

Supplementary Material for Collaborative Graph Repair Under Denial Constraints

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PVLDB Artifact Availability:

The source code, data, and/or other artifacts have been made available at <https://github.com/pake97/CGR>.

1 QUALITY COMPARISON OF THE ASSIGNMENT ALGORITHMS

To complete our investigations on the assignment algorithm, we compared the different ranking functions in terms of the F1 measure. Figure 1 shows the results with safe repairs while Figure 2 shows the results with unsafe repairs. After performing a Kruskal-Wallis H test, we did not find a significant difference in the results, suggesting that the the quality of the result does not depend on assignment algorithms based on the topology of the graph. The code for the Kruskal-Wallis H test is available in our online repository¹.

2 SURVEY FOR THE USER STUDY

Before testing our approach with real users, we submitted a form to collect useful information regarding our court to better analyze the results of the experiments. The questions with their relative answers were:

- What is your age range?

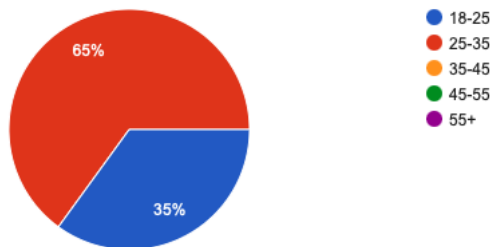


Figure 3: Pie chart for the age ranges

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¹<https://github.com/pake97/CGR>

- How would you rate your knowledge about Databases?

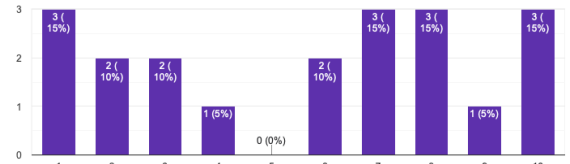


Figure 4: Histogram for the 10-level Likert scale: 10 means expert.

- How would you rate your knowledge about Database constraints?

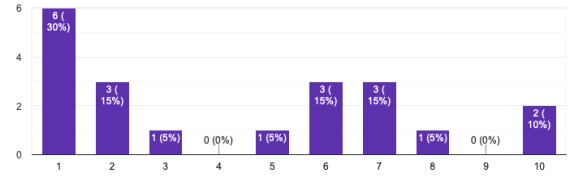


Figure 5: Histogram for the 10-level Likert scale: 10 means expert.

- How would you rate your knowledge about Graphs?

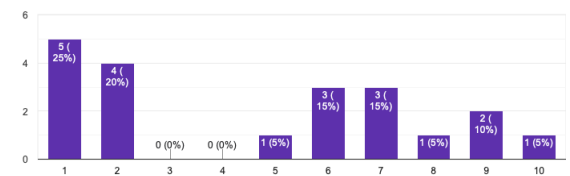


Figure 6: Histogram for the 10-level Likert scale: 10 means expert.

- How would you rate your the Star Wars universe?

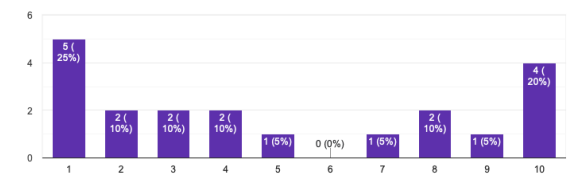


Figure 7: Histogram for the 10-level Likert scale: 10 means expert.

- Which of the following Star Wars movies have you seen?

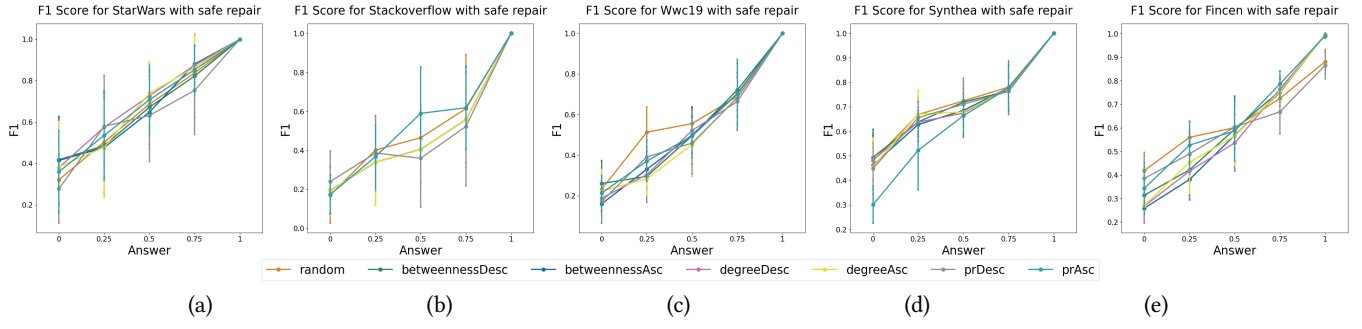


Figure 1: Average F1-measure of the different assignment algorithms in relation with the probability of the users to pick the correct repair. The error bars correspond to the standard deviation.

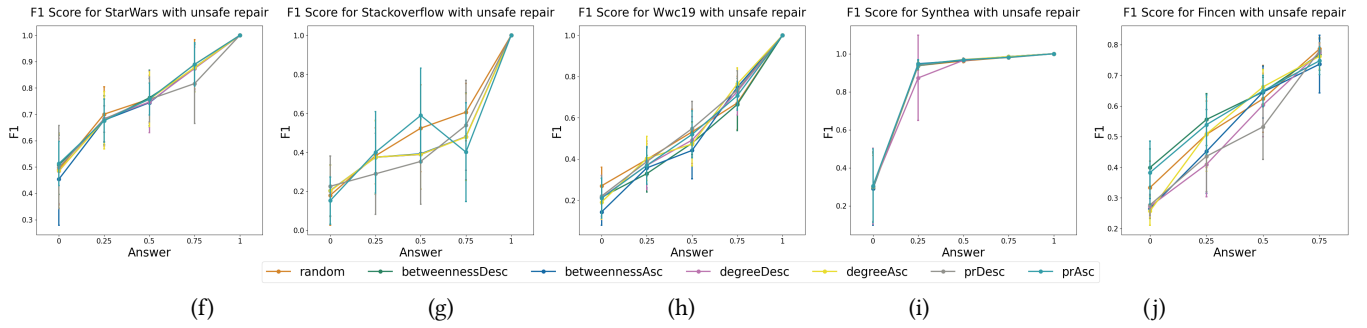


Figure 2: Average F1-measure of the different assignment algorithms in relation with the probability of the users to pick the correct repair. The error bars correspond to the standard deviation.

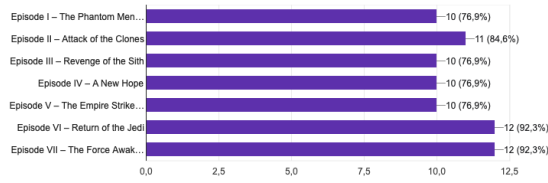


Figure 8: Barplot for the movies count.