**USABILITY**

The web application must be innovative/intuitive, allowing non-technical health workers to upload chest x-rays, review diagnosis, and manage patient records efficiently. The UI needs to be simple, containing large buttons, clear font, and labels. To ensure readability and to help visually impaired users, the contrast of colors should be high. The button menus and other interactive elements should be placed logically at expected locations, this helps reduce human error through input validation and provides instant feedback to the user in the form of notifications or messages for each action taken. The application is to work smoothly on desktops, tablets, and smartphones without any limitations. The layout ought to be compatible with different screens, making it easy to use on any device. Search and filter options should be included so that patient information, diagnosis, history, and treatment suggestions could be identified without hassle. A consistent design across all pages will eliminate the need for relearning navigation. To assist new users there should be user training materials in the form of in-app tutorials, tooltips, and a help center. If the UI is good enough to reduce the learning curve, the healthcare workers should be able to use it easily from the start. Users should be able to access frequently used features, so for that a customizable dashboard needs to be available for quick access. Keyboard shortcuts and voice command options should also be included. Additionally, to improve usability and user experience, usability testing should be done regularly and should incorporate the feedback of actual users. It is important to perform usability testing frequently in order to identify problems and improve the overall performance of the system.

**ACCESSIBILITY**

The system should be globally accessible to ensure usability for people of all abilities, incorporating those with physical, visual, auditory, or cognitive impairments. It must comply with WCAG 2.1 standards, including features like keyboard navigation, alternative text for images, and high contrast visuals. Text-to-speech functionality should also be provided to make applications friendly to visually impaired. Maintaining a user-friendly layout is crucial so that people with cognitive impairments won't be overwhelmed. Buttons, labels, messages must be written in plain, simple language to ensure that all the users understand how the system works. The system should include customizable accessibility settings like adjusting font size, changing color contrast, and zooming on screen to make it even more user-friendly. Multilingual support is essential to ensure usability from different parts of the world. A translation mechanism ought to be included, which allows users to switch from one language to another without affecting system performance. To make navigation easier for non-native speakers, multilingual error message tooltips and help guides need to be implemented, this will ensure that the application can be used anywhere in the world and that the patients and healthcare workers can use it regardless of their language proficiency. The application needs to work with older browsers and low-end devices so that healthcare workers working in environments with limited resources can also use it. It must keep its essential features or core functionalities even on devices with poor processing power, slow internet connections, and little RAM. To make it possible for users to interact with applications without experiencing lag even while using a 3G connection, loading time should also be minimized. To determine the system's performance in the real-world condition, accessibility-focused user testing should also be done. People with disabilities should also be included in the testing as it is going to help developers identify the issues that may go unnoticed, improving the system's overall performance.

**AVAILABILITY**

The system has to operate without failure for 99.5%, to be always available and have minimal service downtime. It should be developed with the ability to work offline in order to allow patient entry of data and upload X-rays without an internet connection, and the data should be updated upon regain of connection. The system has to be hosted on a secure cloud environment with backup controls to avoid data loss. Load balancing is recommended to help with high traffic without affecting performance. It is crucial to have failover measures in place for the continuity of the system in the event of a failure. Maintenance should be scheduled to cause least interruption at critical times. It should also have real time monitoring to help in identifying potential failures before they affect the users. Automated alerts should notify the administrators of any downtime risks so that they can take preventive measures. It may be necessary to have regional data centers to enhance access time for users in different regions.