

CONNECT

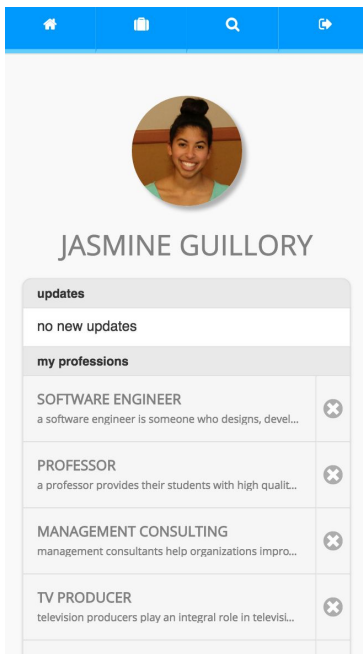
MAKING DREAMS ACCESSIBLE

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Design

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Management

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Documentation

Jasmine G.
Development



Problem and Solution Overview

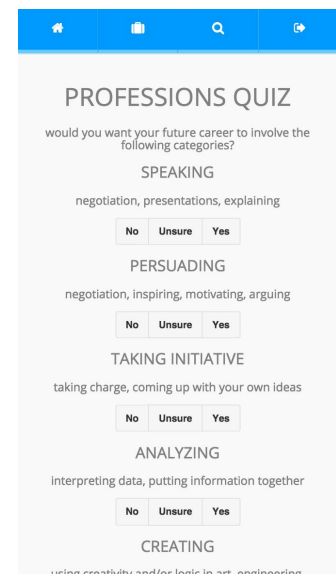
Low-income and minority high school students lack exposure to the range of competitive careers they could pursue and access to academic opportunities to explore those interests. Our solution is a mobile web app that assists minority and low-income students in finding and exploring their passions. Using Connect, students can take a professions quiz to be matched with possible careers of interest. They can also search for, save, and apply for opportunities that seek to support students with similar backgrounds. Finally, students can write reviews for programs, creating a sense of community within the app.

Task and Final Interface Scenarios

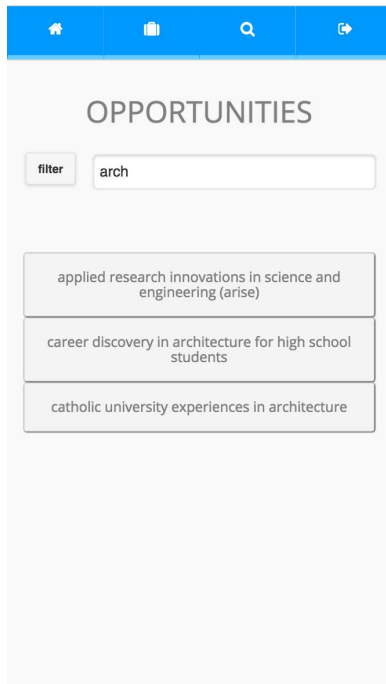
(See Below For Walkthroughs)

Simple Task: Take Professions Quiz

One of the barriers that low income and minority high schoolers face in reaching certain competitive professions is lack of exposure to the possibilities. After learning that high schoolers enjoy taking quizzes about their interests during our needfinding stage, we concluded that a



profession quiz would be an effective way to combine the usage of a format with which our users were familiar and our goal of providing those users with information about potential careers.

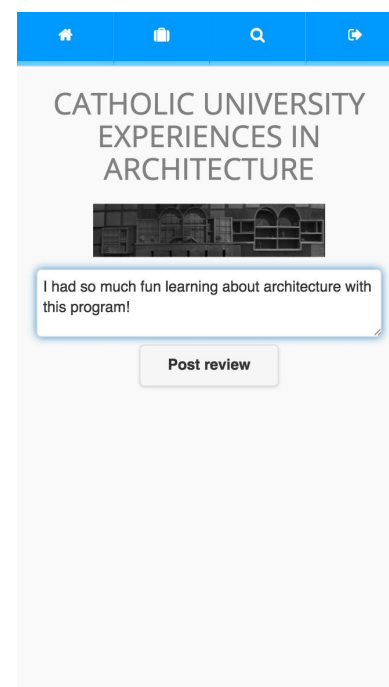


Medium Task: Find An Opportunity

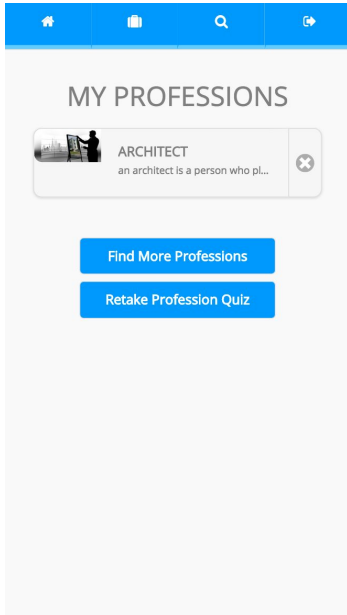
We chose this task as the logical continuation of the first task; after a user discovers some professions that she might be interested in, she can search for a program that will help her explore that profession. Users find opportunities by going to the search page and either looking up the name of the program or utilizing our filters. The filters include fields that we know are important for our users, such as price, location, and whether or not the opportunity is paid and housed, as well as an option to find programs that match the professions on the user's professions list.

Complex Task: Write Review

This task is designed to help foster a sense of community among Connect users, as well as provide useful insights for users attempting to decide which programs they're interested in. Users can review a program that they participated in by searching the name of the program on the search page and then clicking the review button on the page that comes up.



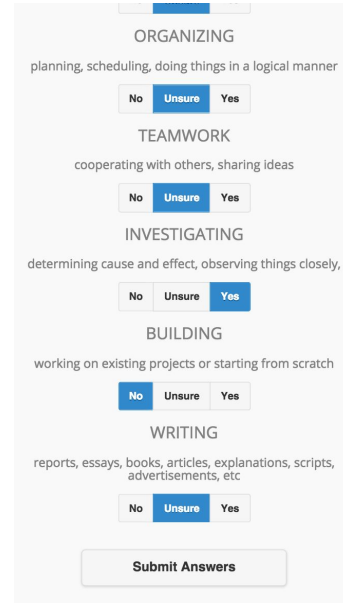
Take Professions Quiz Walkthrough



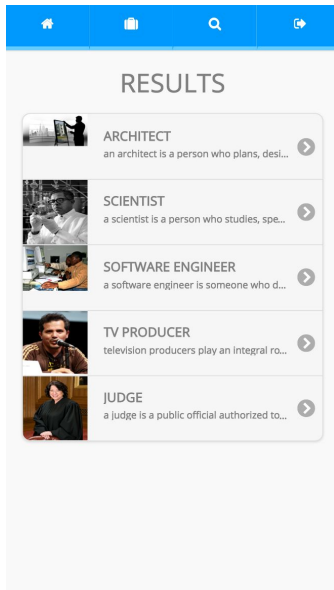
Click 'Briefcase' to Reach Professions Page
Click 'Retake Quiz'



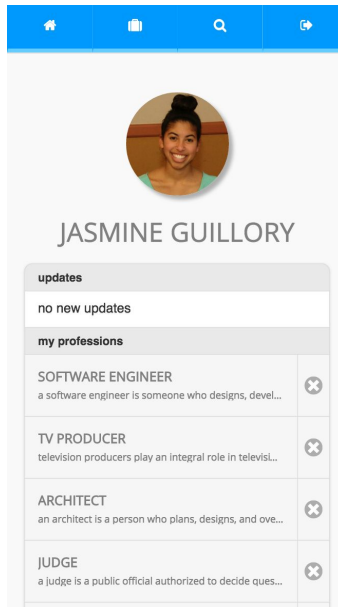
For First Time Users the Quiz Opens Automatically When 'Briefcase' is Clicked



Fill Out Form
Click 'Submit Answers'

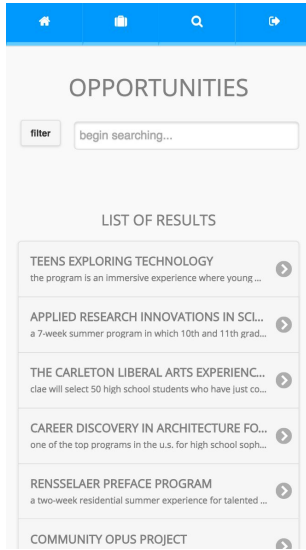


Land on Results Page

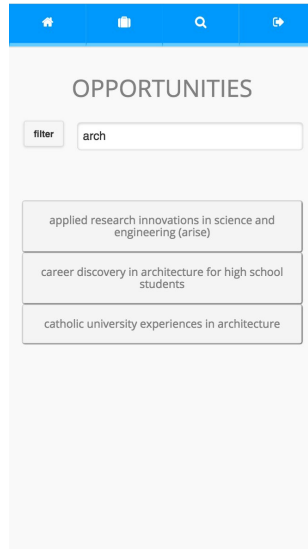


Click 'Home' to See Professions Added

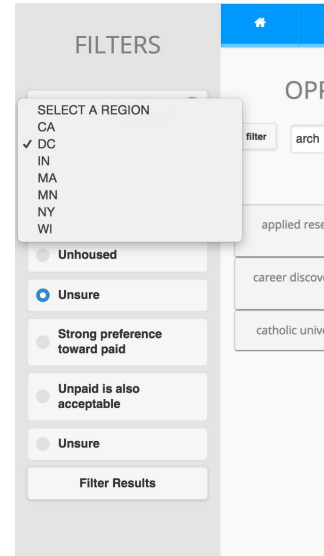
Find Opportunity Walkthrough



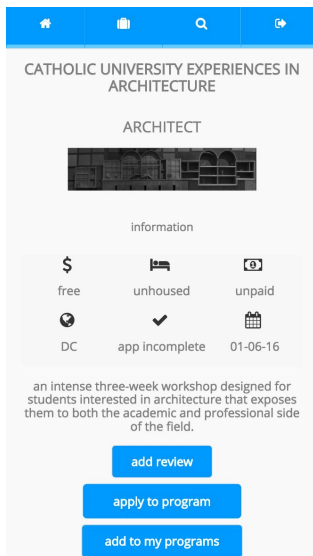
Click 'Magnifying Glass' to Reach Opportunities Page



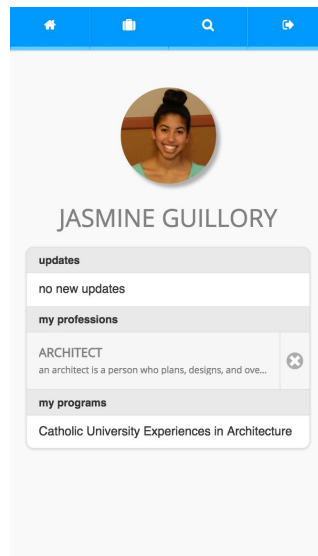
Live Query in Search Bar for Opportunities



Click Filter Button for More Search Options

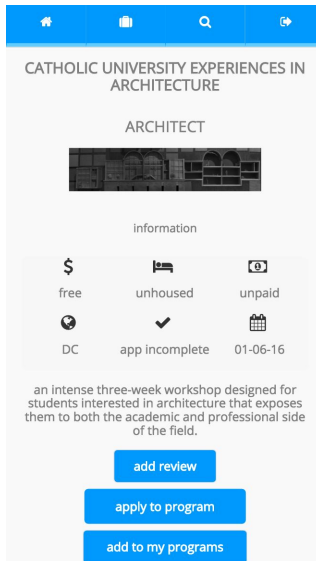


Click on Opportunity for More Information

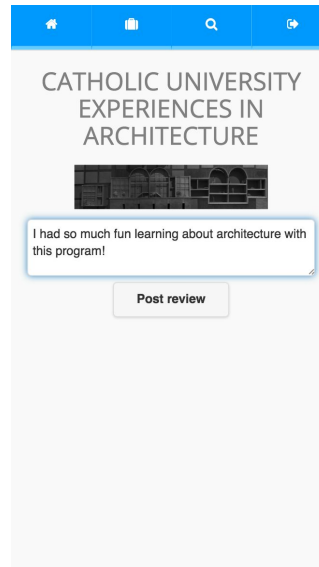


Click 'Home' to See Program Added to 'My Programs'

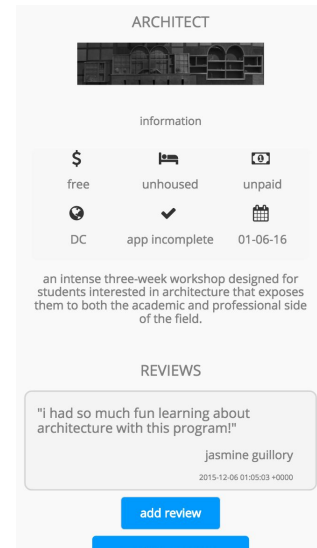
Write Review Walkthrough



Go to the Opportunity You Wish to Add and Click 'Add Review' (See 'Find Opportunity')



Write Your Post Click 'Post Review'



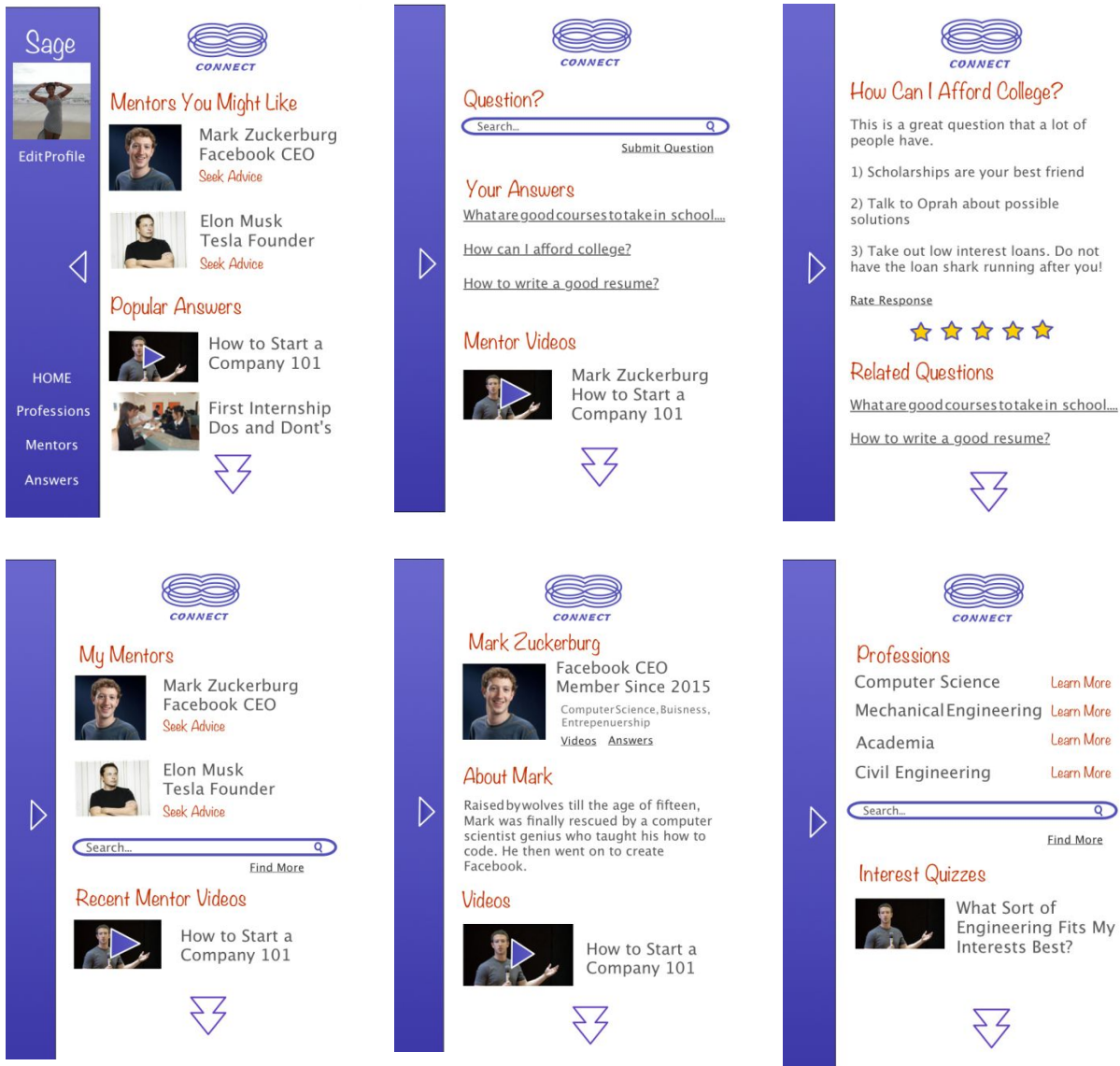
Land Back on Opportunity Page and See Post

Design Evolution

From inception our team was interested in building an application that uplifted low-income and minority students. Through the need-finding process we discovered that many of the students we talked to wished they knew more about the different professions available for them to pursue. The students also brought up that there was a lack of representation of people of color in their upper-level classes which made taking the classes seem more out of reach.

The original idea for Connect was inspired when one teammate suggested a virtual reality application that would allow students to have their own virtual mentors. We took that idea and iterated on it to make our concept prototype. This first idea for our app, also called Connect, allowed students to search for different STEM fields

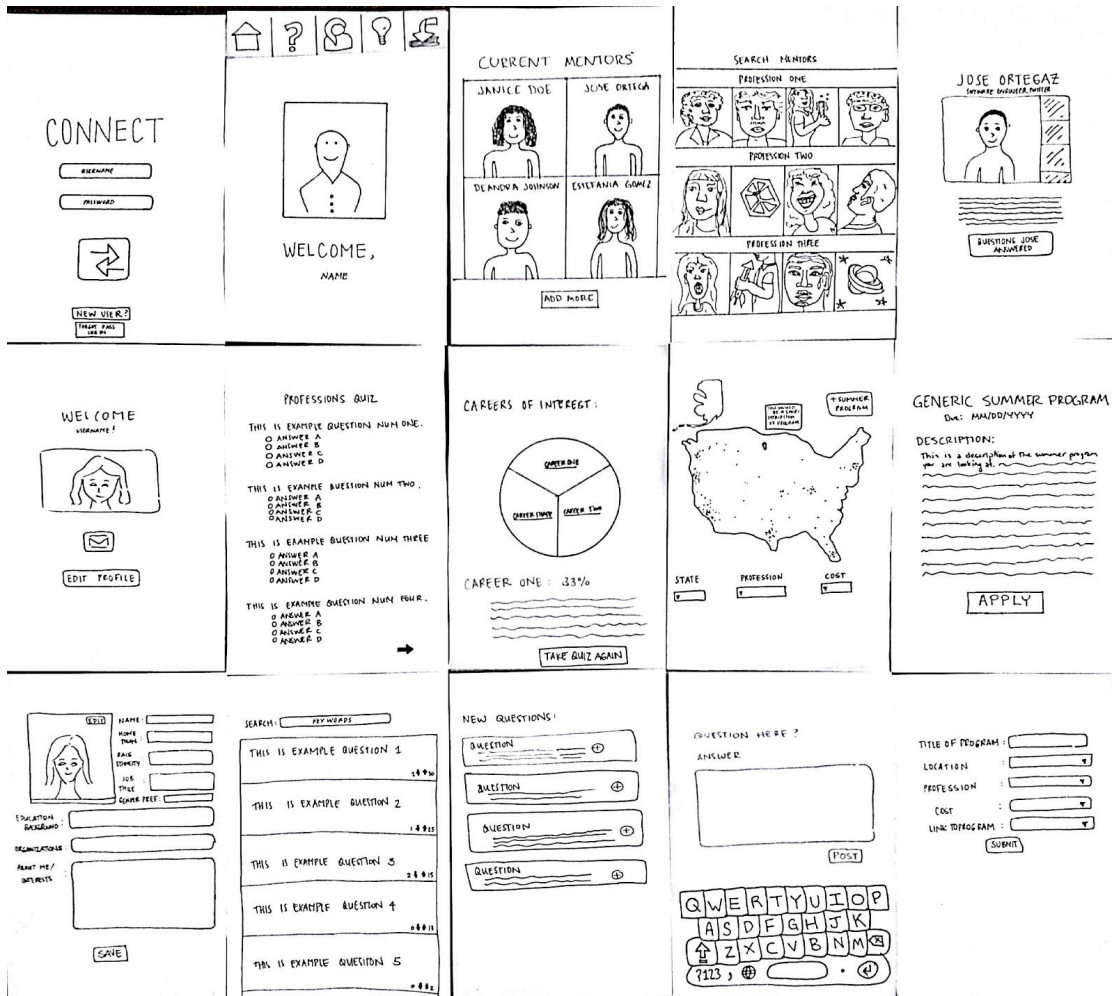
and learn about those professions. From the professions page they could see mentors in that particular field and add them. They could also ask public questions, similar to Yahoo Answers, and receive feedback from mentors.



Concept Design Screens

One of the features of this concept app that our user testers were most excited about was a link to a professions quiz. This was originally just a side thought that the designer thought would look good on the page. After user testing, the

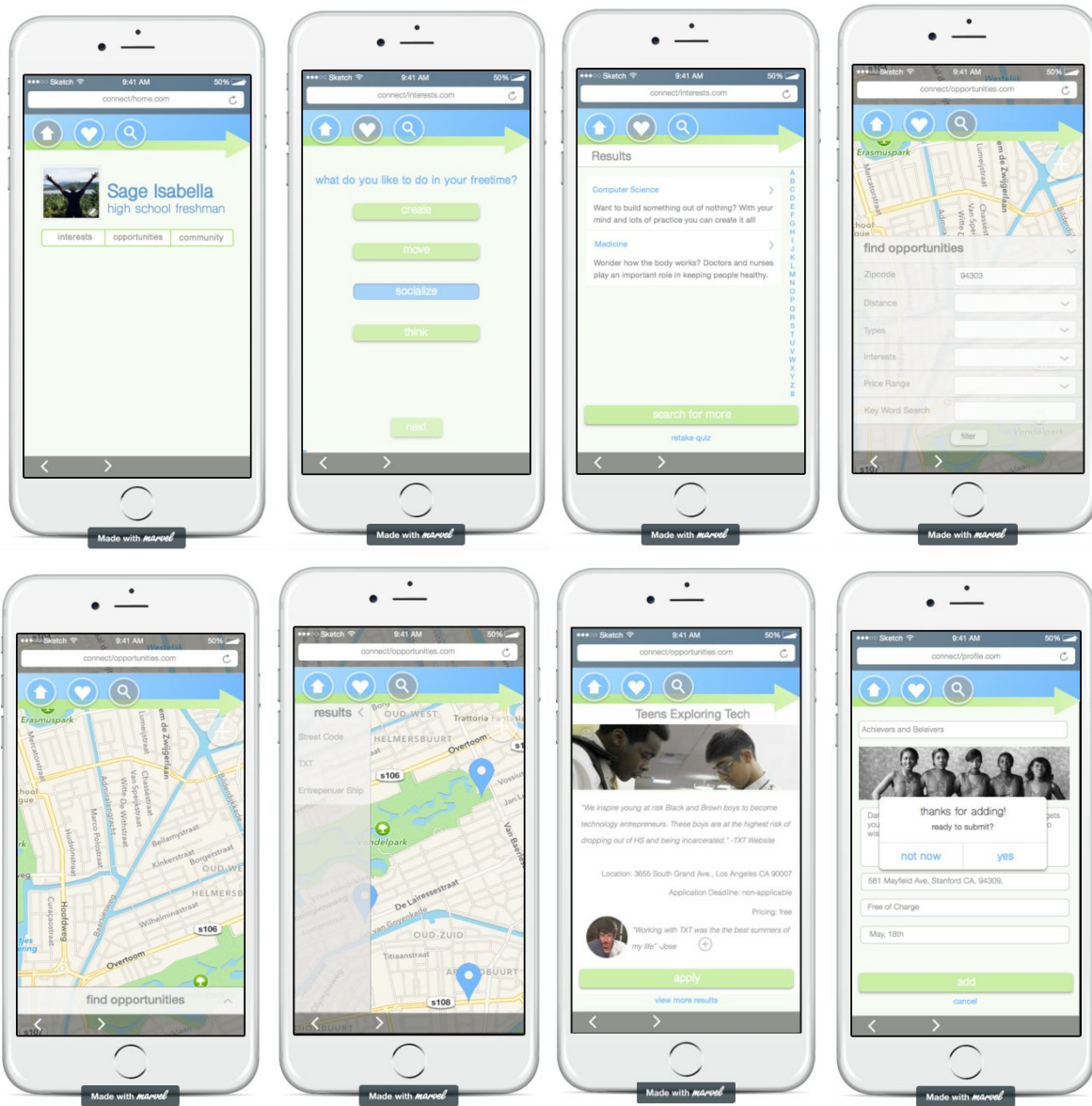
“Professions Quiz” became one of the most important features of our application and one of the three tasks of our low-fi prototype. The other tasks were “connect with mentors” and “discover summer program opportunities.”



Low-Fidelity Prototype Screens

The summer opportunity page was implemented on a map since we thought that distance would be an important issue for our target users. Users could search by state, profession, and cost, but there was no way to type in a program name directly. During testing, the users said that they thought summer programs was one of the most important features of the application. Conversely, the mentor part of

the app was deemed more confusing because users were not sure what sort of relationship they would have with their mentor.



Medium Fidelity Prototype Screens

For our medium-fi prototype we dropped the mentorship part of our application because we realized that we wanted for the application to be about personal exploration without the stress of keeping up a mentor relationship. We determined that most users might not have the experience or background yet to make the

mentorship feature helpful. Additionally, we finally dropped answers because we felt as though it was not a part of the core functionality of our application. We also expanded our application to professions out of STEM because we felt as though we were unnecessarily excluding low-income minority students with other interests.

Finally, in the last iteration of our prototype we removed the ability to have friends. We found it to be unnecessary and distracting in the road to the user's personal discovery. We also made some design changes to make the app more intuitive and beneficial to our target users. Most of our changes from the medium-fi to hi-fi prototype are outlined in "Major Usability Problems Addressed" below.

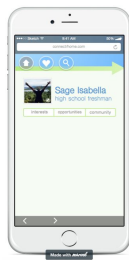
Major Usability Problems Addressed

The high severity Connect medium-fidelity heuristic evaluation violations are listed below as well as general design decisions and reasons for changes.

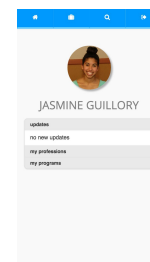
[H2-3 User Control and Freedom] [Severity 4] [Found by: A]

After logging in, there is no clear way to logout of the system (except for the case where you click the back button immediately after you initially log in to Connect). Thus, if you ever need to change users in this app, you will need to fully close the app from the iPhone and re-launch it to access the login screen again. As a fix, try including an option to logout at the profiles page!

Solution: Add logout button on right side of top bar.



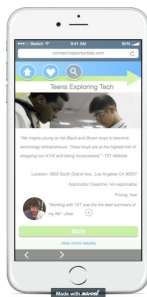
Before



After

[H2-5 Error Prevention] [Severity 3] [Found by: A, E, C, D]

When the user opens a screen detailing a nearby opportunity, there is a section at the bottom of the opportunities screen (specifically, I am referring to the “Teens Exploring Tech” screen in the prototype) that gives user reviews about the opportunity being studied. Next to each review is a little “+” icon. At first, this seems like a button that would expand the screen to include more details about the user review being presented. However, the “+” actually means to add the person who gave that review to your contacts list, which is kind of awkward because I just accidentally added Jose to my contact list when I did not want to do that. This is an issue of clarity – as a fix, maybe use a better icon for adding friends?

Solution: Get rid of friending

Before

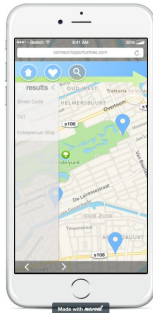


After

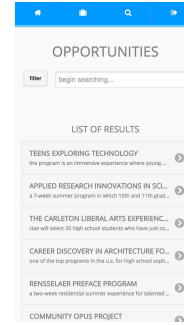
[H2-4 Consistency and Standards] [Severity 3] [Found by: A, D, C]

The interface uses the same “+” button multiple times to mean different things throughout the program. For example, on the opportunities screen, the “+” means to add a friend; on the main map page, “+” pulls up an option “search to write review”; and on the page that details what computer science is, the “+” logo has no obvious function. To keep consistency and clarity throughout your interface, maybe make different symbols for each of the functions (this may be a prototype specific issue, but I wanted to point it out just in case).

Solution: Remove map. Plus icons are no longer used on interface.



Before

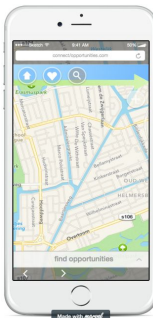


After

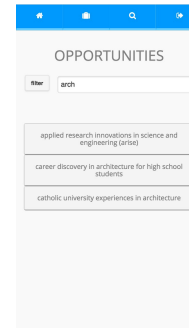
[H2-3 User Control and Freedom] [Severity 3] [Found by: A, B, C]

When using the map screen, there is no clear way to directly search up an opportunity by name (you can search for an opportunity to write a review for, but not to just get information about). This is an issue because the user should have the ability to just straight up find opportunities that they know exist without needing to use the map to find it. As a fix, implement a search bar on the first map screen!

Solution: Remove map. Users now just filter and search for opportunities.



Before

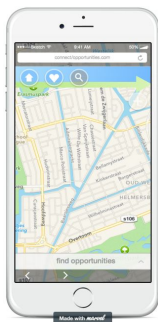


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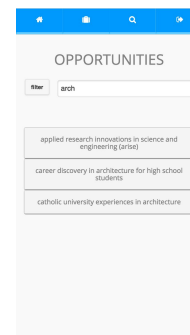
[H2-2 Match between system and the real world] [Severity 3] [Found by: C]

When clicking the magnifying glass, I expected it to extend into a search bar, as is what happens when I tap on the magnifying glass search icon for all the other apps that I'm extremely familiar with using. However, I'm quite shocked and overwhelmed when I'm taken to a map after clicking on the search. I was expecting to simply type in a query—the map overwhelms me with a lot of information that I'm not sure what to do with.

Solution: Changed opportunities into a searchable list instead of a map.



Before

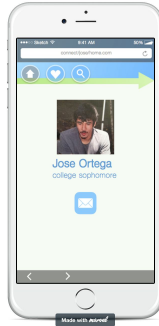


After

[H2-6 Recognition rather than recall] [Severity 3] [Found by: A, C, E]

On the community member's profile page (Jose Ortega), all I can see is his age (college sophomore). I forget why I became friends/added him to my community members list in the first place. It would be nice to have the organizations he was involved in and his interests listed on his profile page as well. What does it mean to add someone to your network?

Solution: No longer a way to add friends or view community members as it is not a core focus of the application.



Before



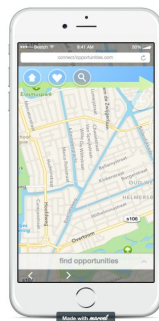
Does Not Exist

After

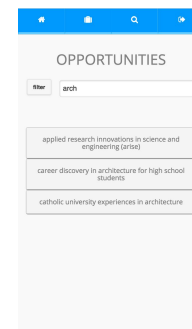
[H2-6 Recognition rather than Recall] [Severity 3] [Found by: B, C]

If the user wants to add a new opportunity, they have to remember to also touch the search bar to see the option to add a new opportunity. Since many users probably will add multiple opportunities in a spread out time, it may be confusing each time when adding a new one. One fix is to make the search bar visible at all times for searching opportunities for reviews and to have the plus sign be for adding opportunities.

Solution: Make one uniform way of finding an opportunity. From that page one can add a review.



Before



After

OTHER CHANGES: Changed interests icon from a heart to a briefcase for better representation of careers.

Prototype Implementation

Connect was built using Ruby on Rails, HTML, CSS, JQuery Mobile, and Javascript. JQuery Mobile and Ruby on Rails simplified the process of getting input from our users and the portability of our final product. JQuery Mobile assisted in building a site that looked good on both mobile and stationary devices. There was also plenty of documentation on JQuery Mobile, which was a huge plus along the way.

Although JQuery Mobile and Ruby on Rails were easy to use tools in isolation, they presented challenges when we tried to have them work together. Rails error messaging was sometimes blocked by JQuery Mobile, which ultimately made debugging a very difficult process. Debugging was also difficult at the beginning stages of our project because JQuery Mobile would not load on Chrome unless it was connected to a server. Finally, although JQuery Mobile provided our team with an easy to use framework, there was built in CSS that was difficult to navigate or understand unless you read through a lot of documentation on JQuery Mobile.

On our final product, we had a few areas where hard-coded data was implemented. When a user creates a new account, they are given the option to upload a profile picture. However, when they log in, each new account is hard coded with the same profile picture. When a user lands on their homepage, there is an updates section that is meant to have newly updated programs and any other announcements. This section was also hard-coded with “no new updates.” For the programs and professions portions of the project, our database was pre-populated with opportunities that we found through our own research. Finally, rather than checking the database for the due date of the program on the program’s page, we just hard-coded it to January 6th, 2016.

Since we hard-coded the updates feature on the homepage, that is a feature we would definitely want to finish moving forward. Additionally, when a user takes a

profession quiz or wants to view all the professions in the database, we want to also allow them to click on each profession and learn even more about it. We would also want to implement a feature where users can add opportunities into our database, as crowdsourcing that would both increase the community feeling of the app and greatly expand the variety of programs available for perusal.

Summary

Connect started as an idea to empower low-income and minority students. Through the needfinding we discovered that the main issues preventing these students from having attaining competitive careers are a lack of exposure to professions and a lack of exposure to opportunities. By ideating and listening to feedback from our users we created an app with the core functionality to take a professions quiz, find opportunities, and write reviews. Although Connect is a small solution to a multifaceted problem we believe that Connect can help make dreams accessible.