Automated Testing Approach for Generation and Optimization of Test Cases using Hybrid Bat Algorithm

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Abstract

Software testing is used to identify error or bugs. Manual testing is a time-consuming process to generate errors. Automated testing is also used for generating the test cases or test data in less time. Generation of test cases identifies the test cases with requirements. Automated generation of test cases has predefined test data which bring into the specified condition through the system under test (SUT). In this paper, the role of hybrid (BCBA) search technique is analyzed for generating and optimizing random automated test cases or test data. This paper also discusses the automatic generation and optimization of test cases from a hybrid bat algorithm which is a combination of a bee colony and bat algorithms applied in withdrawal operation of an ATM.

References


**Index Terms**

Computer Science  
Software Engineering

**Keywords**

Bee colony algorithm, Bat algorithm, BCBA algorithm, meta-heuristics, test case generation and optimization.