User Manual for Shannon Apps

Database Information

Collection 1: Patients

BOlow (number)

HRhigh (number)

HRlow (number)

address (string)

cell (string)

email (string)

firstName (string)

lastName (string)

p_ID (string)

Sub-Collection 1: HeartData

HeartRate (number)

TimeStamp (timestamp)

Sub-Collection 2: OxygenData

BloodOxygen (number)

TimeStamp (string)

Collection 2: ProviderInfo

Name (string)

email (string)

userID (string)

Collection 3: Notifications

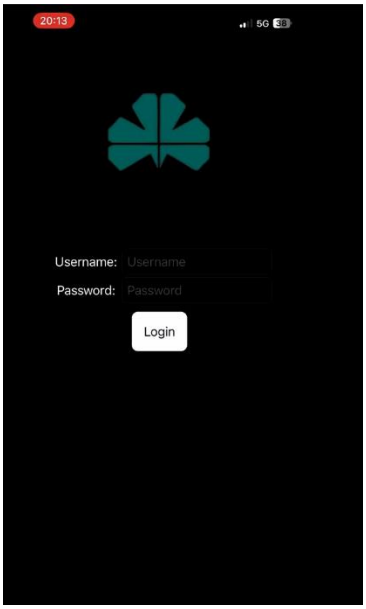
Message (string)

TimeStamp (timestamp)

p_ID (string

Mobile App Usage

Here users with Firebase Authentication accounts and matching emails in the Patients collection may log in to access the app. There is no create account option because ideally users would already have MyChart accounts which we would be used here in a real situation.

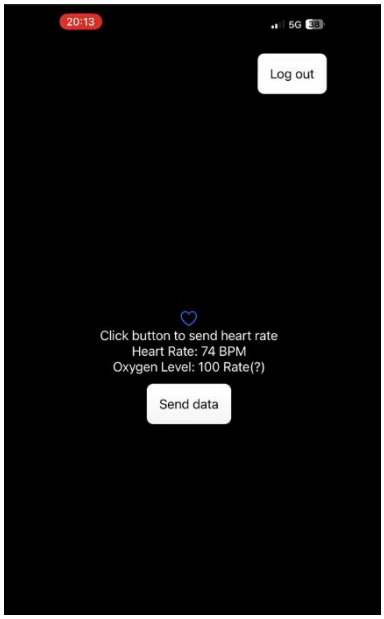


Once logged in, this page will display. Heart Rate may take some time to update. Make sure the Apple Watch is on and connected to the iPhone, and that is is reading your heart rate. Due to limitations with how often the watch reports and reads into HealthKit, heart rate takes a much longer to update on the app.

If a recent blood oxygen reading has not been done, do one on the watch, the result should update within 30 seconds.

The send data button will push the currently displayed Heart Rate and Oxygen Level to the database with a timestamp of when the button was pressed. Ideally the app would push these on a timer in the background, but Apple has restrictions against 3rd party apps trying to obtain certain health data in the background.

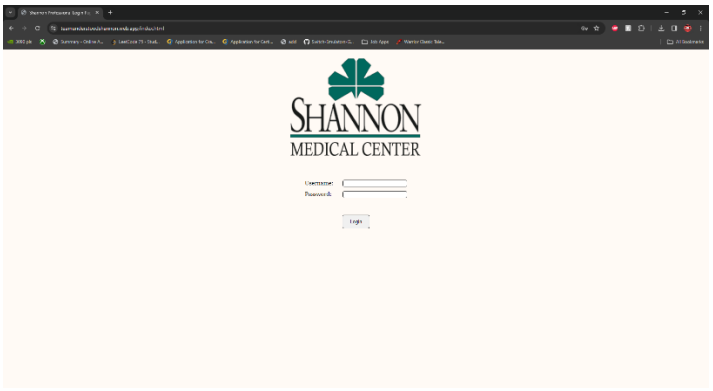
The Log out button may be used to log the user out and return them to the log in screen.



Website Usage

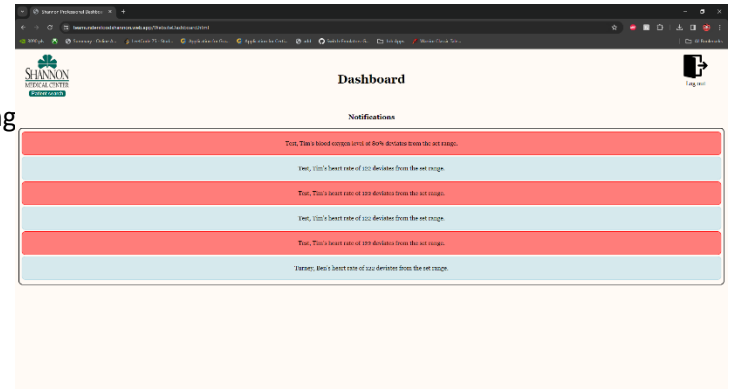
Login

This page is used to login to the Shannon Website. Email and passwords will have been created in Firebase Authentication, and must have matching emails in the ProviderInfo collection. There is no create account so that only Shannon accounts are securely created through Firebase.



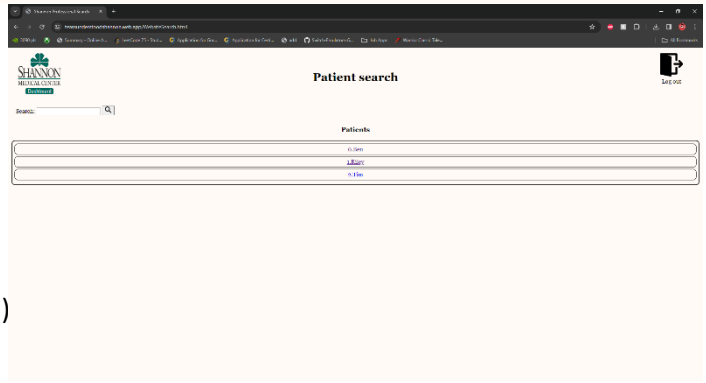
Dashboard

This page is used to navigate to different areas of the site, and displays immediate notifications (newest first). Clicking notifications removes them from the list and directs the user to the patient page of the user whose app sent a notification. The patient search button directs the user to a search page (next part). The Log out button will log the user out and return them to the log in screen.

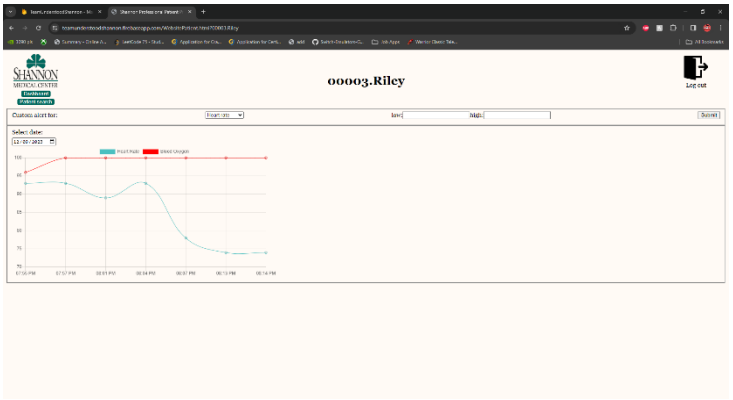


Patient Search

This page is used to search for patients (based on name). The page will display the entire list of patients from the Patients collection in the database. Clicking any patient directs the user to the patient page of the clicked patient. Using the search bar, you can type the name of a patient and click search find a specific patient. The dashboard button will return the user to the dashboard (previous page) The Log out button will log the user out and return them to the log in screen.



Patient Data



Here the patient data may be viewed. In this example Riley's data is being displayed (he has a watch with blood oxygen capabilities). The heart rate/blood oxygen selector is used to select which limit the user wants to update. Entering numbers in the text fields and clicking submit will update the limits on for the patient on their document in the database. These limits are used as checks for when patients send info from the IOS app. If any of the data exceeds the limits, a notification is sent to the database to be viewed on the dashboard. Below this we have the graph. By default, the graph will display data for the current day, but can be changed to any date using the date selector above the graph. The user may interact with the graph by hovering over data points to view the exact number and timestamp of specific data. The red line is for blood oxygen and the blue line is for heart rate. At the top of the graph, the user may click on the red or blue color next to the options listed "Heart Rate" or "Blood Oxygen" to toggle the graphing of specific data. The dashboard button returns the user to the dashboard page. The patient search button returns the user to the search bage (previous). The log out button may be used to log the user out and return them to the log in screen.