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Data Structures and Algorithms

Reading Week 6

What is spatial locality?

Spatial locality is accessing data that is nearby in memory address.

Which order of iterating through a 2D array is more efficient and why? [Row order or column order?]

Row order. It is faster because it doesn’t have to access the memory every time a matrix value is needed

Compare the L1 and L2 caches qualitatively in terms of size and speed.

L1 smaller but faster. L2 Larger but slower

Do multiple cores share the same L2 cache?

Yes they typically do.

What does cachegrind measure?

The number of hits and misses in a program.

Do you have any questions about the reading?