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[IJASEIT] Submission Acknowledgement

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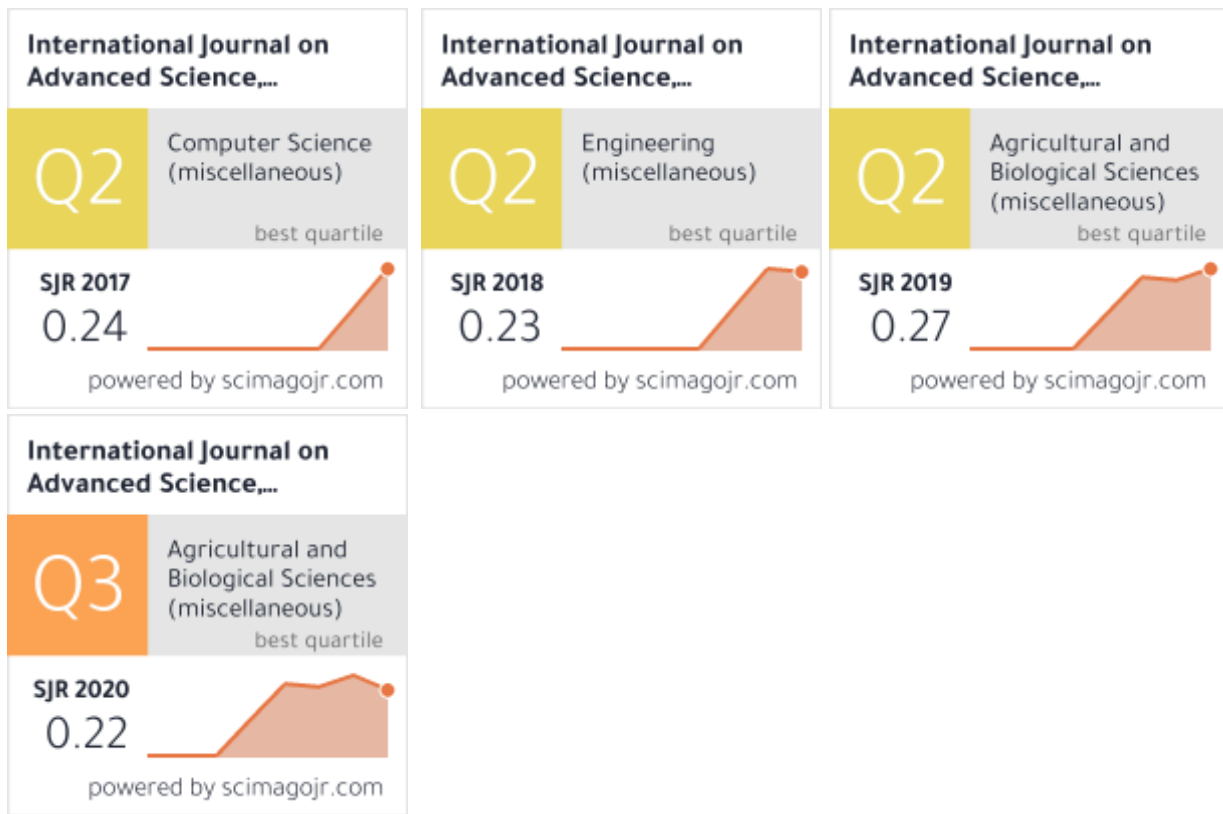
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#13372 Review

[SUMMARY](#) **[REVIEW](#)** [EDITING](#)

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Authors Reza Fauzan, Daniel Siahaan, Siti Rochimah, Evi Triandini 
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#13372 Summary

[SUMMARY](#) [REVIEW](#) [EDITING](#)

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Title and Abstract

Title	An Automated Statechart Diagram Assessment using Semantic and Structural Similarities
Abstract	The statechart diagram is a behavior diagram in the unified modeling language (UML) diagram. Numerous state chart diagrams are taught in computer science majors. In teaching and learning activities, the assessment process is essential. A teacher is required to be objective in assessing. However, objectivity can be affected by inconsistency and fatigue. Thus, an automatic assessment is very important. Automatic assessments can help teachers save time while assessing answers given by multiple students. By combining semantic and structural similarities, we propose a method to evaluate statechart diagrams automatically. Semantic comparison is conducted based on the lexical information from the states and transitions between the two diagrams. We then use a combination of cosine similarity, Wu palmer, and WordNet to assess the semantic similarity between the two diagrams. The structural assessment is conducted on the basis of the structure of the two diagrams using the greedy graph edit distance. The diagram structure is obtained by translating the diagram into several graphs. The graph is divided into two types of subgraphs, namely intraSim subgraph and interSim subgraph. Further, our results demonstrate that the proposed method agrees well with the state chart diagram assessed by the teacher. The agreement value between the teacher and our proposed method is an almost perfect agreement. In the assessment process, we observe that teachers see the structure of the statechart diagram instead of the lexical of the statechart diagram.

Indexing

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