A Large Scale Survey of Motivation in Software Development and Analysis of its Validity - Survey Questions

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1 Survey Questions

To facilitate the review, the full questionnaire used in the survey is reproduced herewith.

1.1 Survey introduction

Dear participant,

We are a team of researchers interested in improving software development (see for example https://www.cse.huji.ac.il/~feit/papers/Refactor19PROMISE.pdf).

If you contributed to a GitHub repository as a developer in the last 12 months, we ask for your help by answering questions about your contribution and motivation. Answering these questions is estimated to take 10–15 minutes of your time.

Based on the experience of respondents to this questionnaire in the past, you may gain new insights about your priorities in software development and areas of importance to you. Your answers, with the answers of others, will allow researchers in the future to investigate motivation, quality and productivity in software development and hopefully improve them.

We would appreciate a link to your GitHub profile in order to match your answers and GitHub activity (e.g., number of commits, years in the repository). We are aware that the profile is a personal identifier and we will keep it private and use it for research purposes only. The results of analysis of the profile data will be reported in aggregated form only. Of course, in case that you are not interested, you can leave the field empty.

If you are willing to participate in this study, move to the next page. By moving to the next page you agree to participate in this study. The only inconvenience that this study may cause you is the need to concentrate on the

questions for about 10-15 minutes. Yet, you may quit this survey at any time without answering all the questions, with no consequences for you. We will be grateful if you complete ALL the questions. No personally identifying information will be collected, except your GitHub profile if you choose to share it.

Thank you so much for your help.

Prof. Dror Feitelson, Prof. Avi Kluger, Ph.D. candidate Idan Amit

If you have any question you can contact Idan Amit at idan.amit@mail.huji.ac.il

1.2 Questions regarding yourself

The questions in this section are in Likert scale where 1 is 'Strongly disagree' and 11 is 'Strongly agree'.

1. Productivity is more important to me than quality

2. My motivation has more influence on my productivity, than my skill

3. I regularly reach a high level of productivity (based on [6])

4. I am a relatively productive programmer

5. I am skilled in software development (based on [5])

6. My code is of high quality

7. I am satisfied with my performance in software development [5]

8. I want my code to be beautiful

9. I enjoy software development very much

10. It is important for me to program well (based on [5])

11. I write tests for my code

12. I write detailed commit messages

13. I contribute to open source in order to have an online portfolio

14. I try to write high quality code because others will see it

15. I enjoy trying to solve complex problems [1]

16. I contribute to open source in order to become a better programmer

17. I improved as a programmer since a year ago

18. I contribute to open source due to ideology

1.3   Questions regarding activity in a repository

Please choose *one specific* GitHub repository that you work on. Answer the following questions with respect to this repository. (These questions

- What is the link of the GitHub repository that you answer on? (Free ext)

- How many hours a week do you work on the repository (average)? (Free text)

- I'm being paid for my work in this repository (Yes/No)

The questions in this section are in Likert scale where 1 is 'Strongly disagree' and 11 is 'Strongly agree'.

1. I regularly have a high level of motivation to contribute to the repository (based on [6])

2. I have complete autonomy in contributing to the repository

3. I have significant influence on the repository

4. I feel responsible for the repository's success

5. I'm interested in the repository for my own needs

6. We have many heated arguments in the community. If you are the only developer in the project, please skip.

7. I wish that certain developers in the project will leave. If you are the only developer in the project, please skip.

8. My work on the repository is creative

9. Working on this repository is challenging

10. I derive satisfaction from working on this repository

11. The repository is important

12. When I look at what we accomplish, I feel a sense of pride.

13. Belonging to the community is motivating my work on the project. If you are the only developer in the project, please skip.

14. The community is very professional. If you are the only developer in the project, please skip.

15. I get recognition due to my contribution to the repository

16. I am a core member of the repository

17. I learn from my contributions

18. The quality of the code in this repository is better than others

19. Code quality in the repository improved since a year ago

20. The project's community of developers is more motivated than that of other projects. If you are the only developer in the project, please skip.

21. My personal motivation in this repository has increased since a year ago

22. In the past year, members of my project community put me down or were condescending to me. If you are the only developer in the project, please skip. (based on [2])

23. In the past year, members of my GitHub community made demeaning or derogatory remarks about me. If you are the only developer in the project, please skip. (based on [2])

24. In the past year, members of my project community asked questions that show their understanding of my contributions. If you are the only developer in the project, please skip. (based on [4])

25. In the past year, members of my project community expressed interest in my contributions. If you are the only developer in the project, please skip. (based on [4])

1.4   Job Satisfaction

The following questions are from Job Satisfaction Scale questionnaire [3]. We present the questionnaire as is in order to compare to previous results. In case that you find some questions irrelevant, please skip them.

The questions in this section are in Likert scale where 1 is 'Extremely dissatisfied' and 7 is 'Extremely satisfied', as in the original survey [3].

The questions indicate level of satisfaction with the following:

1. Freedom to choose your own method of working

2. Amount of variety in your work

3. Physical working conditions

4. Opportunities to use your abilities

5. Your colleagues and fellow workers

6. Recognition you get for good work

7. Your hours of work

8. Your remuneration (payment)

9. Amount of responsibility you are given

10. Taking everything into consideration, how do you feel about your work?

1.5 Demography

1. Country (Free text)

2. Age (0-100 selection)

3. Gender (Free text)

4. I work as a professional programmer (Yes/No)

5. Years of work experience (not including studies) (Free text)

6. Years of contribution to GitHub(0-15 selection)

7. Academic background (degree and graduation year) (Free text)

8. Git profile link (Free text) We would appreciate a link to your GitHub profile in order to match your answers and GitHub activity (e.g., number of commits, years in the repository). We are aware that the profile is a personal identifier and we will keep it private and use it for research purposes only. The results of analysis of the profile data will be reported in aggregated form only. Of course, in case that you are not interested, you can leave the field empty.

1.6 Open questions

1. Do you have any comments on the questionnaire or research? Are you motivated due to a cause that we didn't consider? Do you have a method that increases your code quality? (Free text)

2. Thank you for answering our survey. If you would like to be informed in the results of the research or to participate in the gift card lottery, please enter your email and we will send it to you once completed. The email will not be used for profile identification. (Free text)

References

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