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 a critical necessity. Maintainability of object-oriented software can be predicted through the implementation of advanced modeling techniques. This paper presents a model to predict the understanding and modifiability as a standard for maintainability software from class diagram using the Back propagation neural network with the Coco search algorithm. The results of this model are compared to a multiple linear regression model. The results reported that the integration between Back propagation neural network with the Coco search algorithm is an improved maintainability expected with higher accuracy.

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Index Terms

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Keywords

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