

Validation of object-oriented software GA metric selection model using domain experts

ABSTRACT

This study presents validation of object-oriented model to predict its maintainability. The study used metric threshold in its encoding strategy in the implementation of GA Model before being compared with classical model. This empirical validation was then compared with real maintainability data from experts using similar procedures. To understand the overall effect of particular software, linear discriminant analysis which is machine learning statistical method was utilised to evaluate the performance of the metrics. The results pointed out that there is significant relationship when expert's opinions were used. Experts also indicated the role of inheritance metrics in predicting maintainability of object-oriented software which also highlighted the needs for further empirical investigation on the production of more metrics threshold that give researchers and practitioners an opportunity to work on more metrics.

Keyword: Maintainability; Metric threshold; Experts opinion; Linear discriminant analysis; Statistical; Validation