

DOES IT ALWAYS DO THAT? PRACTICAL AUTOMATIC LIGHT-WEIGHT NONDETERMINISM AND FLAKY TEST DETECTION AND DEBUGGING FOR PYTHON LIBRARIES

Highlights:

This article presents a new approach to “flaky tests” and nondeterminism.

The article presents a formalism distinguishing horizontal and vertical determinism.

The approach is implemented in an open source Python library testing system.

Failure determinism can detect 6% more program mutants than a strong specification.

The article presents the first examination of test reduction for probabilistic properties.