Effective Programming Practices for Economists

Scientific Computing

Profiling code with snakeviz

Janoś Gabler and Hans-Martin von Gaudecker

7/21/2024

Remarks

- Snakeviz is most useful if your code is structured in many small functions

- Don't obsess about the lowest levels of the output. It is enough if you find out which of your functions is currently a bottleneck.

Non obvious outputs

- A lot of time is spent in `__getitem__` and `__setitem__` calls

  - You are using the wrong data structures

  - Replace DataFrames or dicts with numpy arrays where possible

- All time is spent in numpy operations but your code is still much slower than one would expect

  - You are doing array operations in a loop

  - Either use full loops with numba or full vectorization. Never a middle ground