

## **1. Functionality testing**

- 1.1. Audio Recording
  - 1.1.1. The user shall be able to record and playback cough audio samples.
  - 1.1.2. Ensure playback quality is consistent with recorded audio
- 1.2. Data io
  - 1.2.1. Verify proper handling of audio files and user information for saving, retrieving, and submitting
- 1.3. Test cases
  - 1.3.1. Test with a variety of audio qualities and user data

## **2. Usability testing**

- 2.1. Ensure core functions (recording, playback, submission) are intuitive for users
- 2.2. Navigation and content
  - 2.2.1. Test ease of navigation between the home page, sign-in process, audio recording, and accessing health history
- 2.3. Test participants
  - 2.3.1. Include participants from various demographics and device types
- 2.4. Analyze results
  - 2.4.1. Gather and review feedback on user interactions

## **3. Interface testing**

- 3.1. Frontend and backend interaction
  - 3.1.1. Ensure proper data flow between web interface and the server, specifically for saving and retrieving user data.
- 3.2. ML placeholder
  - 3.2.1. Prepare the backend to deliver audio files and display results

## **4. Compatibility testing**

- 4.1. Browser
  - 4.1.1. Ensure functionality on all major browsers
- 4.2. OS
  - 4.2.1. Ensure functionality on all major OS platforms
- 4.3. Mobile
  - 4.3.1. Ensure functionality on smartphones and tablets

## **5. Performance Testing**

- 5.1. Stress testing
  - 5.1.1. Test multiple users accessing the system simultaneously for any bottlenecks.
- 5.2. Server response
  - 5.2.1. Ensure web interactions occur within an acceptable timeframe
- 5.3. Load testing
  - 5.3.1. Ensure web app can handle a larger volume of users

## **6. Security Testing**

- 6.1. User authentication
  - 6.1.1. Ensure secure account creation, login, and logout.
- 6.2. Unauthorized access
  - 6.2.1. Ensure unauthorized users cant access user-specific data

6.3. Session management

6.3.1. Ensure open sessions are closed after a period of inactivity.

6.4. Ensure open sessions are closed

6.5. Verify SSL

6.5.1. Ensure communications are SSL/TLS encrypted