Abstract

Accuracy and software quality impacts user satisfaction and development costs. Maintainability has gained its importance as a feature of software quality and the need for early indicators of external quality attributes is critical. Maintainability of object-oriented software can be predicted through the implementation of advanced modeling techniques. This paper presents a model predicting the understanding and modifiability as standard maintainability software from class diagram using the Backpropagation neural network with the Coco search algorithm. The results of this model are compared to multiple linear regression models. The results reported that the integration between Backpropagation neural network with the Coco search algorithm is an improved maintainability expected with higher accuracy.

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Index Terms

Computer Science Algorithms
Keywords

Maintainability, Back propagation neural network, Prediction, understanding, modifiability, Cuckoo search algorithm