Survey on input output relation based combination test data generation strategies

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ABSTRACT
Combinatorial test data generation strategies have been known to be effective to detect the fault in the product due to the interaction between the product's features. Over the years, many combinatorial test data generation strategies have been developed supporting uniform and variable strength interactions. Although useful, these existing strategies are lacking the support for Input Output Relations (IOR). In fact, there are only a handful of existing strategies addresses IOR. This paper will review the existing combinatorial test data generation strategies supporting the IOR features specifically taking the nature inspired algorithm as the main basis. Benchmarking results illustrate the comparative performance of existing nature inspired algorithm based strategies supporting IOR.

KEYWORDS
Combinatorial testing; Test data generation; Combinatorial optimization problem; Nature based algorithms; Software testing

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