Abstract

The test suite optimization during test case generation can save time and cost. The paper presents an information theory based metric to filter the redundant test cases and reduce the test suite size while, maintaining the coverage of the requirements and with minimum loss to mutant coverage. The paper propose two versions, RR and RR2. RR filters test cases for each requirement, where as, RR2 filters till the target coverage is achieved. The paper suggests the time and phase for the implementation of the algorithms, based on results. The results show that the proposed algorithms are effective at optimizing the testing process by saving time and resource.

References

Mutual Information Gain based Test Suite Reduction


Index Terms

Computer Science

Algorithms

Keywords

Information Theory, Optimization, Mutual Information Gain, Test suite size reduction, test data generation