Define Report

Problem Description

For many years, students at the University of Massachusetts Amherst have struggled to find a dining venue on campus that matches what their taste buds are in the mood for. With each location having such a wide variety of unique options, students often find themselves at a loss when it comes to where to eat on campus. Incoming freshmen as well as new transfer students on campus especially struggle with this as many often have difficulty even locating or learning about all the locations that offer food on campus. Thus, we want students at UMass Amherst to have a consolidated platform in which they can discover all the dining locations on campus and receive tailored recommendations based on the individual student's specific preferences. Therefore, the activity that we wish to support is the student's choice of where to eat on campus, especially around dinnertime. At the current moment, all the UMass dining halls, as well as food vendors on campus have separate menus with differing options. On top of this, many of the dining halls will often serve special dishes which are only offered occasionally and are easy to miss. Therefore, our app's goal is to find out what the student's food preference is and give them recommendations based upon what is available across all locations on campus while also notifying students about any special events. As mentioned earlier, some students also struggle with finding and accessing certain locations on campus. A good example of this are the student run organizations that are not directly affiliated with the campus dining halls. As a result, we wish to support a student's ability to discover and locate all of these locations by using a mapping feature that will allow each user to see exactly where their desired food venue is.

Design Direction

To tackle the problem that we had defined, we decided to take a step back and first think of what tools and features we were going to need as well as the capabilities of every team member. Thus, the first step was to decide what type of platform we were going to build our application on. This came down to a decision between two options, a web-based application or a mobile app geared towards devices such as phones and tablets. With a mobile app, we would have to develop both iOS and Android version, and considering that most of our group is unfamiliar with mobile app development, we decided to avoid this route. On top of this, after receiving feedback via our interviews, we found out that many students find their phones to be cluttered with applications already and did not want yet another niche app on their mobile device. Therefore, we are choosing to create a web app, as many of our group members have experience using languages such as HTML and JavaScript, and we can easily integrate other functionality such as widgets. A web app also avoids clutter and space problems that result from a mobile app.

As we continued to narrow down the direction that our project would take, we next had to tackle some of the features that would go into solving our problem. One of the key elements of the solution was the customizable feature gives food recommendations based upon the preferences of the user. One idea was to have a preferences tab where a given user could save their choices in a checkbox style manner and the application would save their results. We quickly realized, however, that this would not be a good direction to take as it would require users to create an account which meant storing and collecting their information. One common theme that arose in our surveys/interviews was that users were worried about their data. As a result, we collectively decided to move onto a different solution. After more brainstorming, we came up with the idea of creating a short, simple and optional survey that a user could fill out. This solution avoided the problem of having to log data as the results of the survey would be on a single use basis and would not be saved. In order to implement this, we had to brainstorm questions that would make up the survey.

We decided that we would first need to start with a couple general overview questions such as whether or not the user had any dietary restrictions or allergies (ie: vegan or nut allergies) , as well as if they had a location preference as to where they wanted to eat (ie: Southwest, Central, Northeast, etc.). The user would then answer one final question about their actual food preferences to gauge what they are in the mood for (e.g.: fish, Latin, pasta). Once a user finished the survey, the answers would be paired up with a pre-created database and the dining options would be listed to the user. It is also important to note that after being given their recommended foods, their survey answers would be scraped by the application. This would provide a simple, efficient way for users to discover food they might be interested in eating without them having to individually look and sort through separate menus.

Finally, in order to solve the problem we have established, we are going to need to tap into at least two resources that will eventually be integrated into our web app. First and foremost, we are going to need the menus of all the dining halls at UMass as well as the menus for any other food establishment on campus (Blue Wall, Greeno Sub Shop, Sylvan Snack Bar, Etc.). This information is all publicly available on the internet for each respective food venue. Once obtaining the information, we plan to link it to some form of SQL database for ease of access. The second resource we are going to need is the geographic location of each venue on campus. This is also easily obtainable by pinning the location of each place to a Google Maps widget on our web application. This will avoid any data collection issues as it means a user will not have to share their location with us. If the user does not feel comfortable using another application such as Google Maps, they will also be able to see the address and location of each food venue. The final outside resources that we are going to need in order to complete our web application are images of the food itself. We can obtain this by using copyright-free stock images as well as images already provided by UMass dining and the other food venues.

Personas

Lily Peterson

" I like to eat a variety of dishes from different cuisines while avoiding food with tree nuts. As a college student with many classes, a research lab , group projects and other commitments, it has become challenging to scroll through the menus of the dining commons in search for differences in the dishes being served so that I could find the food of my choice."

Age: 19
Occupation: Full-time student @ UMass
Major: Chemical Engineering
Gender: Female
Location: On-Campus
Year: Sophomore

Goals:

- Punctual to class, lab and scholastic events
- Variety in diet
- Check menu in advance to go to the dining commons for the dish of her choice
- Spend relatively short amount of time at dining venue

Motivations:

- Dining efficiency - values time
- Eating a healthy & varied diet

Frustrations:

- Busy schedule with short breaks in between classes, finds it time-con suming to scroll through menus of dining centers in close proximity to her classes on the current UMass Dining App
- Although avoids eating during busy hours at the dining commons, she spends a considerable amount of time looking for food to eat at the dining commons based on her dietary preferences and restrictions
- Difficulty making dining decisions

Biography:

Lily is a diligent chemical engineering student. She plans her meals around her busy college schedule, while taking the time to check the menu to ensure that she is going to her preferred dining venue for breakfast, lunch and dinner. Lily is allergic to tree nuts, and she sometimes prefers to eat a vegetarian meal.

James Jackson

Age: 18
Occupation: Full-time student @ UMass
Major: Computer Science
Gender: Male
Location: On-campus
Year: Freshman

Goals:

- Enjoying and taking full advantage of what UMass has to offer
- Trying new foods
- Getting meals at non-traditional times
- Learning more about the campus
- Maintain good grades
- Explore student-run businesses

"UMass has a lot of options, but I've only gone to Worcester and Frank for food so far. My friends have talked about the student run businesses but I have no idea where they are or how to get there."

Frustrations:

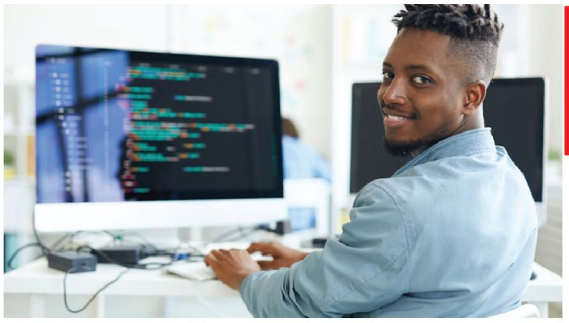
- Has only been to two dining halls this semester
- Can't find other food locations on campus
- Wants to try new places but they are closed when he wants to go

Motivations:

- Trying new things
- Wants to look at all the possible dining options

Biography:

James is new on campus and is excited to explore all the possibilities UMass has to offer. He stays up late doing his homework and sometimes gets dinner after 9 PM, when most dining halls close. He has no food allergies and no particular diet, but gets bored by monotony and likes to try new things.



Jamie Rivas

"I love McDonald's but it is more important to be healthy. This is why I cook a lot. What I made depends on what I purchased at the farmer's market. As long as I purchase the right ingredients, I'm living in a healthy lifestyle."

Biography:

Jamie graduated from UMass in 2009 with a bachelor's degree in Computer Science. After he graduated, he accepted a research professorship at Boston University. He resides near Boston, Massachusetts and drives to work every morning. Sometimes he gets busy and skips meals. He invested most of his income into research and is not looking to get married. He exercises a lot and enjoys cooking. He sometimes visits UMass Amherst for homecoming events and to catch up with his friends.

Frustrations:

- He lives in Boston, and would more likely want to eat around Boston
- With Jamie getting older, he wants to cook more by himself and reduce the times he eats out
- He ate at UMass Dining for four years and no longer needs to obtain food from UMass
- He graduated a long time ago and does not want UMass apps cluttering his phone

Goals:

- Spend less money
- Maintain a healthy lifestyle
- Focus on his work and not be disrupted by meaningless trivia
- A powerful app that he can interact with as a programmer

Motivations:

- Spend less
- Eat healthily
- App coverage
- High technology

Background Research

Similar Technologies and Helpful Resources

With our web application, we intend to provide a survey that offers suggestions about dining halls, retail dining, or student run businesses to students based on their preferences and what food items they are in the mood for. Doordash, the food delivery app provides a similar feature where you can search for what dish you are in the mood for and locates restaurants in the area that provide that specific dish or something similar to it. The main reason behind our questionnaire/survey is to provide a fun, interactive way to provide students a way to decide where they want to eat and to help them discover the less popular dining spots around campus.

UMass Dining also has its own application that provides menus of all the dining halls and retail dining locations but it does not contain the menus for the student run businesses. There is the issue of endless scrolling and no information about student run businesses around campus on the UMass Dining App itself. To know all the menus being offered, you have to physically click on each location's menu and scroll through them. Even if you wanted to look up what the babyBerk trucks are serving, you have to go on their Twitter page. If every dining place on campus had their information provided in one central location, people would have more options

of where they could eat, what they want to eat, and what options are closer to them in particular, which is what we are trying to attain with this app.

An app with a similar technology and interface as we are trying to aim for is the Tasteful app. The interface starts off with having the user choose where they are located, their eating style (such as gluten-free, vegetarian, etc.) and pick a meal type (such as lunch, dinner, etc.). With our app, we hope to have an interface that also begins with asking the user their location, asking what meal of the day they are trying to eat, and what foods they are interested in eating. When we first thought about the idea, we wanted to go along the lines of a survey type of interface. We realized sites like Buzzfeed get so many users all the time, and when people aren't able to figure out what type of food they want, they can take a "survey" and have the app feedback options as to where they could potentially want to eat, without each user having to scroll through each location's menus.

Team Members' Contribution

- **Jarrod Daniels** - problem statement, design direction, personas
- **Annapurna Jagasia** - similar technologies
- **Arianna Kazemi** - anti-persona, editing of text
- **Kuhu Wadhwa** - similar technologies
- **Vista Sohrab** - Personas: primary persona, parts of secondary and anti-persona
- **Xiaoxue Lou** - anti-persona
- **Jinhong Gan** - secondary persona
- **Corey Kozlovski** - Created persona graphics
- **Efosa Ighodaro** - design direction, text editing