**Heuristic Evaluation of “Digital Doctor for Pneumonia”**

**Evaluators**

* Maham Johnson
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1. **Problem:**

This prototype is a mobile application which allows user to detect pneumonia online. The application is very easy to use and is straightforward. The user can detect pneumonia by following simple steps.

1. **Violations found:**

**H2-9 Help Users recognize, diagnose and recover from errors [Sev 1]/ found by: Maham Johnson**

Previous data of user should be stored so he can just enter the new results, compare and check for improvements.

**H2-10 Help & Documentation: [Sev 1]/ found by: Maham Johnson**

The help button should be visible at the very start so that every new user can easily get to know about the application.

**H2-9 Help Users recognize, Diagnose and recover from errors: [Sev 1]/ found by: Maham Johnson**

User should be told that entering all data is compulsory and you cannot leave any field empty.

**H2-8 Aesthetic & Minimalist design: [sev 2]/ found by: Hamid Ali**

The background colour is not very effective. The colour of the text written in the buttons is as same as the background.

**H2-4 Consistency and Standards: [sev 3]/ found by: Hamid Ali**

The button for next page is as same as the fields so the user might get confused while using the application.

**H2-6 Recognition rather than recall: [sev 3]/ found by: Hamid Ali**

The colour of the text is as same as the background which makes it unreadable.

**H2-3 User Control and Freedom: [sev 4]/ found by: Hamid Ali**

User cannot exit right in the middle of the process. There should be a complete exiting method.

**H2-10 Help and Documentation [Sev 2] /Found by: Ali Aslam**

There are no explanations of what to do with those rbc count, wbc count on the blood report page. A brief description would give the user context. The app does not explain how they are helpful for blood report.

**H2-2 Match systems with real world [Sev 1] /Found by: Ali Aslam**

Not everyone in your audience might now what “pulse rate”, “cough” etc., is, I would call it something instead to match the other apps.

**H2-1: Visibility of Status [Sev 3] /Found by: Ali Aslam**

Going to the physical examination screen in it does not inform the user what the range is and what values to enter. To fix, include an indication or range of user’s entering value.

**H2-1 Visibility of system status [Sev 4] /Found by: Ali Aslam**

The only way for the user to track his or her progress over time is to complete a new activity. Otherwise, there is no way to get to this screen from the homepage without completing an activity. Having a save button of the activity and results will make user see the results afterwards.

**H2-4: Consistency & Standards [Severity 2] /Found by: Ali Aslam**

In the physical examination screen there are some of on off buttons and some are there where data is to be entered so this breaks the consistency. I will suggest to use same thing throughout.

1. **Summary of Violations**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Category** | [Sev 0] | [Sev 1] | [Sev 2] | [Sev 3] | [Sev 4] | Total |
| [H2-1: Visibility of Status] |  |  |  | 1 | 1 | 2 |
| [H2-2: Match Sys & World] | 1 |  |  |  |  | 1 |
| [H2-3: User Control] |  |  |  |  | 1 | 1 |
| [H2-4: Consistency] |  |  | 1 | 1 |  | 2 |
| [H2-5: Error Prevention] |  |  |  |  |  | 0 |
| [H2-6: Recognition not Recall] |  |  |  | 1 |  | 1 |
| [H2-7: Efficiency of Use] |  |  |  |  |  | 0 |
| [H2-8: Minimalist Design] |  |  | 1 |  |  | 1 |
| [H2-9: Help Users with Errors] |  | 2 |  |  |  | 2 |
| [H2-10: Documentation] | 1 | 1 |  |  |  | 2 |
| **Total** |  |  |  |  |  | 12 |

**4. Evaluation Statistics**

|  |  |  |  |
| --- | --- | --- | --- |
| **Severity** | Hamid Ali | Maham Johnson | Ali Aslam |
| Sev. 0 | N/A | N/A | N/A |
| Sev. 1 | 0% | 100% | 20% |
| Sev. 2 | 25% | 0% | 40% |
| Sev. 3 | 50% | 0% | 20% |
| Sev. 4 | 25% | 0% | 20% |
| **Sev. (3 & 4)** | 25% | 0% | 20% |
| **Total** | 20% | 16% | 20% |

**5. Summary Recommendations**

Overall, the Digital Doctor app provides a convenient way to detect Pneumonia by following simple steps. Suggestion for improvements mostly lie in visual design and user control. With respect to design, usability can be improved by making the back button clearer and less ambiguous with the header text on top. This visual fix can be applied to multiple screens and clarify the user experience. Regarding the colour of the font in the buttons, we recommend experimenting with other colour that can be more readable. We think this app would benefit if the previous state of the users in saved and it will allow user to track his/her health too. Lastly, make sure to guide your user through an on-boarding process when they are using the app for the first time and to explain to the user why they are doing certain tasks. Moreover, we believe this app needs to focus on using simpler terms so that user can understand it for example RBC maybe replaced with a simpler term. Providing help and error recovery methods can also be beneficial for the users of this app.

**Severity Ratings**

0 - don’t agree that this is a usability problem

1 - cosmetic problem

2 - minor usability problem

3 - major usability problem; important to fix

4 - usability catastrophe; imperative to fix

**Heuristics**

**[H2-1: Visibility of System Status]**

● keep users informed about what is going on

**[H2-2: Match Between System & Real World]**

● speak the users’ language

● follow real world conventions

**[H2-3: User Control & Freedom]**

● “exits” for mistaken choices, undo, redo

● don’t force down fixed paths

**[H2-4: Consistency & Standards]**

**[H2-5: Error Prevention]**

**[H2-6: Recognition Rather Than Recall]**

● make objects, actions, options, & directions visible or easily retrievable

**[H2-7: Flexibility & Efficiency of Use]**

● accelerators for experts (e.g., gestures, kb shortcuts)

● allow users to tailor frequent actions (e.g., macros)

**[H2-8: Aesthetic & Minimalist Design]**

● no irrelevant information in dialogues

**[H2-9: Help Users Recognize, Diagnose, & Recover from Errors]**

● error messages in plain language

● precisely indicate the problem

● constructively suggest a solution

**[H2-10: Help & Documentation]**

● easy to search

● focused on the user’s task

● list concrete steps to carry out

● not too large