Author's note:

This document was my final report for my CSC 356 Accessible Computer Seminar, which I took during the Fall 2024 semester.

This document examines the accessibility of my Figma design for Smith Foodie through the perspective of what we learned in that class.

It provides an in-depth overview of:
- why this project is important
- my personal design choices
- the limitations of my design

Elena Wang

CSC 356 Accessible Computing Seminar

12/18/2024

The Accessibility of Smith Foodie

An Assessment and Personal Reflection on the Accessibility of my Redesign of the Smith Dining Menu Website

Introduction

With around 10 dining halls, all with different hours of operation and cuisines, dining at Smith College can get fairly confusing to keep track of. During the 2022 Spring semester, I realized that before every meal, I would check two websites: the Smith dining menu website and the dining hours website. At some point, I thought to myself, "Needing to check two websites every time I'm deciding where to eat is kind of annoying. Someone should combine the menu and hours into one website." But then I remembered, "Wait, *I'm* a computer science student. *I* could combine the menu and hours into one website." That epiphany launched a long journey of attempting to design and code a new and improved version of the Smith dining menu website, which I've named "Smith Foodie," that caters to how students use the website.

Weekday Schedule

Breakfast-8 — Monday - Friday
Time columns: 7:00 AM – 10:00 AM

Campus	Location	Schedule
Quad	King/Scales	Traditional Breakfast 7-9:30am
Quad	King/Scales	Expanded continental 7-10am
Center Campus	Chapin	Continental, Egg Sandwiches 7:30-10am
Center Campus	CC Cafe	Grubhub Pre-Order/Meal Swipes 7:30-9:30am
Center Campus	Cutter/Ziskind	Traditional & Halal 7:30am-9:30am
Center Campus	Chase/Duckett	Traditional 7-9am / Snacks 9-11:30am
Center Campus	Gillett	Traditional, Vegan & Vegetarian 8-10am
Center Campus	Dawes	Traditional (Gluten & Nut -free) 7:30-9:30am
Lower Campus	Tyler	Traditional 7:30-9:30am

Lunch-11 — Monday - Friday
Time columns: 10:00 AM – 4:30 PM

Campus	Location	Schedule
Quad	King/Scales	Traditional 11:30 am-1:30pm
Center Campus	Chapin	Grab & Go 10am-1:30pm
Center Campus	Compass	Grubhub pre-order/meal swipes 11am-2pm / Snack 2-4 pm
Center Campus	Cutter/Ziskind	Traditional & Halal 11:30am-1:30pm
Center Campus	Kosher	Kosher 12-1:30pm
Center Campus	Chase/Duckett	Snacks 9-11:30am / Traditional 11:30am-1:30pm / Snacks 1:30pm-4:30pm
Center Campus	Gillett	Vegan/Vegetarian 11:30am-1:30pm
Center Campus	Northrop	Traditional, Vegan & Vegetarian
Center Campus	Lamont	Free of 10 major allergens- Buffet/Halal 11am-1:30pm
Center Campus	Dawes	Traditional (Gluten & Nut-free) 11:30am-1:30pm
Lower Campus	Tyler	Soup, Salad & Sandwiches 11am-1:30pm

Dinner-11 — Monday-Friday
Time columns: 4:30 PM – 9:30 PM

Campus	Location	Schedule
Quad	King/Scales	Traditional 5-7pm
Quad	Comstock	Pan Asian Cuisine- Buffet (late night)-Sun-Thurs 5-8pm
Quad	Haynes	Build-Your-Own Stir Fry -Sun-Thurs 4:30-7:30pm
Center Campus	CC Cafe	Grubhub Pre-Order- Late Night Swipes 7-9:30pm
Center Campus	Cutter/Ziskind	Traditional & Halal 5-7pm
Center Campus	Kosher	Kosher- Mon-Thurs 5-6:30pm
Center Campus	Chase/Duckett	Traditional 4:30-7pm
Center Campus	Gillett	Traditional, Vegan & Vegetarian 5-7pm
Center Campus	Lamont	Free of 10 major allergens- Buffet/Halal-5-7pm
Center Campus	Dawes	Traditional (Gluten & Nut-free) 5-7pm
Lower Campus	Tyler	Traditional Late Night 5-8:30pm

Weekend Schedule

Continental Brunch/Lunch -8 — Saturday - Sunday
Time columns: 7:00 AM – 2:00 PM

Campus	Location	Schedule
Quad	King/Scales	Continental 7-9am / Brunch 9am-1pm
Center Campus	Compass	Grubhub pre-order/meal swipes 11am-2pm
Center Campus	Cutter/Ziskind	Continental 7:30am-9:30pm / Brunch 11:30am-1:30pm
Center Campus	Chase/Duckett	Breakfast 7-9 am / Snacks 9-11:30am / Lunch 11:30am-1:30 pm / Snacks 1:30-4:30pm
Center Campus	Gillett	Brunch (11:00am-1:00 pm)
Center Campus	Lamont	Lunch 11:30am-1:30 pm
Center Campus	Dawes	Brunch- Gluten and Nut-Free- 11:00am-1:00pm
Lower Campus	Tyler	Continental 7-9 am / Brunch 9am-12:30pm

Dinner-10 — Saturday - Sunday / Weekend Late Night
Time columns: 2:00 PM – 9:30 PM

Campus	Location	Schedule
Quad	King/Scales	Traditional 5-7pm
Quad	Haynes	Build-Your-Own Stir Fry -4:30pm-7:30pm
Quad	Comstock	Pan Asian Cuisine Buffet- 5-8pm
Center Campus	CC Cafe	Grubhub Pre-Order
Center Campus	Compass	Snacks 2-4
Center Campus	Cutter/Ziskind	Traditional & Halal 5-7 pm
Center Campus	Chase/Duckett	Snacks 1:30pm-4:30pm / Traditional 4:30-7 pm
Center Campus	Gillett	Traditional, Vegan & Vegetarian 5-7 pm
Center Campus	Lamont	Free of 10 major allergens- Buffet/Halal 5-7 pm
Center Campus	Dawes	Traditional - Gluten Free 5-7 pm
Lower Campus	Tyler	Traditional 5-7 pm

A [visual overview](#) of the hours of operation for all dining halls and cafes on campus. With differing hours for different days of the week, dining halls, and meal types, it can get overwhelming to remember when each dining hall is open.

Currently, the website is still in development, but last semester (2024 Spring) I completed a [Figma mockup](#) of the UI design. For my CSC 356 Accessible Computing Seminar final project, I am assessing my Figma design to determine how well it follows accessibility standards and identifying areas for improvement. I also wanted to document why redesigning the dining menu website is important and desired by the Smith student body.

Research Problems

Over the past couple of years, I have noticed that I am not the only one who would like to see the dining menu website redesigned. Every person who I have told about Smith Foodie – from students to Smith staff/faculty alike – has been excited and supportive, and all of them agreed that a redesigned website could be useful. One student went so far as to describe Smith Foodie as "her Roman Empire," which is TikTok slang for something that one often thinks about. The Student Government Association (SGA) has even tried to work on this issue. In an email from March 31, 2023, the SGA listed "Worked with Dining Services to update the menu page to include hours of operation" as one of the projects they accomplished during the 2023-24 academic year. However, this only resulted in a link to the hours website being added to the top of the menu website, so we still need to open two separate websites to check the menu and hours.

In Professor Johanna Brewer's CSC 256 Human Computer Interaction class during the 2024 Spring semester, we developed ideas for a new Smith dining experience as part of an in-class workshop about HCI prototyping. Additionally, a group taking CSC 256 this semester (2024 Fall) decided to focus on the dining menu website for their semester-long project. After talking with one of those group members, as well as my fellow CSC 256 classmates from last semester, I've gathered that these are the common complaints about the Smith dining menu website:
- The hours of operation for each dining hall are not listed directly on the menu website.
- Menu website does not include allergen/nutrition information.
  - Furthermore, most students aren't aware of the website NetNutrition, where this information can be found.
- The announcements section is too long and has too much boilerplate text.

Unfortunately, it seems like Smith has no intentions to update the official dining menu website anytime soon. In February 2024, I contacted Dining Services and the Office of College Relations Website Development Team for help with my project. During my conversation with Jamil Asad-Ubinas, Dining Services' Menu & Systems Specialist, and Danielle Leonard, Dining Services' Nutritionist, I learned that Dining Services was partnering with the company Epicure Digital Systems to display menus on TVs in the dining halls. Michael Yargeau, the Office of College Relations' Senior Web Developer, mentioned that his team has not worked on the dining menu website for a long time since Dining Services is pursuing the Epicure project.

With all this in mind, I figured that a student-directed website would likely be a more effective solution.

Proposed Solutions

Smith Foodie's Figma design and GitHub codebase can be accessed at the following links:
- [Link to Figma prototype of the UI design](#)
- [Link to GitHub repo of the in-progress website](#)

A student-directed dining menu website could be beneficial in multiple ways. Since students are the users using the website, it makes sense that they are the ones to lead the redesign; this follows the disability justice principle of "Leadership of Those Most Impacted." Additionally, the student community will be able to be more involved with the creation and modification of the website – students can contribute code to the open-source GitHub repo, submit feedback, and notify the website owner of mistakes. This represents the "Collective Access" and "Anti-capitalist Policies" disability justice principles. If enough of the student body gets involved, we could potentially have a good representation of different perspectives to build cross-movement and cross-disability solidarity. Without the added obstacles of waiting for school staff to approve changes and update the website, progress and change on a student-directed website can happen much quicker.
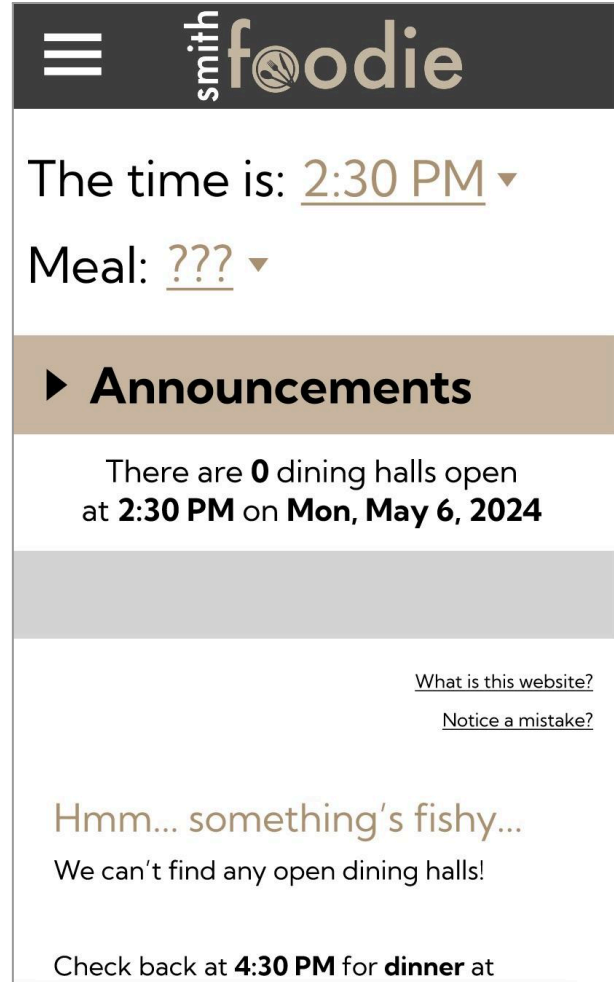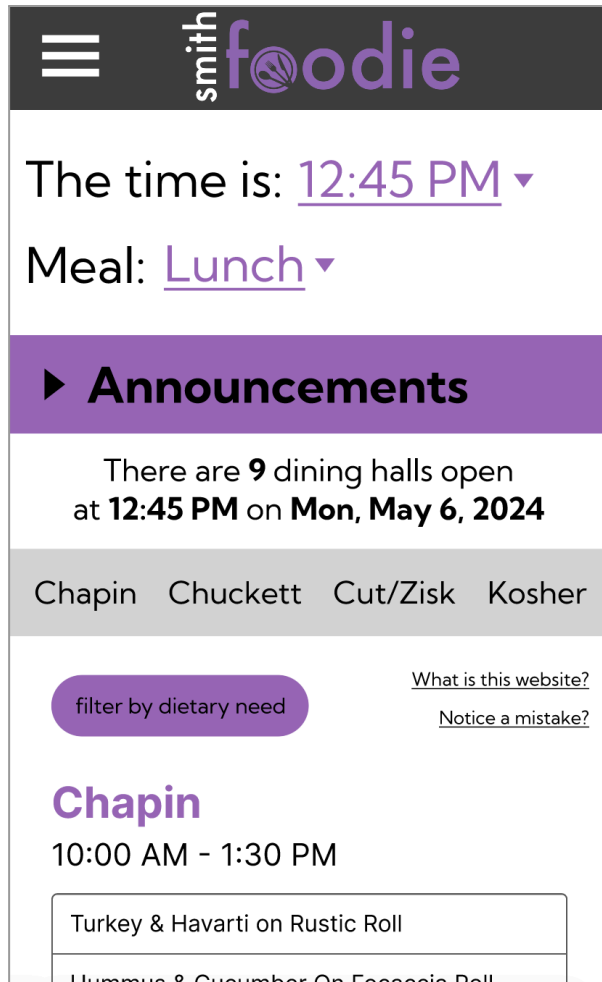
Screenshots of my Figma design on a phone screen. On the left, the screen shows what the website would look like during lunch at 12:45pm, where 9 dining halls are open. On the right, the screen shows what the website would look like at 2:30pm when no meals are being served and no dining halls are open.

When I created my design, I prioritized the ability to scroll quickly through only the options that are relevant to the selected time or meal. This is why the website is fully available on only a single page, and a horizontal scroll bar is available to jump to specific dining halls. The announcements section is collapsible so that the user does not need to view it at all times. However, I also wanted to keep certain aspects of the UI similar to the official dining menu website, such as listing the dining halls in alphabetical order with each food item in its own row in a table. Importantly, the hours of operation are listed with each dining hall, and a button allows the user to filter the menus according to allergies or dietary preferences. If no dining halls are open, the page displays a silly message to inform the user that no dining halls are available and tells the user when the next meal starts and at which dining halls.

To assess the accessibility of my design, I used two Figma plugins: [A11y Color Contrast Checker](#) and [Stark](#). The A11y Color Contrast Checker determined that the color contrast of many of the colors in my color scheme did not meet AAA WCAG guidelines. The Stark plugin seemed to agree with this assessment. Stark is able to assess additional accessibility guidelines, but you need to upgrade to the Premium subscription to see all the results of its assessment, so I can't speak for much else. Overall, I was disappointed by the selection of accessibility checkers for Figma designs. It seems that they are limited in function because the ones I found mainly seemed to check color contrast. However, if I had more time, perhaps I would have found more tools with more functionality.

When I asked some of my fellow students to give feedback on my design, I received a lot of feedback on both things that I expected and things that I had not previously thought about.

- Multiple students liked the feature that alerts when a dining hall is closing soon.
- One student mentioned that the lines between each food item row in the tables makes it easier to read. (In the official website, each row of the food item tables is only differentiated by different background colors.) She also thought that the wider columns made it easier to read.
- One student said that "[This design is] much more logical to me than the current website and faster to get to what we're all actually looking for."
- One student appreciated the collapsible announcements section.
- Multiple students had questions about the time selector at the top of the page. As a result, I will continue to think about how I want the UX and interaction of the time selector to function.

Reflections

The internet has become an essential part of my everyday life and using websites has become second nature to me. As a result, it is easy to forget that everyone has a different experience with using websites.

I access the Smith dining menu website multiple times a day, so I noticed issues that I personally had with using it. This motivated me to redesign it, not only for myself but also for the Smith

student body at large. I figured the things that I noticed would be issues for other people, and that the way that I redesigned it to be more preferable to myself would work for others as well.

But I didn't really consider a wider perspective while I did this work. I didn't consider the accessibility of my design aside from font size and color contrast, but even then, I didn't run my design through an accessibility checker to get a more objective assessment.

With this project, I want to take a more formal approach to making sure my design is truly accessible to as much of the Smith student body as possible. I have come to realize that my personal perspective is limited and I want to widen my lens. In general, the designer is limited by their own perspective - accessibility guidelines help designers consider conditions that they normally wouldn't and accommodate more people.

In the future, I will remind myself not to limit myself to my own perspective. I will check the resources that we have used this semester to reread the accessibility guidelines and disability justice principles to ground my work.