CSC 642 842 HCI Fall 2021
Phase 1: Initial Proposal

Project Name
Participaid

Slogan
Medical Companies don't hold the power over drug's future, you do!

Team 1
Denny Feng: dfeng1@mail.sfsu.edu
Mai Ra
Marco Marino

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1 - Executive Summary

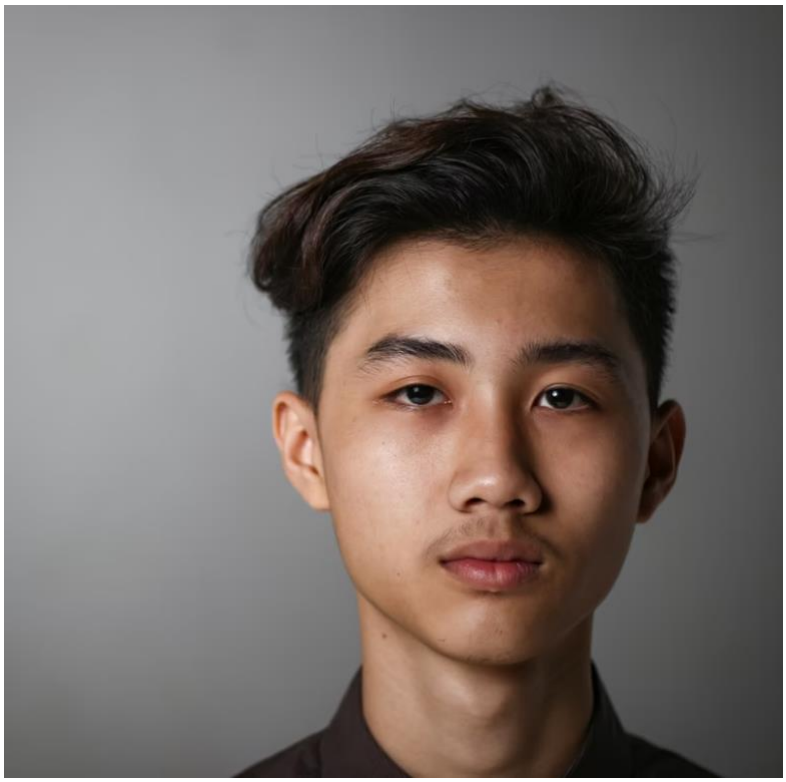
In order to successfully launch a new drug out to the market, medical companies must rely on human participants to perform clinical trials for each specific drug. The process to find participants for certain trials is very time-consuming, and as each day goes by without the ability to test these new drugs, the potential profit will decrease. The decrease in potential profit isn't the only problem medical companies have to face, but in fact, it's the approval from the FDA. The faster they find participants, potential profit will increase, and the higher chance to receive approval, if clinical trials are successful.

To help speed up the process, for the medical companies, in finding participants for their clinical trials, our team will create an application, allowing participants to be paid for testing different types of drugs. Participants have the ability to browse around and sign up for different medical trials if they pass all the specified requirements listed for those trials.

For medical companies, they have the ability to upload various drug trials allowing them to find the right participants, once they fit the requirements of the trial. Each trial contains different procedures, so, therefore, medical companies can also upload images or videos to help give their participants a quick preview before they actually sign up for the trial.

2 - Personas

Student Persona



Tim

- Full-time Biology student
- Has almost used up all his funding for college
- Paying for tuition out of his own pocket
- Due to his school schedule, Tim cannot work a regular job

Goals

- Must graduate this semester before all his school funding run out

- Wants to make some side income without having to work a regular job, so he can focus more on school.

Qualifications

- Technology - **5/5**
- Medical - **5/5**

Limitation

- Allergic to some drugs

Pain Points

Due to being allergic to some of the drugs, Tim hopes there's a way to check if he will be allergic to the clinical drugs before proceeding forward with the trial.

Medical Professional Persona

Allison

- Works for a pharmaceutical company
- Has a low tolerance for anything that makes her job more difficult than it needs to be
- Has a very busy job with

Goals

- Needs to schedule trials easily
- Needs to schedule a wide variety of trials

Qualifications

Technology - **3 / 5**

Medical - **5 / 5**

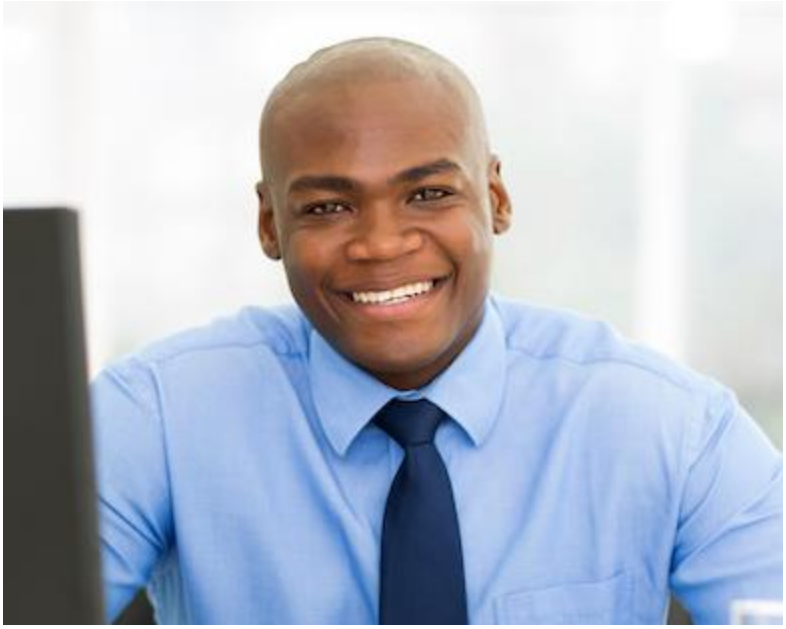
Limitation

- Allison has little patience for any kind of technology that is inconvenient to use

Pain Points

- Allison is under strict legal requirements to provide all the correct information for the dozens of tests she schedules each week.

Office worker persona



Grant

- Has a regular 9-5 job
- Has had regular back and joint pain for years
- Over the counter, remedies have stopped working for him

Goals

- Seeks a cure or remedy that will help alleviate his discomfort
- Does not want testing to interrupt his work schedule

Qualifications

Technology - **3 / 5**

Medical - **1 / 5**

Limitation

- Does not understand much medical jargon and will become easily frustrated

Pain Points

- Grant is unable to participate in as many trials as he would like to because of his work schedule

3 - High-Level Use Cases

Student Use Case

Tim is a full-time Biology major student and is very fluent in technology. He heard from his peers that a recent application has been launched and can help pay for his last semester, college tuition. Tim noticed on the front page of the website, a section listing the payouts for each of the trials. After seeing the payouts, Tim now proceeds forward to search and read the descriptions of each trial, hoping to see if he can find one that performs certain allergy tests before applying. If trials fail to list the requirement to test their participants for allergic reactions before being accepted, Tim would continue to search for one that does. Once one has been found, he now must sign up for an appointment to perform an allergic test for the drug that will be used in the trial. Once his allergic test comes back as a "negative", he is now ready to apply for any of those drugs trials and get paid out.

Medical Professional Use Case

Allison is working at a pharmaceutical company. When she was working, she saw a lot of medical trials that were complicated medical usage and technical terms that made it difficult for applicants to participate. She wants the page to be easy to understand and accessible to a wide variety of participants. She understands most of the medical terms, but she is uncomfortable with any kind of technology that is complicated to use. And because she was working in the industry Allison is under strict legal requirements to provide all the correct information for the dozens of tests she schedules each week. She also has very little time to participate. But if found that is an easy step to participate in, she is ready for that.

Office worker Use Case

Grant is a 9-5 office worker. He has had back pain for years but over-the-counter medicine stopped working for him. He was looking for the medicine and trial that worked for him all over online but most of the trial procedures conflicted with his work time frame. And he saw on the website some of the trails that he can participate in without conflict with his work. But he is not very familiar with medical terms, which frustrated him. So he is looking for a page that describes the medical term simply to understand non-medical professionals. If he found a webpage that does not conflict with the work schedule and simple term usage page he is ready to participate.

4 - Major Functions Envisioned

1) **Modals**

   We will be using modals to build our necessary forms, video/images for our trials

2) **Forms**

   We will create numerous forms, including registration, sign-in, upload, questionnaires for users, etc.

3) **Cards**

   For most of our UI, we will be implementing cards to show users the payout, modal links to video/images, and the descriptions for different trials

4) **Search Functionality**

   The search functionality will be implemented to search for trails input by users

5) **Calendar**

   The calendar UI will be used as a date picker to set up necessary appointments

6) **Dropdown Functionality**

   The drop-down search functionality allows users to see what types of trials are available to them

5 - Competitive landscape

1) Clinicaltrials.gov

When a user proceeds to clinical trials websites, they will first prompt the user to “Find a study”, allowing users to search for the desired trials. However, the implementation of this functionality is not user-friendly. Instead of doing it this way, we will have a navbar with search functionality, and also a drop-down functionality. The drop-down functionality allows users to see what types of trials are available to them. The search functionality will filter out their desired results and show results on a new page. This allows the user to search for their desired trials much faster than the clinical trials websites. Also, instead of first prompting the user to search for trials before displaying these trials to their user, we will first show different trials to the users on our homepage.

2) clinicaltrials.ucsd

Again, when a user proceeds to these clinical trials websites, they will first prompt the user to search for a trial and showing them their search results. Clicking on one of the results will display full-width cards per row for each of the trials, showing the detail of the trials, location, and eligibility. Now, regardless of screen sizes, their cards will stay full width per row. Also, when the user clicks on one of the cards, it will bring the user to a new page, show them the necessary information for that trial. What we are trying to accomplish on big screens is to show multiple cards in a row that contains images, location, and also a description of the trail, etc. However, on a smaller screen, we will also show one card per row. When users click on our cards, it will pop open a modal, which shows them the most important information about the trials and have a button that allows them to read more about the trials, if needed.

6 - Tools and Frameworks

Tools

For our mockup and designing phase, we will be using **Figma**. We will first create a simple wireframe to envision what our application will be. After wireframing, we will use the wireframe and incorporate use cases to create our application storyboards.

Frameworks

For our front-end development, we will be using **React.js**, and **React Bootstrap**. The reason why we decided to use React.js is the ability to create reusable components. Also, React.js uses JSX, which allows us to combine and write JavaScript and HTML in a single file. Thus, giving our team a faster development process compared to other frameworks. Using React Bootstrap instead of Bootstrap 4/5, allows us to implement the same component with shorter syntax. Thus, our code will be much cleaner and easier to maintain. Also, instead of declaring CSS variables for each HTML element, we can simply declare the variables as their own HTML elements.