



# Optimization of Performance Testing Process Through Input Data Selection

## Description

Full performance testing requires application to be tested with all of the allowed combinations of values of input parameters. This task can be time consuming, so the idea is to reduce the amount of data, but to still be able to detect problems. This process can be very prone to errors and there is a strong possibility that some of the performance problems will be missed. The goal of this topic is to evaluate some of the automatic techniques available in the literature which allow this reduction of data, and compare their results.

The provided references ([1, 2]) are to be considered a starting point and it is expected to extend the literature search and present a coherent view on the current state of the art in this area.

## References

- [1] Mark Grechanik, Chen Fu, and Qing Xie. Automatically finding performance problems with feedback-directed learning software testing. In *Proceedings of the 34th International Conference on Software Engineering, ICSE '12*, pages 156–166, Piscataway, NJ, USA, 2012. IEEE Press.
- [2] Du Shen, Qi Luo, Denys Poshyvanyk, and Mark Grechanik. Automating performance bottleneck detection using search-based application profiling. In *Proceedings of the 2015 International Symposium on Software Testing and Analysis, ISSTA 2015*, pages 270–281, New York, NY, USA, 2015. ACM.

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