



Reza Fauzan <reza.fauzan@poliban.ac.id>

[csci] Submission Acknowledgement

1 pesan

Computer Science Journal <csci@agh.edu.pl>
Kepada: Reza Fauzan <reza.fauzan@poliban.ac.id>

20 Juni 2020 18.56

Reza Fauzan:

Thank you for submitting the manuscript, "A Novel Approach in Automated Behavioral Diagram Assessment using Label Similarity and Subgraph Edit Distance" to Computer Science. With the online journal management system that we are using, you will be able to track its progress through the editorial process by logging in to the journal web site:

Manuscript URL: <https://journals.agh.edu.pl/csci/author/submission/3868>

Username: rezafauzan

If you have any questions, please contact me. Thank you for considering this journal as a venue for your work.

Computer Science Journal
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Reza Fauzan <reza.fauzan@poliban.ac.id>

[csci] Editor Decision on your paper submitted to CSCI

1 pesan

Roman Dębski <rdebski@agh.edu.pl>

23 Oktober 2020 23.15

Kepada: Reza Fauzan <reza.fauzan@poliban.ac.id>

Cc: Reza Fauzan <reza.18051@mhs.its.ac.id>, Daniel Oranova Siahaan <daniel@its.ac.id>, Siti Rochimah <siti@if.its.ac.id>, Evi Triandini <evi@stikom-bali.ac.id>

Dear Reza Fauzan,

We have reached a decision regarding your submission to Computer Science, "A Novel Approach in Automated Behavioral Diagram Assessment using Label Similarity and Subgraph Edit Distance".

Our decision is to: resubmit the paper.

For your guidance, reviewers' comments are in the attached document.

If you decide to revise the work, please submit a list of changes or a rebuttal against each point which is being raised when you submit the revised manuscript.

Thank you for submitting your work to our Journal.

Kind regards

Roman Dębski
rdebski@agh.edu.pl

Reviewer A:

The paper is interesting and well written - the goals and the main approach of the paper are presented clearly. The problem of UML diagrams similarity is adequately presented and it provides a sufficient introduction to the subject. However, the discussion of results should be extended as you do not address a few relevant issues.

Figure 5 shows that (almost) the same results are achieved for α coefficient equal to 0.8 and 1. This means that introducing a semantic analysis does not improve the assessments (or improves it slightly). This fact raises the question if the semantic analysis improves the assessment process at all?

I strongly recommend to explain this fact and answer the above question, as you also wrote that the main novelty of the paper is "an approach that combines semantic and structural assessment to assess the similarity between two behavioral diagrams." Without a convincing explanation, it looks like the semantic analysis does not improve the results and therefore the novelty of the paper is disputable.

I guess that the lack of improvement with the semantic analysis could be caused by the fact that in proper sequence diagrams teachers look rather more at communication schema between objects than the naming schema. From my standpoint, adding to the semantic assessment an additional step, in which you utilize synonyms to compare particular names used for naming classes, objects, methods, or attributes, could improve this part of the assessment. I guess, for teachers, there is no matter how these elements are exactly called, but the overall meaning is important.

Reviewer F:

The paper proposes an approach to measuring the similarity between UML sequence diagrams. Unlike the majority of similar works, the main application here is assessment of students' works in the learning process, rather than practical applications such as identifying reusable code.

The proposed approach consists in combining the evaluation of two aspects of similarity: semantic similarity, which is assessed by applying natural language processing to the elements of the diagram (object and message attributes), and structural similarity, where the Authors propose an algorithm based on transforming the diagram into a graph structure (called the UML Common Graph) and calculating the edit distance between the graphs. The experiments entailed 28 diagrams prepared by students (for 3 distinctive cases) being assessed by 23 experts, lecturers of Software Engineering. Automatic similarity assessment was conducted with varying values of three ratio parameters regarding the importance of parameters within: semantic similarity (object vs. message), structural similarity (object structure vs. inter-object communication) and overall similarity (semantic vs. structural). This let the Authors determine the characteristics of the evaluations performed by the experts, i.e. that they focus more on the structure than on the semantics. Overall, the agreement between the proposed method and the experts was promising. As the ratio parameters can be adjusted, the Authors argue that the proposed method may provide additional flexibility in shaping the emphasis of the evaluation. The results seem reasonable, but evaluation at a larger scale would improve the credibility of the research in the future.

The paper requires a revision of language and editing. Some language mistakes include:

“to assess the similarity (...) as reliable as experts“ (abstract, p. 1; should be: “reliably”)

“value of the agreement has a substantial agreement“ (abstract, p. 1)

“Semantic assessment (...) is assessed“ (sec. 2.2, p. 4)

“Each object msn contains a label“ (sec. 2.2, p. 5)

Besides fixing mistakes such as these, general improvement of the language style would be recommended.

Also, some editing problems are present:

the ‘min’ function in eq. 2 (sec. 2.2, p. 5) should be formatted using LaTeX \min

text within equations (and inline equations) should be rendered using font formatting commands (trm , tit , etc.)

subscripts are missing in some element labels (sec. 3.1, p. 6); also, see the remark above about text in equations

‘intraSim’ is not formatted with italics at the very top of p. 9

also, consider changing ‘intraSim’ and ‘interSim’ at the beginning of sentences to “the intraSim/interSim function”, as lowercase words look strange in such places

bibliography formatting should be improved, especially in entries such as [23]; please verify that all of your BibTeX entries have proper attributes and their values.

Computer Science

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Reza Fauzan <reza.fauzan@poliban.ac.id>

[csci] Editor Decision on your paper submitted to CSCI Journal (accept)

4 pesan

Aleksander Byrski <olekb@agh.edu.pl>

8 Januari 2021 06.58

Kepada: Reza Fauzan <reza.fauzan@poliban.ac.id>

Cc: Reza Fauzan <reza.18051@mhs.its.ac.id>, Daniel Oranova Siahaan <daniel@its.ac.id>, Siti Rochimah <siti@if.its.ac.id>, Evi Triandini <evi@stikom-bali.ac.id>

Dear Reza Fauzan,

when are you going to submit a final version of your paper? (latex sources)

we need it to proceed with typesetting

Best regards

Aleksander Byrski

We have reached a decision regarding your submission to Computer Science, "A Novel Approach in Automated Behavioral Diagram Assessment using Label Similarity and Subgraph Edit Distance".

Our decision is to accept the paper.

Congratulations!

We thank you for submitting your work to our Journal.

Sincerely yours,

Aleksander Byrski
AGH University of Science and Technology
olekb@agh.edu.pl

Computer Science
<http://journals.agh.edu.pl/csci>

Reza Fauzan <reza.fauzan@poliban.ac.id>

8 Januari 2021 10.43

Kepada: Aleksander Byrski <olekb@agh.edu.pl>

Dear Prof. Byrski,

Thank you for the good news. Here I attach the latex source file, Consent to Publish, and Consent to Publish Appendix.

Please tell me anytime if you have some trouble in my latex source file.

Reza Fauzan
Institut Teknologi Sepuluh Nopember
[Kutipan teks disembunyikan]

3 lampiran**Consent to Publish Appendix.pdf**

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**Consent to Publish.pdf**

48K

**latex source.zip**

1017K

Reza Fauzan <reza.fauzan@poliban.ac.id>

8 Januari 2021 13.26

Kepada: Aleksander Byrski <olekb@agh.edu.pl>

Dear Prof. Byrski,

I apologize for the latex source earlier. I just realized there was an error writing the email of one of the authors. Here I attach the latest latex source.

Once again I apologize for the previous mistake.

Thanks in advance.

Reza Fauzan
Institut Teknologi Sepuluh Nopember

[Kutipan teks disembunyikan]

 **latex source.zip**
1017K

Aleksander Byrski <olekb@agh.edu.pl>
Kepada: Reza Fauzan <reza.fauzan@poliban.ac.id>

9 Januari 2021 06.05

Thank you, your paper will appear in the issue 2/2021
Best regards
Aleksander Byrski.

Wiadomość napisana przez Reza Fauzan <reza.fauzan@poliban.ac.id> w dniu 08.01.2021, o godz. 06:26:

[Kutipan teks disembunyikan]
<latex source.zip>

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