Project Contract

* **Overall Goals and Feature Scope**. The product we are building is an application that allows users to record their doctor’s visits and obtain a summary of the visit. We are primarily focusing on first enabling our app for Oncology visits. Our MVP will be an application that allows users to add visits and record them, and then they will see a template of a visit journal. This visit journal will not be auto populated for the MVP as this requires a high quality voice recognition algorithm and machine learning algorithm. We will instead store the recording or its transcription in a database. This information can be used by patients as a reference after the visit to better understand their condition and the recommendations made by their physician.
* **Design Goals**. The design goals of this project are to create a full-stack mobile application using the React Native framework. The core features of the app are a robust frontend with multiple pages that connect to one another based on user action. The specific pages our app will have are: login page, landing page, record appointment, record appointment, patient report card/journal, FAQs → different for each type of diagnosis, past patient report cards and my profile. We will also create a relational database using SQL that will store the necessary information, such as user profile and information, appointment transcriptions, FAQs, and patient profiles. We will also build APIs using a JavaScript framework like Express or a Python framework like Flask. These will connect the frontend to the information stored in this database, and need to support functionality to create, read, update, and delete information within the database.

Our app will also be flexible enough to support integration with a machine learning algorithm that can process the appointment transcriptions or audio files and deliver a concise summary of key information. This flexibility will be achieved by creating static React Native pages that show how this information will be displayed to the user in a report card, as well as by creating sample database schemas in SQL that could store the information produced by this algorithm.

* **Dependencies**.

We are planning to discuss the UI design of the application in our next client meeting, which will determine how we will start planning the layout of our app components. Furthermore, we will have to see how extensive the current voice recognition frameworks for ReactNative are in order to see if we can continue developing for both iOS and Android or limit it to just one. We would also like to get assistance from a medical professional in order to check the accuracy of our recording transcription to make sure that users are getting all necessary information from their client visits.

We will also likely use a CSS framework to bootstrap our project in React Native to have consistent styles and color schemes. We will rely on this CSS framework in order to meet our design goals for the frontend.

* **Concerns**.
* The ReactNative voice recognition library is not well documented and makes it harder to create the transcriptions and create accurate transcriptions.
* The recordings should be very accurate and might be dependent on how close the patients are to the doctors. This would pose a large challenge because if the recording is of low quality we would still have to process the recording into the transcription.
* Privacy and security concerns regarding recording clinical visits and accidentally leaking personal medical information or the transcriptions of the physician. This would violate HIPAA and therefore put patient and physician privacy at risk.
* **Team Organization**.
* Kiori Tanaka: Quality Assurance, Back end (understudy for Siyi)
* Matt Rose: Tech Lead, Front end (understudy for Melissa)
* Siyi Xu: Project Manager, Back end (understudy for Kiori)
* Melissa Leal: Business Analyst, Front end (understudy for Matt)