

IVS - profiling

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Tabuľky zachytávajú výstup profilovania programu, ktorý počíta štandardnú odchýlku s počtom vstupných hodnôt 10 – tabuľka 1, 1000 – tabuľka 2 a 1000 – tabuľka 1.

Najviac času zaberie programu volanie funkcií power a sub. Funkcie power aj sub sú volané toľkokrát, aký je počet vstupných hodnôt + 1.

Pri optimalizácii kódu by sme sa mali zamerať na funkcie Pow a Sum.

ncalls	tottime	percall	cumtime	percall	filename:lineno(function)
11	0.011	0.001	0.011	0.001	mathLib.py:49(power)
11	0.000	0.000	0.000	0.000	mathLib.py:28(sub)
1	0.000	0.000	0.011	0.011	mathLib.py:60(root)
1	0.000	0.000	0.011	0.011	built-in method builtins.exec
2	0.000	0.000	0.000	0.000	method 'reduce' of 'numpy.ufunc' objects
1	0.000	0.000	0.000	0.000	ipython-input-1-9c1fbf7e120c:18(deviationSum)
17	0.000	0.000	0.000	0.000	method 'item' of 'numpy.generic' objects
2	0.000	0.000	0.000	0.000	mathLib.py:35(div)
2	0.000	0.000	0.000	0.000	fromnumeric.py:69(_wrapreduction)
1	0.000	0.000	0.011	0.011	ipython-input-1-9c1fbf7e120c:33(deviation)
2	0.000	0.000	0.000	0.000	mathLib.py:44(mul)
2	0.000	0.000	0.000	0.000	fromnumeric.py:2162(sum)
2	0.000	0.000	0.000	0.000	__array_function__ internals:177(sum)
1	0.000	0.000	0.000	0.000	ipython-input-1-9c1fbf7e120c:26(mean)
2	0.000	0.000	0.000	0.000	fromnumeric.py:70(dictcomp)
2	0.000	0.000	0.000	0.000	built-in method numpy.core._array_function
2	0.000	0.000	0.000	0.000	built-in method builtins.getattr
1	0.000	0.000	0.000	0.000	built-in method decimal.localcontext
1	0.000	0.000	0.000	0.000	method '__exit__' of 'decimal.ContextManager' objects
1	0.000	0.000	0.011	0.011	string:1(module)
10	0.000	0.000	0.000	0.000	method 'append' of 'list' objects
2	0.000	0.000	0.000	0.000	built-in method builtins.isinstance
3	0.000	0.000	0.000	0.000	built-in method builtins.len
1	0.000	0.000	0.000	0.000	method 'disable' of '_lsprof.Profiler' objects
2	0.000	0.000	0.000	0.000	fromnumeric.py:2157(_sum_dispatcher)
2	0.000	0.000	0.000	0.000	method 'items' of 'dict' objects

Tabuľka 1: 10 vstupov

ncalls	tottime	percall	cumtime	percall	filename:lineno(function)
1001	0.014	0.000	0.014	0.000	mathLib.py:49(power)
1001	0.001	0.000	0.002	0.000	mathLib.py:28(sub)
1	0.001	0.001	0.004	0.004	ipython-input-1-9c1fbf7e120c:18(deviationSum)
1007	0.000	0.000	0.000	0.000	method 'item' of 'numpy.generic' objects
2	0.000	0.000	0.000	0.000	method 'reduce' of 'numpy.ufunc' objects
1000	0.000	0.000	0.000	0.000	method 'append' of 'list' objects
1	0.000	0.000	0.012	0.012	mathLib.py:60(root)
1	0.000	0.000	0.017	0.017	built-in method builtins.exec
1	0.000	0.000	0.017	0.017	ipython-input-1-9c1fbf7e120c:33(deviation)
2	0.000	0.000	0.000	0.000	mathLib.py:35(div)
2	0.000	0.000	0.000	0.000	fromnumeric.py:69(_wrapreduction)
2	0.000	0.000	0.000	0.000	mathLib.py:44(mul)
2	0.000	0.000	0.000	0.000	fromnumeric.py:2162(sum)
2	0.000	0.000	0.000	0.000	__array_function__ internals:177(sum)
1	0.000	0.000	0.000	0.000	ipython-input-1-9c1fbf7e120c:26(mean)
2	0.000	0.000	0.000	0.000	built-in method numpy.core._array_function
2	0.000	0.000	0.000	0.000	fromnumeric.py:70(dictcomp)
2	0.000	0.000	0.000	0.000	built-in method builtins.getattr
1	0.000	0.000	0.000	0.000	built-in method decimal.localcontext
1	0.000	0.000	0.000	0.000	method '__exit__' of 'decimal.ContextManager' objects
1	0.000	0.000	0.017	0.017	string:1(module)
2	0.000	0.000	0.000	0.000	built-in method builtins.isinstance
3	0.000	0.000	0.000	0.000	built-in method builtins.len
2	0.000	0.000	0.000	0.000	fromnumeric.py:2157(_sum_dispatcher)
2	0.000	0.000	0.000	0.000	method 'items' of 'dict' objects
1	0.000	0.000	0.000	0.000	method 'disable' of '_lsprof.Profiler' objects

Tabulka 2: 10^3 vstupov

ncalls	tottime	percall	cumtime	percall	filename:lineno(function)
1000001	0.839	0.000	0.839	0.000	mathLib.py:49(power)
1000001	0.810	0.000	1.013	0.000	mathLib.py:28(sub)
1	0.287	0.287	2.187	2.187	ipython-input-1-9c1fbf7e120c:18(deviationSum)
1000007	0.203	0.000	0.203	0.000	method 'item' of 'numpy.generic' objects
2	0.066	0.033	0.066	0.033	method 'reduce' of 'numpy.ufunc' objects
1000000	0.033	0.000	0.033	0.000	method 'append' of 'list' objects
1	0.004	0.004	2.241	2.241	ipython-input-1-9c1fbf7e120c:33(deviation)
1	0.000	0.000	0.007	0.007	mathLib.py:60(root)
2	0.000	0.000	0.000	0.000	mathLib.py:44(mul)
1	0.000	0.000	2.241	2.241	built-in method builtins.exec
2	0.000	0.000	0.066	0.033	fromnumeric.py:69(_wrapreduction)
2	0.000	0.000	0.000	0.000	mathLib.py:35(div)
2	0.000	0.000	0.066	0.033	fromnumeric.py:2162(sum)
2	0.000	0.000	0.066	0.033	__array_function__ internals:177(sum)
2	0.000	0.000	0.000	0.000	built-in method builtins.getattr
1	0.000	0.000	0.042	0.042	ipython-input-1-9c1fbf7e120c:26(mean)
2	0.000	0.000	0.066	0.033	built-in method numpy.core.array_function
1	0.000	0.000	0.000	0.000	built-in method decimal.localcontext
2	0.000	0.000	0.000	0.000	fromnumeric.py:70(dictcomp)
1	0.000	0.000	2.241	2.241	string:1(module)
2	0.000	0.000	0.000	0.000	built-in method builtins.isinstance
1	0.000	0.000	0.000	0.000	method 'disable' of '_lsprof.Profiler' objects
3	0.000	0.000	0.000	0.000	built-in method builtins.len
1	0.000	0.000	0.000	0.000	method '.__exit__' of 'decimal.ContextManager' objects
2	0.000	0.000	0.000	0.000	fromnumeric.py:2157(_sum_dispatcher)
2	0.000	0.000	0.000	0.000	method 'items' of 'dict' objects

Tabulka 3: 10^6 vstupov