SeatSeeker

Executive Summary

SeatSeeker, is an app designed for restaurant owners and their customers. The design problem we are looking to solve is the problem of long wait times for customers and managing seating arrangements for restaurant owners. The problem is addressed by providing customers with the ability to reserve seats at particular restaurants as well as providing a means of managing reservations and seating arrangements on the restaurant side of things.

Introduction

Seakseeker is an app built on the idea of facilitating the process of both managing and reserving seats at restaurants, and in turn increasing efficiency for restaurant managers and decreasing wait times for customers. The app will provide restaurants with the ability to manage seating layouts, reservations and wait times through an intuitive and easy to use interface. The client side will provide customers with a way to search through participating restaurants and reserve seats with seating preferences in mind.

Design Problems

Existing applications (e.g. OpenTable, Bookenda) tackle the workflow that is confined to only booking reservations at a chosen venue. Upon performing an initial research, we discovered that there is no existing application that allows users to view the current wait times for filtered venues. SeatSeeker is designed to address the issue of not having a convenient method of simply viewing how busy restaurants are without having to follow through with a reservation.

User Research & Findings

Two research methods were used to get a better understanding of our prospective stakeholders. Firstly, surveys were used to collect statistics about future customers of our app, the ones who will be reserving the tables. Secondly, interviews were conducted with restaurant managers to get a better idea of what kind of tools were needed to help make managing a restaurant easier.

A survey was used because a large amount of data could be collected in a limited amount of time. The survey was distributed over social media networks and was completed roughly 50 times in the span of less than a week. Data from the survey portion provided insights into whether or not some ideas were worth pursuing. One of the findings had revealed that overall most people currently do not use a seat reserving app, indicating that the market for apps that complete this task still has room to grow. The survey results also showed that the average wait time for a table at a restaurant is 13 minutes, while the maximum time customers would wait for their favorite restaurant was around 26 minutes before they decided to go

elsewhere. This suggests an extra wait time of just 13 minutes would mean the difference between servicing a customer and losing one. Results from the survey also suggested that people are almost always going to do research about a restaurant before going to one, therefore focusing our design on providing helpful reviews and information would prove to be of great importance.

Interviews proved to be especially helpful in providing a perspective on how things worked on the restaurant side as well as the potential scope of the market that our app is targeting. One major finding was that the larger the restaurant, the more likely a seating or reservation app would be using there. Of the restaurants using an app, the general observation was that human error was decreased significantly when managed with some app. Restaurant managers not currently using apps seemed somewhat enthusiastic about the idea of implementing one, although some believed getting approval from upper management would prove to be difficult. Finally, the major concern that was brought up about seat reservations, and in particular reserving seats at specific locations in the restaurants (I.E. patio, window etc.), was that reserving seats for large parties often required moving around tables and therefore changing seat layouts.

There were unfortunately some limitations to our research methods. With the surveys, it was discovered post collection that there were some questions that should have been asked in conjunction with others. For example, when asked how often they use seat reserving apps, it would have been of great help to provide a way explain why they did not use one. This would have helped to clear up the question of whether they had just never heard of any such app, or they simply just would rather not bother with one. Another downfall of the surveys was the sampling bias that may have resulted from only sampling people on our own social networks. Reflecting on the Interviews, a problem with the results was that the sample of restaurants may not have fully represented the targeted restaurant side users of the app. Had interviews been conducted in busier restaurants such as those located in the downtown core of Calgary, perhaps a broader perspective could have been gathered.

Design & Justifications

User Side

In developing the home page for SeatSeeker, we wanted to take a very minimalist approach. By having very few buttons and options, we wanted the work flow to feel very intuitive and straight forward. There are questions above the fields that are necessary to complete that are simple and concise ("Where are you headed?", "How many?", etc.). This is in an effort to make the system feel and appear both simple and inviting. It is then topped off with an enthusiastic red-bordered "Let's Eat!" button which directs you to the results based on the field criteria entered.

Upon making your selections on the home page, you are then redirected to the results of your search. This layout is very clean and uses individual card-like sections for each restaurant. By displaying it in this way, we are trying to not overwhelm the user with results. The division of each restaurant in a contrasting white rectangle against an image used for the background helps add to this clear and concise means of displaying the results. When a restaurant of interest is found, clicking "Eat here!" on the option will display a modal with further information

on the restaurant. Simply click "Get in Line!" again on the modal and it will bring up the necessary information for getting in line.

Taking a step back from our most common workflow on the user side, is the profile and login pages. The login and sign up pages follow a generic login and sign up look found in many different applications. By choosing a simple, generic look for these options, we hoped that the functionality would feel very easy and intuitive. There is error checking for incorrect login information as well as a "forgot password" and "forgot username" which allows you to send reset account information via email. The profile itself has some basic functionality that you would come to expect from most user profiles used on other applications. It allows for a profile picture as well as images from restaurants that one may upload. It also has your recently visited restaurants front and center. There is also a portion that includes basic personal information that a restaurant may see after booking a reservation or getting in line. The user profile abides by the same minimalist design feel that is present throughout the entire user experience.

Restaurant Side

The restaurant side of the application is very different in terms of design from the used side. It implements the same color pallet and logo as the user side, however as it is intended to be used on a tablet interface, the overall feel is quite unique. The login requires a password as well as google 2 factor authorization for added security. There is no username login as this would be domain based and customized to each restaurant.

The page after the login directs you by default to your "Layout View" where you can see all tables in the restaurant in a birds eye view. This was modelled after existing restaurant systems as well as the typical marker-drawn systems in place. You can customize the layout with an edit button in the bottom corner. Editing the layout is very simple as it utalizes a drag and drop interface. The icons used throughout this side of the application are all supposed to be relevant and self-explanatory. Also present on the layout screen is a side bar with the current wait time and tables available present. This is very visible because it is important for hostess to acquire that information very quickly and efficiently when seating and dealing with customers. There is also a hamburger menu in the top corner of the application to navigate through different pages. The use of this style of menu is to help appropriately make use of the smaller screen size present on a tablet. The layout view is primary use of this application.

Aside from the layout view, there is another tab designated for viewing the restaurant information. This is the information being displayed on the user sides results. It is intended to be editable so that the restaurant can advertise to its market appropriately.

Heuristic Evaluation & Findings

User:

The design of the Hi-Fi prototype was created with the heuristic evaluation in mind. In other words, the goal was to satisfy the most points for the heuristic evaluation. However, there are still some points we've missed.

Looking at the home page, it is simple and clean. A simple log in and register button on the top right corner does not interfere with the main functionalities of the website. From the main

page, searching and selecting restaurants is very simple with specific filter options on the search page. From an aesthetic and functional perspective, the website is decent. However, many small details that would greatly enhance the user experience are missing.

Things like having a loading icon for loading the search results are small details that would be helpful on many occasions, such as when loading a large set of search results when searching for generic restaurants. Other things, such as error recovery and prevention are to an extent, implemented. Though, due to time restraints, not every possible error was accounted for.

For the most part, consistency and standards are maintained. The "SeatSeeker" logo directs the user to the home page and the colors, font and work-flow match with the purposes of the website. Minor details, such as logging the user in upon hitting the enter button on the log in page, are missing. These small mechanisms could've been easily implemented if not for the time restraint.

As far as minimalistic design goes, the website encapsulates that idea very well. However, due to minimalism, many mechanisms could not be implemented. If I wanted to see the reviews of a specific restaurant, there is no straight forward way for me to search that specific restaurant. I would have to search through all the filters to manually find that restaurant. This is the issue with trying to keep the website minimalistic; many functionalities are not implemented. Finding the balance between aesthetics and functionality was difficult.

Overall, the user website would still score decently on a heuristics evaluation. Of course, implementing many of the missing mechanisms would greatly enhance the website. There are still many things that we could improve on.

Restaurant:

The restaurant app is simple. Set up the restaurant layout, take reservations from customers and seat them down. The simplicity makes the app applicable to almost any type of restaurant. Again, although it is simple, functionality is limited. Currently, the app provides only 1 floor for the restaurant to set up its layout. For restaurants with a second floor or even bigger restaurants in general, this will be a problem. Help is available for the app. There is a brief tutorial on how to set up the layout. Due to the simplicity of the app, not much more help is needed for the user to efficiently use the entire app.

Due to time restraints, error recovery and prevention is almost non-existent. Logging in with incorrect password does not prompt an "incorrect username/password" message. Tables that are created with the incorrect number of people cannot be edited. Also, regardless of the number of seats for the table, the table size remains constant. These are all important details we've missed.

Aspects such as consistency and standards are maintained. The hamburger menu opens upon being clicked as expected. Moving tables to the trash can will delete the table.

Ultimately, the app is missing a number of mechanisms that could be implemented. If there is sufficient time, we will implement as many as we can.

User Testing & Findings

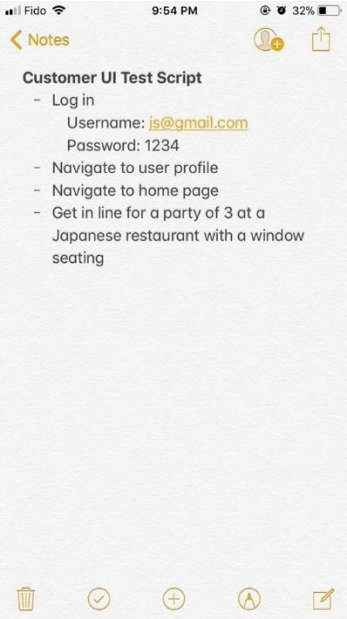

Figure 1: Customer UI Test Script

Using a sample of four testers, we defined a set of instructions for each user interface (i.e. customer-facing and restaurant-facing interfaces) that the users had to follow without any prior knowledge or exposure to SeatSeeker. As they worked through the test script, we recorded the screen to capture mouse clicks and keyboard input in addition to recording the testers "thinking out loud". To ensure that the design was adequate for various age groups, our test sample had an age range from early 20s to late 40s.

The most common piece of feedback that we were given was related to the method of selecting a seating preference when checking in at a chosen venue. Having the seating preference input field in the left navigation bar of the results page turned out to be somewhat unintuitive and worked against the testers' natural flow. Relocating this input field to a different stage in the workflow should suffice in improving this design problem.

Another issue was with the dropdown menus on the main page. The question, "What do you feel like?", does not intuitively imply that it means what kind of food you would like to eat. After the menu has been dropped down, the user understands that it is to select the kind of food they prefer. However, before dropping the menu, it does not make much intuitive sense as to what the menu is for. A simple rewording of the question should solve this issue.

Overall, the testers were able to successfully complete both sets of instructions with minimal struggle or confusion. Upon analyzing the screen recordings of the tests, we gladly found that the interface and workflow seemed to be self-explanatory and natural, aside from the small problems described above.

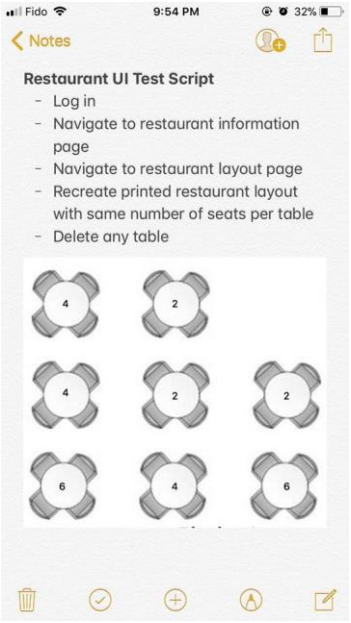

Figure 2: Restaurant UI Test Script

Recommendations for Next Iteration of Design

Seeing that both the low-fidelity and high-fidelity prototypes of SeatSeeker were developed in such a way that the restaurant-facing interface and the customer-facing interface existed in isolation, our primary recommendation for the next iteration of the design process is to further expand the scope of our prototypes to integrate the two interfaces. This would open more opportunities to test the functionality and user experience of the entire system.

Another recommendation would be to address the usability issue described in the previous section regarding the selection of a seating preference as it was the most common piece of feedback received.

Lastly, further enhancements can be made to the restaurant-facing interface, specifically, the restaurant layout view. With the current prototype, users are only able to specify a label and the number of seats per table added to the layout and there is a maximum limit of eight tables that are allowed to be added into the view. It would be much more beneficial to increase the maximum limit of tables to cater for larger venues as well as the addition of the following: colour-coded sections to distinguish the various areas of a venue; labels for such sections; the ability to add symbols (e.g. door, kitchen, dividers/walls, etc.); options for tables of certain shapes/types; and the logic behind associating a reservation with a particular table/arrangement of tables. Having such additions would create a stronger connection between the layout interface and the real world, which is something that we believe would attract more prospective users.

Conclusions

Overall, we are quite satisfied with the prototypes that we've developed thus far given the fast-pace of this course and the feedback that we've received from the user testing stage of the design lifecycle. The user research methods chosen allowed us to develop a strong understanding of the overall workflow that covers the process of a customer viewing prospective restaurants all the way through to the restaurant staff acknowledging and accommodating the reservation. With insightful research results gathered from both parties (customers and restaurants), design justifications were made with ease given the quality of the results. Upon completion of our initial ideation phase, the heuristic evaluation performed on our low-fidelity prototype enabled us to further visualize a higher-fidelity prototype complete with more functionality and a consistent colour scheme. Given the mostly positive feedback provided by our testers during the user testing stage, only minor adjustments were needed to be made as we began to move forward and brainstorm recommendations for the next iteration of design.

Having the opportunity to invest our time into a design project like SeatSeeker has given a fruitful experience that we'll be able to apply to any product that we develop in the future. It taught us the best practices and general guidelines that are commonly used in the industry, which will equip us with the skills needed to design and deliver an efficient and satisfactory product.