**Survey Questionnaire for Mobile App Developers**

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This survey is designed to get feedback from mobile app developers on how they go about handling human-centric issues in eHealth apps’ development for more its more effective usages and fundamental future needs. The questionnaire is divided in two sections. The first section collects some demographic information of the participants. No identifying information is collected in this questionnaire. Then, the second section collects their views on human-centric issues in this domain.

**Section 1: Demographic Information**

1. Country of residence:
2. Age:
3. Gender:
4. Highest qualification:
5. Area of qualification:
6. Experience (in years) in mobile app development:
7. Current role in development team (tick all that apply):
   1. Project manager
   2. Business consultant/Marketing manager/Sales personnel
   3. Requirements analyst
   4. Software architect
   5. Programmer
   6. User interface or Graphical User interface designer/developer/engineer
   7. App animator or operations developer/engineer
   8. QA engineer
   9. Tester
   10. Other:

Please write here

1. Former roles in development teams (tick all that apply):
   1. Project manager
   2. Business consultant/Marketing manager/Sales personnel
   3. Requirements analyst
   4. Software architect
   5. User interface designer/developer/UX experience developer/engineer
   6. QA engineer
   7. Programmer
   8. Tester
   9. Operations
   10. Other:

Please write here

1. Do you ever work on an eHealth app development project?

**☐** Yes (go to next question i.e., question 10)

**☐** No (go to next section i.e., question 11)

1. What sub-domain of an eHealth app have you worked on (tick all that apply):
2. Telehealth and telemedicine
3. Health and Fitness tracking
4. Mental health
5. Mobile games to improve health issues
6. App based solution for a health issue
7. Electronic Health Records (EHR)
8. Electronic Medical Records (EMR)
9. Health IT systems
10. Consumer health IT data
11. Virtual healthcare
12. Mobile health decision making
13. Big data systems used in digital health
14. Other:

Please write here

**Section 2: Views on Human-centric Issues in eHealth Apps**

1. Which human-centric issues of eHealth app end-users have you had to consider during app development (tick all that apply)?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Issue** | **Always** | **Sometimes** | **Rarely** | **Never** |
| Elderly users e.g. > 60 years of age |  |  |  |  |
| Very young users e.g. < 16 years of age |  |  |  |  |
| Users with accessibility issues |  |  |  |  |
| Users with physical challenges |  |  |  |  |
| Users with mental health issues |  |  |  |  |
| Users with cognitive challenges |  |  |  |  |
| Users whose language proficiency may be low |  |  |  |  |
| Users uncomfortable with technology |  |  |  |  |
| Low socio-economic status users |  |  |  |  |
| Different gender, gender identity of users |  |  |  |  |
| Users with diverse cultural backgrounds |  |  |  |  |
| Other vulnerable users |  |  |  |  |
| Others |  |  |  |  |

* Others – please list and indicate how often need to consider:

Please write here

1. Which of these human-centric issues do you view as most critical for effective usages of eHealth app and consequently its development (tick all that apply)?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Issue** | **N/A** | **Critical** | **Important** | **Limited importance** |
| **App reliability:** Trustworthiness, correctness, data source, theory and practice. |  |  |  |  |
| **App accessibilities:** Text contrast, alternate text vs images, links, navigation, form, labels, table, time-outs, use of sitemap etc. |  |  |  |  |
| **App usability:** Taps, landscape mode, platforms, OS versions, resolution, auto-filled customer data, unresponsiveness (for gestures), content, navigation etc. |  |  |  |  |
| **App versatility:** Variety of health information or communication services at different levels in the user community domain. |  |  |  |  |
| **User versatility:** End-users age, physical challenges (for example adaptive interface for the visually impaired), Mental health issues, Cognitive challenges, Language and technology proficiency, Gender variability, Socio-economic status and Cultural backgrounds. |  |  |  |  |
| Other: |  |  |  |  |

* Others – please list and key reasons for this if any:

Please write here

1. Which issues do you find you have to spend the most time on to address (tick all that apply)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Issue** | **N/A** | **Critical** | **Important** | **Limited importance** |
| **App reliability:** Trustworthiness, correctness, data source, theory and practice. |  |  |  |  |
| **App accessibilities:** Text contrast, alternate text vs images, links, navigation, form, labels, table, time-outs, use of sitemap etc. |  |  |  |  |
| **App usability:** Taps, landscape mode, platforms, OS versions, resolution, auto-filled customer data, unresponsiveness (for gestures), content, navigation etc. |  |  |  |  |
| **App versatility:** Variety of health information or communication services at different levels in the user community domain. |  |  |  |  |
| **User versatility:** End-users age, physical challenges (for example adaptive interface for the visually impaired), Mental health issues, Cognitive challenges, Language and technology proficiency, Gender variability, Socio-economic status and Cultural backgrounds. |  |  |  |  |
| Other: |  |  |  |  |

* Others – please list and key reasons for this if any:

Please write here

1. Which human-centric issues do you find hardest to address at different phases of app development (Numeric values 1-easy to 5-very hard):

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Issue** | **N/A** | **Requirements - elicitation** | **Solution design** | **Implementation – coding in** | **Testing** | **Bug fixing** |
| **App reliability:** Trustworthiness, correctness, data source, theory and practice. |  |  |  |  |  |  |
| **App accessibilities:** Text contrast, alternate text vs images, links, navigation, form, labels, table, time-outs, use of sitemap etc. |  |  |  |  |  |  |
| **App usability:** Taps, landscape mode, platforms, OS versions, resolution, auto-filled customer data, unresponsiveness (for gestures), content, navigation etc. |  |  |  |  |  |  |
| **App versatility:** Variety of health information or communication services at different levels in the user community domain. |  |  |  |  |  |  |
| **User versatility:** End-users age, physical challenges (such as adaptive interface for the visually impaired), Mental health issues, Cognitive challenges, Language and technology proficiency, Gender variability, Socio-economic status and Cultural backgrounds. |  |  |  |  |  |  |
| Other: |  |  |  |  |  |  |

* Others – please list and key reasons for this if any:

Please write here

1. Specify the app development practices that you use for addressing human-centric issues in your app for its more effective usages and consequently its development.

Please write here, if no specific practise write N/A

1. Specify the development tool that you use for addressing human-centric issues in your app for its more effective usages and consequently development.

Please write here, if no specific practise write N/A

1. Do you have any ideas what would help you better to address challenging human-centric issues in eHealth app for its more effective usages and consequently its development?

Please write here

1. Any other comments for us about these issues, this survey?

Please write here

1. Might you be willing to be interviewed about some of your experiences in more detail by a member of our team? This will be removed from your survey responses.

**☐** Yes (please provide a contact name and email address in the following box)

**☐** No

Please write Name and Email address in this box if you answered yes for Question 19. This information will be removed from your survey responses.

1. Would you like to receive a report on our findings? This will be removed from your survey responses.

**☐** Yes (please provide a contact name and email address in the following box)

**☐** No

Please write Name and Email address in this box if you answered yes for Question 20. This information will be removed from your survey responses.