Location Review

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Overview

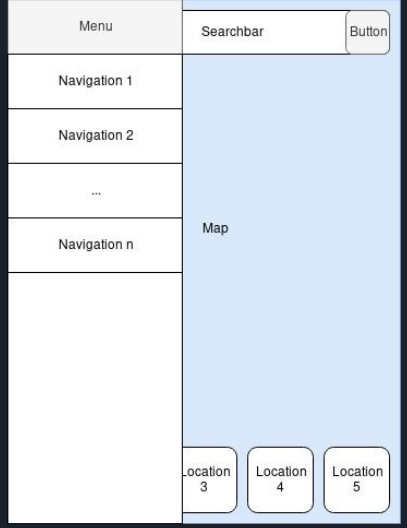
We will be focusing on location-based community apps. This app will help solve the problem of searching for things like food nearby. We will primarily focus on efficiency. We want to make it as easy as possible for users to interact with the application. For example, to get users to leave reviews, it should take minimal time and effort.

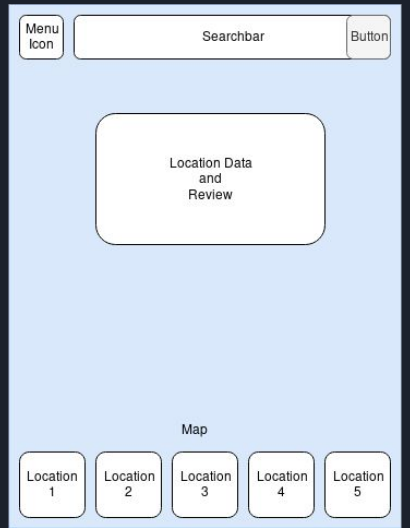
Project objective

Our objective is to improve efficiency. Focus on operational speed, displaying only the most important information. As much of the input as possible should be automated, allowing users to quickly use the app

Low Fidelity Prototyping

First we drew up some quick sketches using draw.io. From there, we started using figma but, quickly realized that the time needed to be spent working on the actual demo rather than learning another wireframing tool that would still not be satisfactory for the “final” demo. We used inspiration from modern map based tools such as google maps and yelp. These “standards” were then followed using components from the Material-Ui library in React.js.



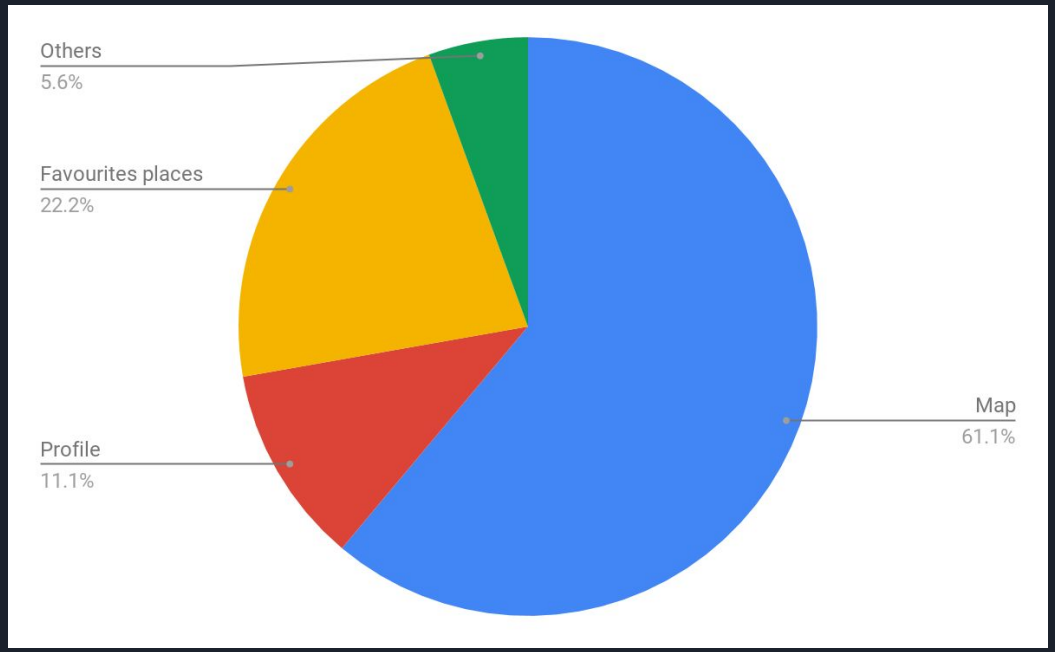


User Story

- As a user, I want to be able to search for locations on a map, so that I can find a place to eat.
- As a user, I want to be able to leave reviews for locations, so that others can see what I think.
- As a user, I want to be able to see reviews of locations, so that I can choose where to eat.

Storyboards

According to usage of each UI

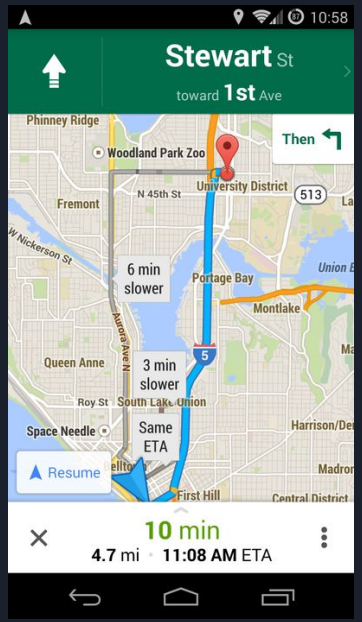


Data Sources

•We will be using the following article (http://www.uxbooth.com/articles/stop-counting-clicks/) to help gauge how efficient our UX is. Our audience is very general, we are categorizing based on technical skill. People who have varied technical ability should be able to navigate product, but those who do come from a technical should find it an efficient process. Data for personas could be drawn from a myriad of sources, since most people use google maps, a similar service, we will be looking at the census data to get a distribution of people from all walks of life. (https://www.census.gov/)

Target Population

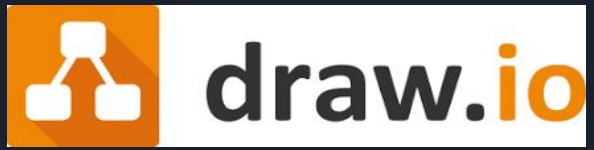
People who use apps to find locations by them and care about other people’s opinions



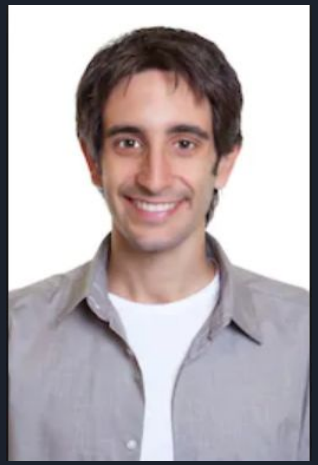
Target E - Efficiency

- How fast a user can use the app and the number of clicks or actions they need to complete tasks (such as finding a place to eat).
- We measured our efficiency with the timing of our user testing
- Additionally, specifying the types of input is required from the user. Standard clicks are better than text fields when getting simple data

Electronic Workspace



Persona

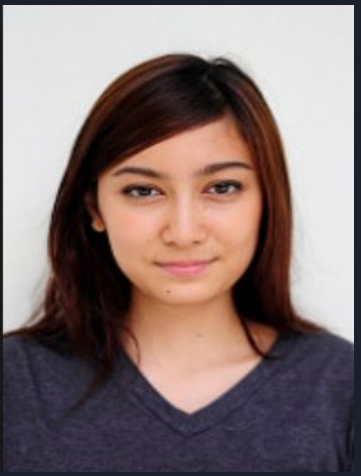


My name is Steven Rowland and I work for We Work In New York City.. Being new to this area I need to use maps all the time to find places like restaurants, mobile stores etc. I live in New Jersey so I commute by Bus, train and cabs everyday.

AI observed in NY Google maps doesn't work properly. Last week I went NY on west Broadway, the place I was looking for was just 2 blocks away, but maps failed to show the exact location. So Location Review will help to find our exact location.

Sometimes on weekends me and my friends plan outing to unknown places (which we never visited before) this time we need to use maps to directions to finding places.

Persona



My name is Mimi and I am an international graduate student studying in NYI came to United States in Fall of 2017 for the first time. Since then, even if I had to look for a coffee shop couple of blocks away I would use Google maps to navigate. The whole block system was new to me as in India we do not have block structure of roads.In my country we do not much tend to use apps to locate places due to following reasons.One is because the name of the shops keep changing in short time period. So it's difficult to have a permanent landmark. If we have a landmark, it's a landmark covering a huge area. Second reason is our countries population that helps us better than any application. While driving or even while walking, the locals are really helpful in navigating places. So I wasn't so used to using navigating applications in my country. As I came to US, this country being not so populated as compared to India, I would land up at places where I didn't see anyone around me to help me navigate to the place I wanted to reach. So I started using google maps. In my experience of using google maps so far, I observed one thing, it works really well in suburbs that aren't very crowded. But when I travel to city areas like New York which are very crowded all the time, it somewhat lags. During my internship in New York this summer, for once I had to travel to another office where we had an event and I was 20 minutes late as I kept walking in the same area on broadway street trying to locate 1 building. I passed by the entrance of that building around 3-4 times but I couldn't locate the entrance.I think this problem arises because the building was huge and every street I went to, showed me the building was right there but the actual entrance was only from one street. So our project (Location Review) is going to help us resolve this problem, by giving us exact detail of the location.

Persona

My name is Nicole Christenson, a New Jersey Resident. I was asked whether I use or rather need any kind of navigation help, and my immediate response was yes of course! Though I've lived here for my entire life, there are hardly any days when I don't need GPS system.

From going to one place to another, I would need navigation and would call it as my best friend. I can look-up the good places to hang out, transportation options whenever I decide not to drive, to check out the places based to distances, etc.

Hence, LocReview can actually prove to be really helpful for me.

Timeline - Prototype to Current

- Designing prototype in Leaflet
- Created base web application project using the react framework
- Styled the application based on the Leaflet prototype
- Went through topics presented in lecture to make improvements to the design
  - Disability Friendly
  - Easy Navigation
  - Error Handling
  - Efficiency
- Submitted application to user testing
- Made changes reflected the users feedback

P A R

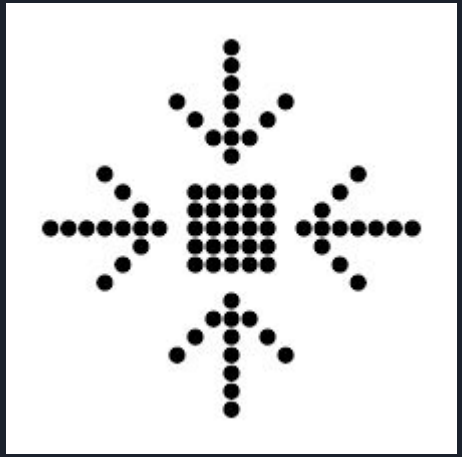
PERCEPTION: The website is easy to navigate with simpler User interface. It follows the Laws of Simplicity, which it simpler as well as with appropriate and important content. UI is clean which includes less text boxes and more clicks.

ATTENTION: Attention means the user should be easily able to locate every feature of our app like the explore option, search option or leave a comment option. Everything should be clear and nothing should be confusing. The transition between features should be easy and the features shouldn't be hidden or too crowded.

RETENTION: Retention is ease burden on memory. Retention means the user is able to remember the navigation easily. Every time the user navigates the interface he should be easily taken to where he wants to go. Also, it means not adding all the features together in one place. Everything should be step by step.

Laws of Simplicity

- Reduce:
  - Minimal effort to search for locations
  - Simplified UI
  - More clicks, less text boxes
- Time:
  - Easy navigation
  - Quick interaction
  - Simplified UI



User Testing - Iteration 1

- 4 Users
- 4 Tasks Each, Average Time Computed (in seconds)
  - Registering Account - 17.9s
  - Signing In - 24.125s
  - Searching Map - 23.5s
  - Reviewing Location - 14.75s
- Feedback
  - Shouldn’t need both username and email
  - No indication of which user is logged in
  - Bad error handling
  - Enter key should submit form

Changes Made (Based on User Suggestions)

- Only use email instead of also requiring a username
- Allow enter key to submit forms
- Indicate which user is logged in
- Only show favorites and profile/name when logged in
- Add logout button

User Testing - Iteration 2

- 4 Users
- 4 Tasks Each, Average Time Computed (in seconds)
  - Registering Account - 10.58s
  - Signing In - 9.2825s
  - Searching Map - 3.7125s
  - Reviewing Location - 7.75s
- Feedback
  - Bad error handling
  - Can favorite a location more than once
  - Stars stay if location is changed without submitting
  - Easy to complete
  - Works, but don’t like menu overlapping location buttons

Accessibility

We are using tota11y to check accessibility of our application.

We labeled all our input forms and buttons. However, the tota11y checker does not recognize the format of some material-ui labels for icon buttons (and the label for method does not work as it messes up the formatting). Also, we could not figure out how to add alt text to the stars in the react rating library we used. Another possible point of issue was the blue marker that could be on a blue background. This only occurs when a user's location is incorrect and puts them over the water. This should not be an issue in actual usage and the marker has great contrast with the usual map background. Overall, we found tota11y very useful for checking the accessibility of our application, even if it had some minor incompatibilities.

Error Handling

Error handling is done minimally due to the time constraints. However, we have a error reducer in redux to catch and record errors from the backend. We pass those to small pop-up windows at the bottom of the screen in the login and signup page.

Heuristic Evaluation

- Visibility of System status
- Match between System and real world
- User control and freedom
- Consistency and Standards
- Flexibility and Efficiency of use
- Aesthetic and minimalist design
- Help and documentation

Measuring Success

As we are focusing on efficiency, our main measure of success is the time it takes for users to complete various actions/tasks. If the iterations on the initial prototype reduce how long it takes for users to do things, we know we have succeeded.

As mentioned in the iterations slides, the average time it took to complete each task dropped after the improvements were made based on user feedback. This is an indication that the efficiency of our app has improved after the design changes.

Tidwel Patterns

- Safe Exploration
- Satisficing
- Change in midstream
- Habituation
- Microbreaks
- Other people’s advice
- Personal recommendation

Micro-Interactions

Micro-interactions are a smaller portion of the overall application, individual pieces of functionality the user interacts with.

Examples of these include:

- Searching the map using the search bar
- Navigating map by dragging mouse
- Registering for an account
- Logging into an account
- Opening the navigation menu by pressing the hamburger button
- Etc.

THANK YOU