**User Experience and Tool Usability Questionnaire**

This questionnaire was designed to gather user feedback on the usability and effectiveness of the SOFL-ASMAT.

**Instructions**

Please answer the following questions based on your experience with the tool. For multiple-choice questions, please mark all applicable options. For Likert scale questions, rate your agreement with the statements on a scale from 1 to 5, where 1 =Strongly Disagree and 5 = Strongly Agree.

**Respondent Profile**

1. What is your highest level of education (please select the highest level, including those currently in progress)? [Single-choice item]

|  |  |  |
| --- | --- | --- |
| **Option** | **Subtotal** | **Proportion** |
| Associate’s degree | 4 | 19.05% |
| Bachelor’s degree | 5 | 23.81% |
| Master’s degree | 2 | 9.52% |
| Doctoral degree | 10 | 47.62% |
| Valid responses (n) | 21 |  |

2. What is your current occupation? [Single-choice item]

|  |  |  |
| --- | --- | --- |
| **Option** | **Subtotal** | **Proportion** |
| Student | 9 | 42.86% |
| Developer | 9 | 42.86% |
| Maintainer | 1 | 4.76% |
| SOFL Expert | 2 | 9.52% |
| Valid responses (n) | 21 |  |

3. How many years of experience do you have in software development? [Single-choice item]

|  |  |  |
| --- | --- | --- |
| **Option** | **Subtotal** | **Proportion** |
| No experience | 3 | 14.29% |
| 0-2 years | 12 | 57.14% |
| 2-5 years | 4 | 19.05% |
| More than 5 years | 2 | 9.52% |
| Valid responses (n) | 21 |  |

4. How familiar are you with SOFL formal specifications? [Single-choice item]

|  |  |  |
| --- | --- | --- |
| **Option** | **Subtotal** | **Proportion** |
| Beginner | 16 | 76.19% |
| Intermediate | 3 | 14.29% |
| Advanced | 2 | 9.52% |
| Valid responses (n) | 21 |  |

5. Have you previously used automated tools for software maintainability assessment? [Single-choice item]

|  |  |  |
| --- | --- | --- |
| **Option** | **Subtotal** | **Proportion** |
| Yes | 7 | 33.33% |
| No | 14 | 66.67% |
| Valid responses (n) | 21 |  |

6. Are you familiar with the ATM system used in this experiment [Likert-scale item]

Mean (1–5): 2.76

|  |  |  |
| --- | --- | --- |
| **Option** | **Subtotal** | **Proportion** |
| Very unfamiliar | 5 | 23.81% |
| Unfamiliar | 4 | 19.05% |
| Neutral | 5 | 23.81% |
| Familiar | 5 | 23.81% |
| Very familiar | 2 | 9.52% |
| Valid responses (n) | 21 |  |

**Tool Usability and User Experience**

7. Do you think it is easy to find the navigation bar in the interface and use the tool? [Likert-scale item]

Mean (1–5): 3.67

|  |  |  |
| --- | --- | --- |
| **Option** | **Subtotal** | **Proportion** |
| Strongly Disagree | 2 | 9.52% |
| Disagree | 0 | 0% |
| Neutral | 5 | 23.81% |
| Agree | 10 | 47.62% |
| Strongly Agree | 4 | 19.05% |
| Valid responses (n) | 21 |  |

8. Are you satisfied with the clarity and completeness of the instructions provided in the tool’s navigation menu? [Likert-scale item]

Mean (1–5): 3.9

|  |  |  |
| --- | --- | --- |
| **Option** | **Subtotal** | **Proportion** |
| Very Dissatisfied | 1 | 4.76% |
| Dissatisfied | 0 | 0% |
| Neutral | 3 | 14.29% |
| Satisfied | 13 | 61.9% |
| Very Satisfied | 4 | 19.05% |
| Valid responses (n) | 21 |  |

**Interface and Interaction**

9. Do you find the tool’s metric interface intuitive? [Likert-scale item]

Mean (1–5): 4

|  |  |  |
| --- | --- | --- |
| **Option** | **Subtotal** | **Proportion** |
| Strongly Disagree | 0 | 0% |
| Disagree | 0 | 0% |
| Neutral | 5 | 23.81% |
| Agree | 11 | 52.38% |
| Strongly Agree | 5 | 23.81% |
| Valid responses (n) | 21 |  |

10. Do you find the visualization of metric data helpful in assessing maintainability? [Likert-scale item]

Mean (1–5): 3.9

|  |  |  |
| --- | --- | --- |
| **Option** | **Subtotal** | **Proportion** |
| Strongly Disagree | 0 | 0% |
| Disagree | 0 | 0% |
| Neutral | 7 | 33.33% |
| Agree | 9 | 42.86% |
| Strongly Agree | 5 | 23.81% |
| Valid responses (n) | 21 |  |

**Efficiency**

11. How long does it take you to assess the maintainability of SOFL specifications (around 1000 lines)? [Single-choice item]

|  |  |  |
| --- | --- | --- |
| **Option** | **Subtotal** | **Proportion** |
| Less than 0.5 hours | 3 | 14.29% |
| 0.5-2 hours | 9 | 42.86% |
| 2-3 hours | 3 | 14.29% |
| More than 3 hours | 0 | 0% |
| Have not conducted a maintainability assessment | 6 | 28.57% |
| Valid responses (n) | 21 |  |

\*If you selected 5) Have not conducted maintainability assessment, please answer question 12.

12. Why have you not conducted a maintainability assessment? [Multiple-choice item]

|  |  |  |
| --- | --- | --- |
| **Option** | **Subtotal** | **Proportion** |
| Because maintainability is difficult to quantify | 3 | 50% |
| Because other software quality metrics, such as reliability, are more important | 3 | 50% |
| Because there are no related assessment tools | 0 | 0% |
| Because maintainability assessment is time-consuming and labor-intensive | 0 | 0% |
| Other (please specify) | 0 | 0% |
| Valid responses (n) | 6 |  |

13. Based on your experience, how would you rate the tool’s efficiency in assessing the maintainability of SOFL specifications? [Likert-scale item]

Mean (1–5): 4.05

|  |  |  |
| --- | --- | --- |
| **Option** | **Subtotal** | **Proportion** |
| Very Dissatisfied | 0 | 0% |
| Dissatisfied | 0 | 0% |
| Neutral | 6 | 28.57% |
| Satisfied | 8 | 38.1% |
| Very Satisfied | 7 | 33.33% |
| Valid responses (n) | 21 |  |

14. Do you think this tool has saved you time compared to manual evaluation? [Likert-scale item]

Mean (1–5): 3.95

|  |  |  |
| --- | --- | --- |
| **Option** | **Subtotal** | **Proportion** |
| Strongly Disagree | 0 | 0% |
| Disagree | 0 | 0% |
| Neutral | 7 | 33.33% |
| Agree | 8 | 38.1% |
| Strongly Agree | 6 | 28.57% |
| Valid responses (n) | 21 |  |

**Practicality**

15. Do you find the tool useful in assessing the maintainability of SOFL specifications? [Likert-scale item]

Mean (1–5): 3.95

|  |  |  |
| --- | --- | --- |
| **Option** | **Subtotal** | **Proportion** |
| Not Useful at All | 0 | 0% |
| Mostly Not Useful | 0 | 0% |
| Neutral | 7 | 33.33% |
| Useful | 8 | 38.1% |
| Very Useful | 6 | 28.57% |
| Valid responses (n) | 21 |  |

16. Would you recommend this tool to other developers or teams? [Likert-scale item]

Mean (1–5): 4

|  |  |  |
| --- | --- | --- |
| **Option** | **Subtotal** | **Proportion** |
| Definitely Not | 0 | 0% |
| Probably Not | 0 | 0% |
| Uncertain | 4 | 19.05% |
| Probably Yes | 13 | 61.9% |
| Definitely Yes | 4 | 19.05% |
| Valid responses (n) | 21 |  |

17. Overall, do you think the tool satisfies your needs? [Likert-scale item]

Mean (1–5): 4.1

|  |  |  |
| --- | --- | --- |
| **Option** | **Subtotal** | **Proportion** |
| Very Dissatisfied | 0 | 0% |
| Dissatisfied | 0 | 0% |
| Neutral | 4 | 19.05% |
| Satisfied | 11 | 52.38% |
| Very Satisfied | 6 | 28.57% |
| Valid responses (n) | 21 |  |

18. What do you think are the advantages and disadvantages of this tool [Open-ended]

No valid responses