Enhanced GUI Test Case Generation Method using Two-stage Classification Method

Abstract

Software testing is a task of quality assurance where the main aim is to identify errors. Graphical User Interfaces (GUIs), a class of Event-Driven Software (EDS), is increasingly used to increase the human-to-computer interaction. General tests are not applied directly to GUIs because of the increased number of states generated because of huge number of permutations of input events. This paper proposes techniques that use a reduction-based test case generation model that is enhanced by identifying feasible and infeasible test sequences. The proposed method uses a two-stage classification process, where two classifiers, BPNN (Back Propagation Neural Network) and Support Vector Machine (SVM), are used. The main goal here is to improve the performance of the second classifier, SVM, by using the results of the first classifier, BPNN. Experimental results show that the proposed method has increased the accuracy of classification.

References

Engineering and Data Mining (SEDM), Pp. 219-224.
Enhanced GUI Test Case Generation Method using Two-stage Classification Method


Index Terms

Computer Science
Software Engineering

Keywords

Graphical User Interface
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Support Vector Machine
Back Propagation Neural Network