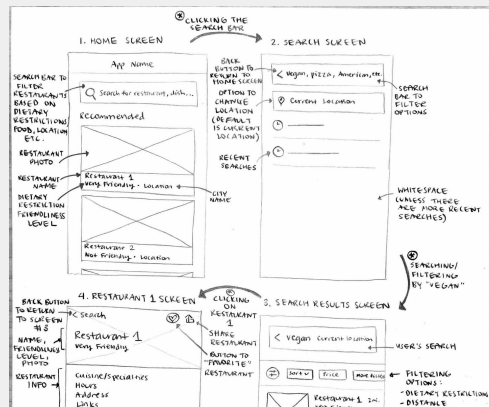
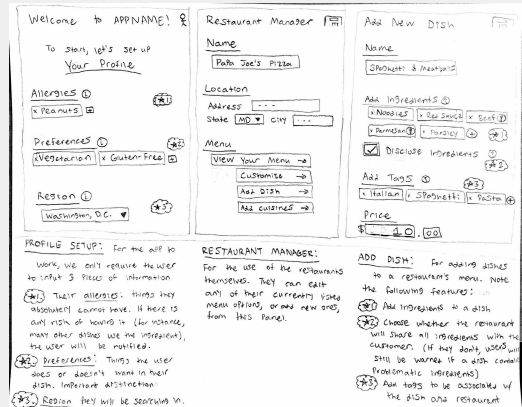
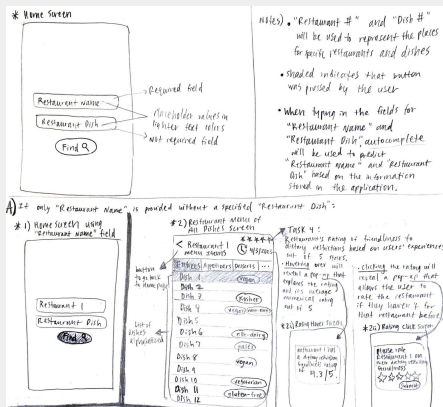
Development Process



Six tasks (cont.)

- ◆ Displaying a rating on the restaurant's accommodations and menu options to help users **better gauge the restaurant's dietary restriction friendliness level**
- ◆ Incorporating **tags** that signal dishes are vegan, peanut-free, non-dairy, etc.
- ◆ Providing a **filtering feature** for users to **narrow their search** based on dietary restriction, food preference, and/or location

- 



Development Process



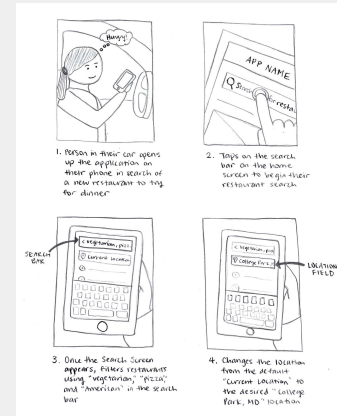
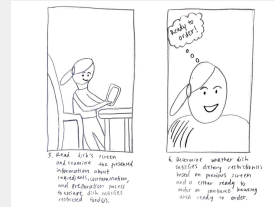
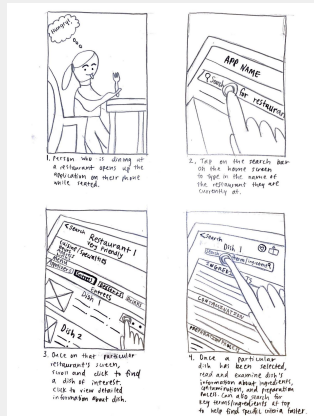
◆ Design Convergence

- ◆ During this step, we chose a design idea to further pursue and refine
- ◆ **First task of focus:**
 - ◆ Displaying a complete, detailed list of ingredients for all dishes a restaurant offers
 - ◆ Including potential contamination considerations
 - ◆ Providing dish preparation process information
- ◆ **Second task of focus:**
 - ◆ Filtering restaurant options based on dietary restriction, food preference, and/or location using a database with a wide-range of DMV restaurants
- ◆ After the in-class sketches design critique, we...
 - ◆ Added a **map feature** to visually assist the restaurant search/filter process

Development Process

◆ Storyboarding

- ◆ On paper, we created a storyboard for the two primary tasks of our design
- ◆ The storyboards indicated the functionality of the design and included descriptive captions to provide clarity

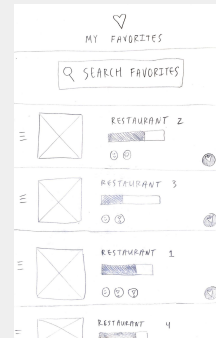
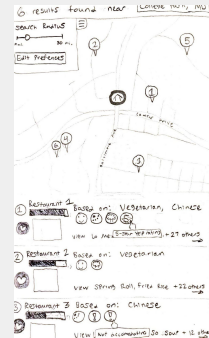
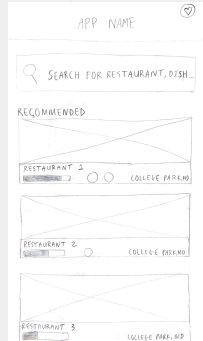
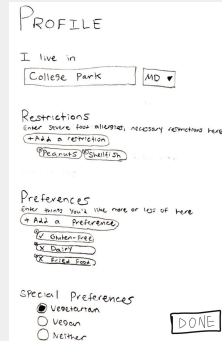


Development Process

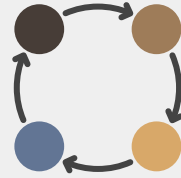


◆ Paper Prototyping

- ◆ Informed by our prior sketches and storyboards, we created an initial paper prototype conveying **critical aspects of our design**
 - ◆ Fast, inexpensive, easier to change, and focuses on the big picture
- ◆ The paper prototype is interactive, and **supported testing** for our two key tasks



Development Process





Heuristic Evaluation


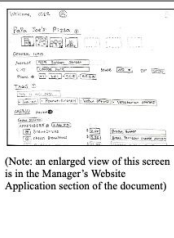
- ◇ We conducted in-class heuristic evaluations as part of **rapidly iterating** on our initial paper prototype
 - ◇ Pre-evaluation training, evaluation, severity rating, debriefing
- ◇ Nielsen's heuristics violations that were found:
 - ◇ **Consistency and standards** (customer and manager profile pages)
 - ◇ **Flexibility and efficiency of use** (page views navigation, search screen, manager component's format, and adding dish screen)
 - ◇ **Aesthetic and minimalist design** (user rating component and restaurant page additional details section)

◆ Heuristic Evaluation cont.

- ◆ The evaluations led us to make multiple changes to our design to **resolve usability issues** and **enhance our interface**
- ◆ Key design improvements (ones that were given higher severity ratings):
 - ◆ Converted the manager's component into a **separate web application** for increased usability and efficiency
 - ◆ Added a **menu bar** with home, search, favorites, and profile tabs for quick and easy navigation between pages
 - ◆ Ensured the manager and customer sides **display consistent information**
 - ◆ Incorporated a **user rating feature** (button/pop-up) into the app

— Heuristic Evaluation Results —

Original Image	Issue Identification	Severity	Revision	Revision Image
	Heuristic #4 (consistency and standards): the "Preferences" sections in the customer profile page are unnecessary and may cause confusion due to potential overlapping with the first "Restrictions" section. The interface should also emulate a typical account profile page more closely.	2	The "Preferences" and "Special Preferences" sections were removed from the customer profile page, leaving the main "Your Dietary Restrictions" section for the user to enter information into. Additionally, the layout has been modified to display the user's profile picture and name.	

	Heuristic #7 (flexibility and efficiency of use): the manager's component of the application is currently in a mobile device form; however, converting it to a website application for desktop use would be more suitable and appropriate for the manager's needs (e.g., entering in many ingredients for restaurant dishes).	3	The manager's component of the application now has a website layout, and the customer component is reserved for the mobile device layout.	
---	---	---	---	--

(Note: an enlarged view of this screen is in the Manager's Website Application section of the document)

Development Process



◆ Digital Prototyping

- ◆ Created a digital mockup of our design in **Figma** based on our final paper prototype
- ◆ **Enhanced the interface** with color, specific typography, and application layout/structure improvements
- ◆ Made additional important changes:
 - ◆ **Displaying search criteria** on the results page to minimize user's memory load
 - ◆ **Tapping on a map pin** brings up a more detailed restaurant pop-up
 - ◆ **Simplifying to two indicators** (a bar and numerical rating) for conveying a restaurant's dietary restriction friendliness/accommodations level



User's Name

My Current Location:

City

State



My Dietary Restrictions:


Allergy, restriction, etc.

Peanut Allergy X

Shellfish Allergy X

Save Changes



Welcome, USER 

Restaurant Name

GENERAL INFO



Address

State

City

ZIP

Phone # - -

Email

TAGS

☒ Italian ☒ Peanut-Friendly ☒ Vegetarian Friendly ☒ Vegan Options

MENU

[Preview →](#)

[+ Add Section](#)

[+ Add Dish](#)

Appetizers

[Edit Ingredients →](#)

Lessons Learned



- ◆ **User-centered design is an ongoing process**
- ◆ **Importance of user research** (and conducting design research in an ethical way) to better understand the target users
 - ◇ Also, practicing **user empathy** to gain a deeper understanding of users' needs and behaviors as well as design a more effective and user-friendly product
- ◆ **Importance of iteration and feedback**
 - ◇ The iterative process of refining designs based on user testing and feedback is crucial
- ◆ **Collaboration and communication** during the design process is essential to ensure all team members are on the same page and working towards a common goal

Thank you!