Appendix D

Context and Tasks Using CoopFinder

Context: You are part of the core team of a project hosted on GitHub. You know the demands of the project and the importance of collaborations made by volunteer contributors with different motivations to collaborate. For example, some prefer to work collaboratively to increase the quality of the project, while others contribute to the project out of personal interests. In addition, the project attracts several potential volunteer collaborators. However, due to the large number of them, it is difficult to interact or follow the collaboration of all, running the risk of demotivating them and, consequently, leaving the project. Therefore, you consider and understand the importance that contributors should approach and interact more with each other in this development environment. You are also aware that some contributors may have difficulty expressing their opinions publicly in this environment. On the other hand, they may feel more secure when interacting with other specific contributors, especially those with the same interests or familiarity with certain parts of the project. They may be already known contributors and those who have some reference or recommendation. **Note**: The following tasks must be performed exclusively using the CoopFinder tool. If you feel it necessary when performing the task and answering the question, report any information to understand the reason for your answers.

Table D.1. Context and Tasks Using CoopFinder — Part 1.

ID	Task description
Task 1	You are part of the core team of 4 GitHub projects. You are using the CoopFinder tool to analyze these projects. Thus, using the tool, order the projects based on the creation date, and answer: Which project is the most recent? Answer: _____ This task was... [Very Difficult— hard — Easy — Very easy]
Task 2	Choose the <project name> project to review the contributors. As part of the core team of the <project name> project, you want to know about the contributors contributing to the project. Thus, you have sorted the list of contributors by the number of commits updated in the project (merged commits). Thus, you have noticed that a given contributor has 50 updated commits and 24 non-merged commits in the main project. What is the name of this contributor? Answer: _____ This task was... [Very Difficult— hard — Easy — Very easy]
Task 3	Now you have realized that some contributors contribute to the project. However, they do not constantly update all of their contributions to the main project for some reason. Thus, you realize the risk of losing those contributors who put some effort and time into the project. Thus, now you want to know who they are. Thus, you can sort the contributors by the number of commits not yet updated (non-merged commits) in the project and answer. Which contributor has the most commits not yet updated in the main project? Answer: _____ This task was... [Very Difficult— hard — Easy — Very easy]
Task 4	You have a high–priority open issue and would like to form a dedicated team to solve it. You are analyzing the list of contributors based on the number of commits. You think that the contributor <collaborator name> could be what you are looking for. Thus, <collaborator name> has 13 commits updated in the main project and 33 not, and his last commit was in Mar/21. Concerned about the lack of engagement in the project, you want to find other contributors who have similar interests as a contributor <collaborator name>. The CoopFinder tool can help you find them. How many other contributors did the CoopFinder tool recommend to work with <collaborator name>? Answer: _____ This task was... [Very Difficult— hard — Easy — Very easy]

Table D.2. Context and Tasks Using CoopFinder — Part 2.

Task 5	Comparing the contributions of <collaborator name> and <recommended collaborator name>, which files are relevant and common to them?
	Answer: _____
	This task was... [Very Difficult— hard — Easy — Very easy]
Task 6	Based on the "Changed LoC" strategy (changed lines of code), which different contributors were recommended to work with <collaborator name>?
	Answer: _____
	This task was... [Very Difficult— hard — Easy — Very easy]
Task 7	Still based on the "Changed LoC" strategy, what is the expertise related to the programming languages of the recommended contributor <recommended collaborator name>?
	Answer: _____
	This task was... [Very Difficult— hard — Easy — Very easy]