rvv-testing-optimize-mem

Relative & Scalar to Vector Performance Increases

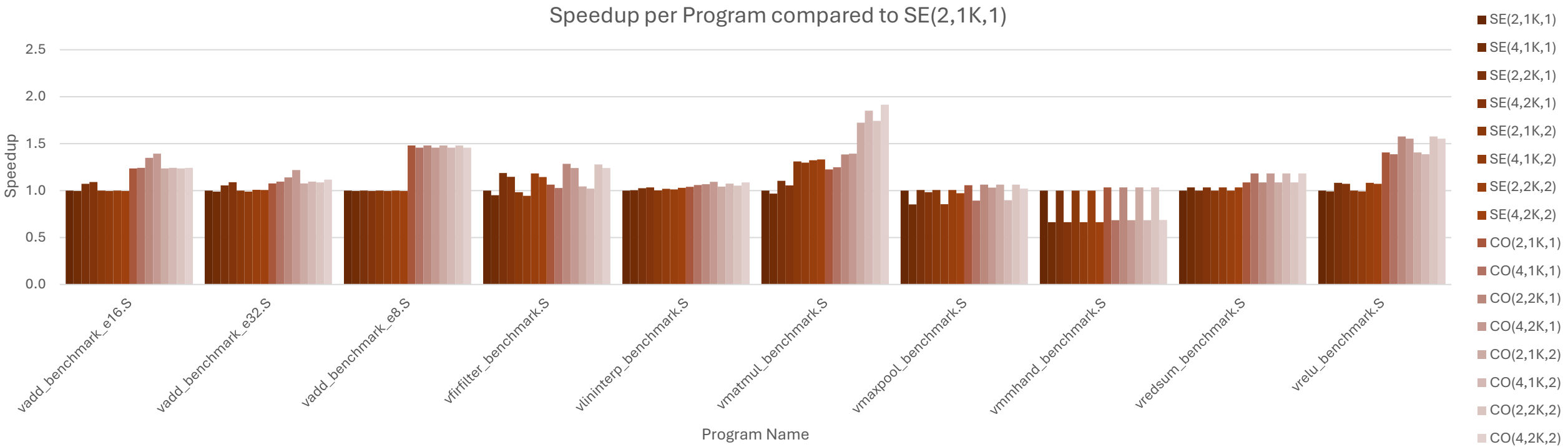
With Variable Cache, Block, and Associativity Sizes

Overview

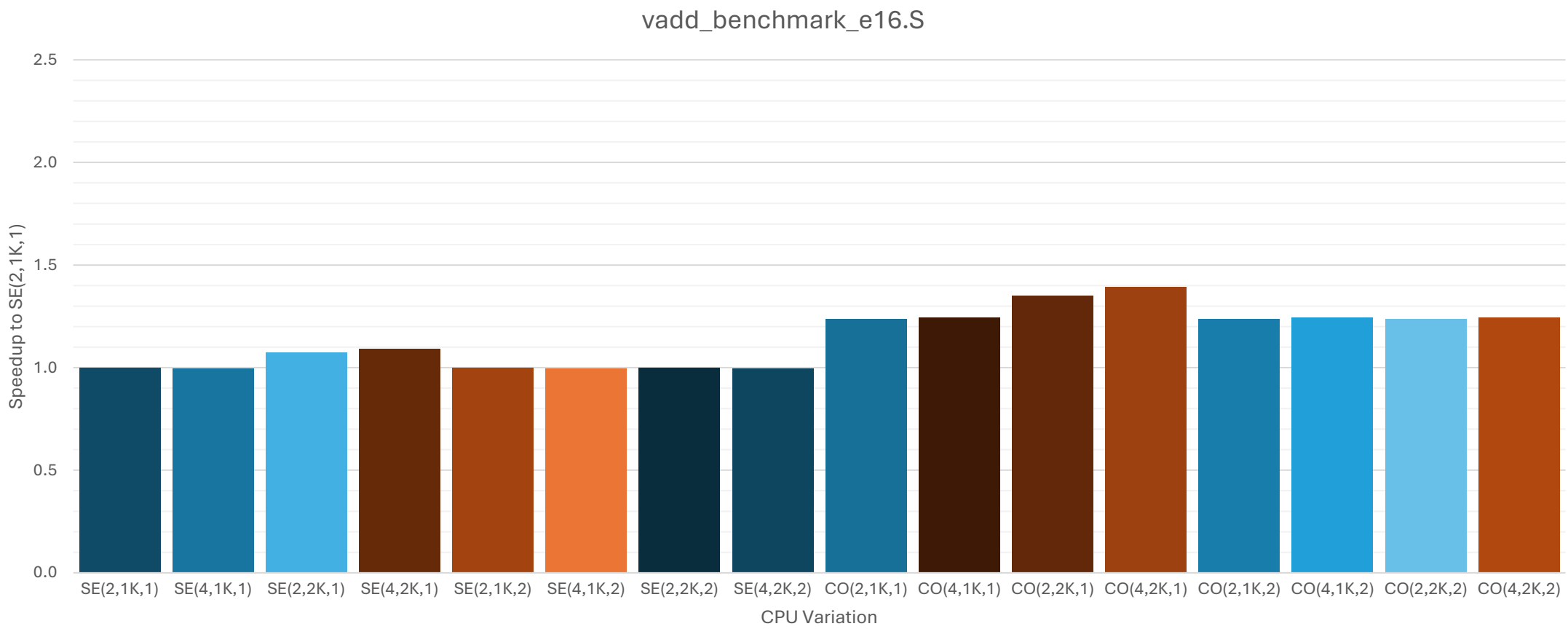
- Scalar performance not impacted by coalescer
- Coalescer significantly impacts vector performance in most benchmarks
- Cache block size 4 seems to help coalescer performance

Relative Performance Increase

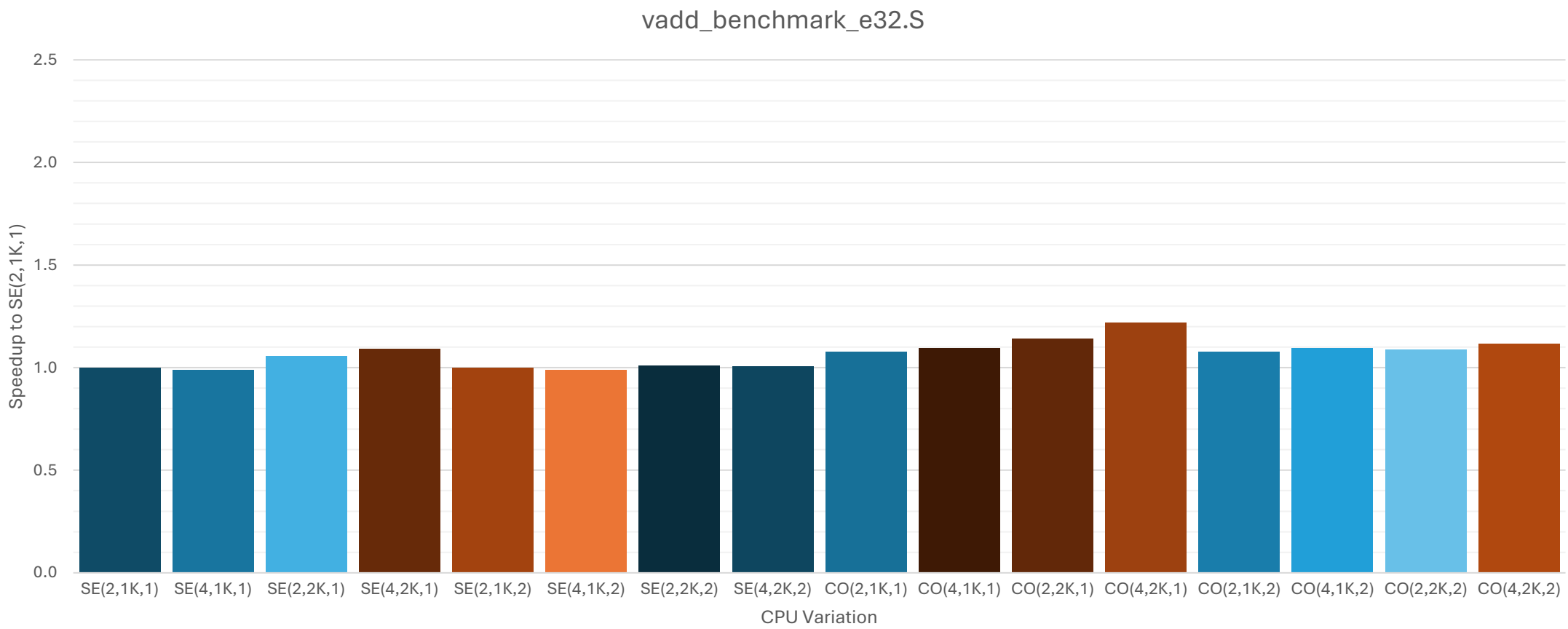
- Block size – 2
- Cache size - 1K
- Associativity – 1



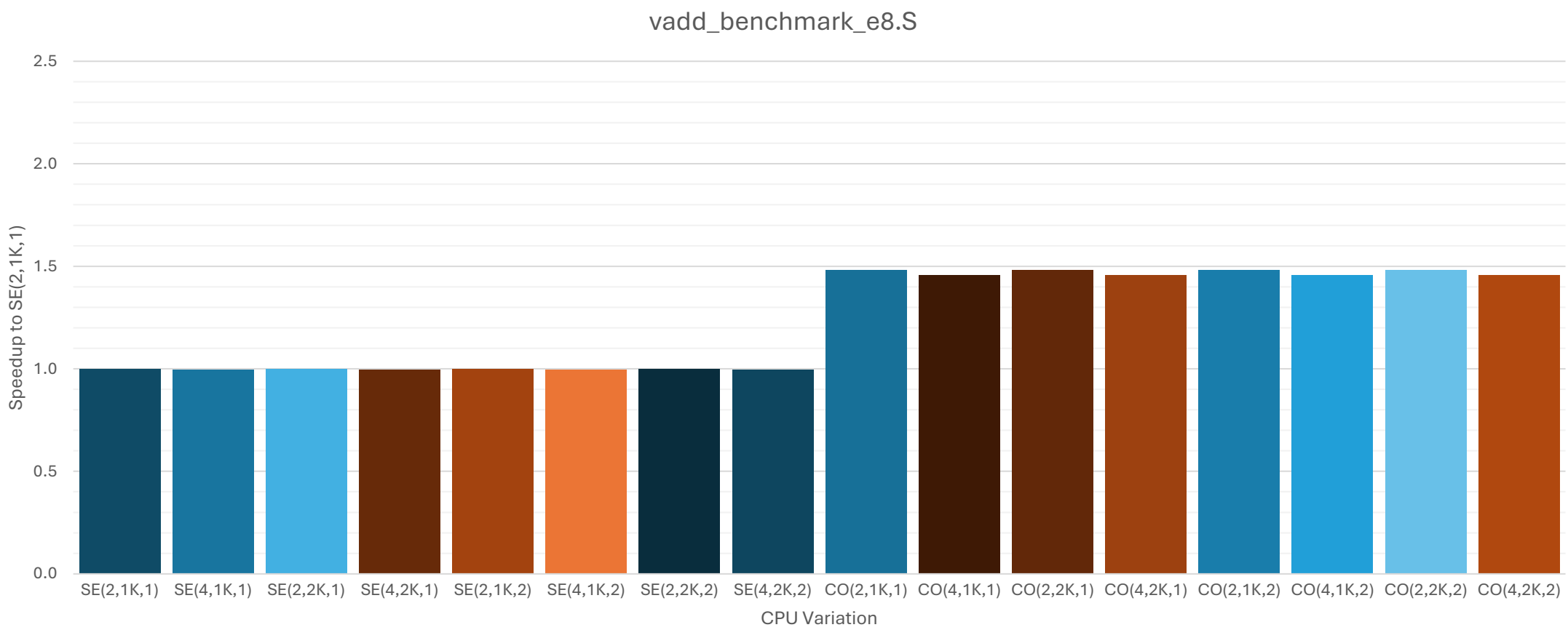
vadd_benchmark_e16



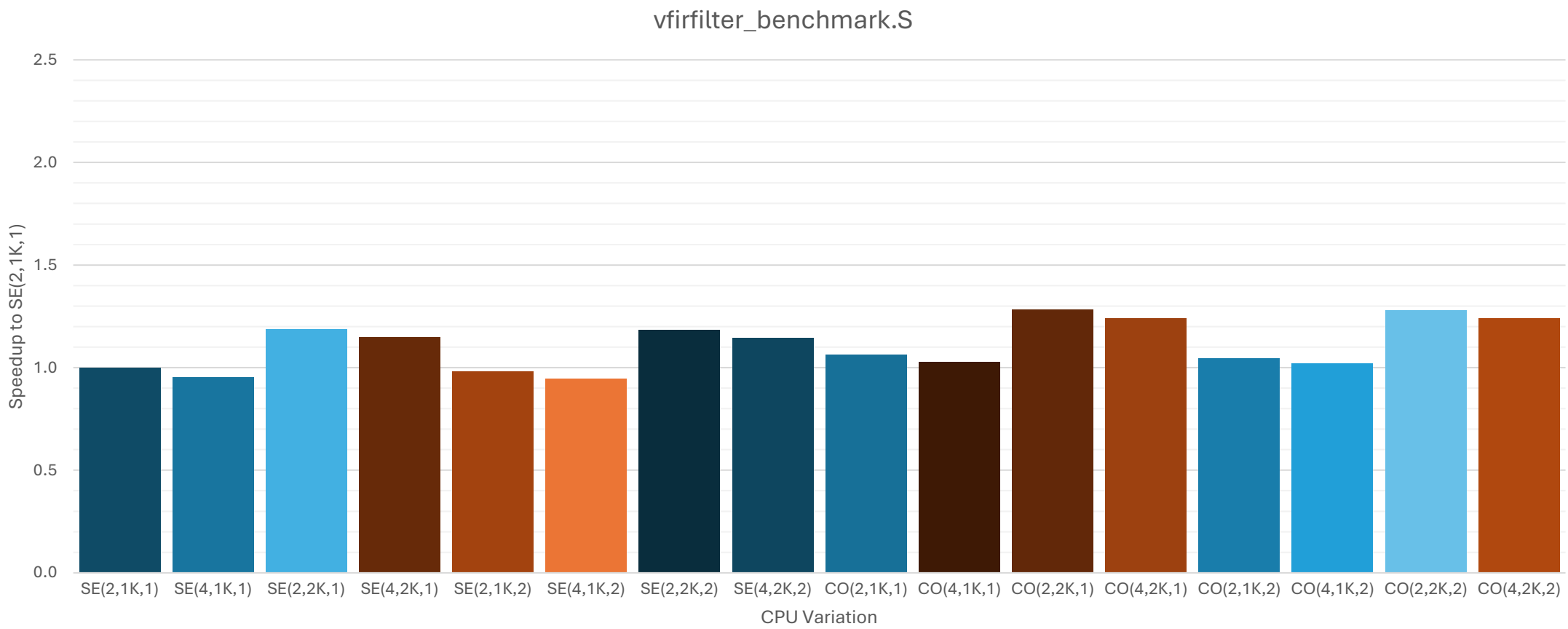
vadd_benchmark_e32



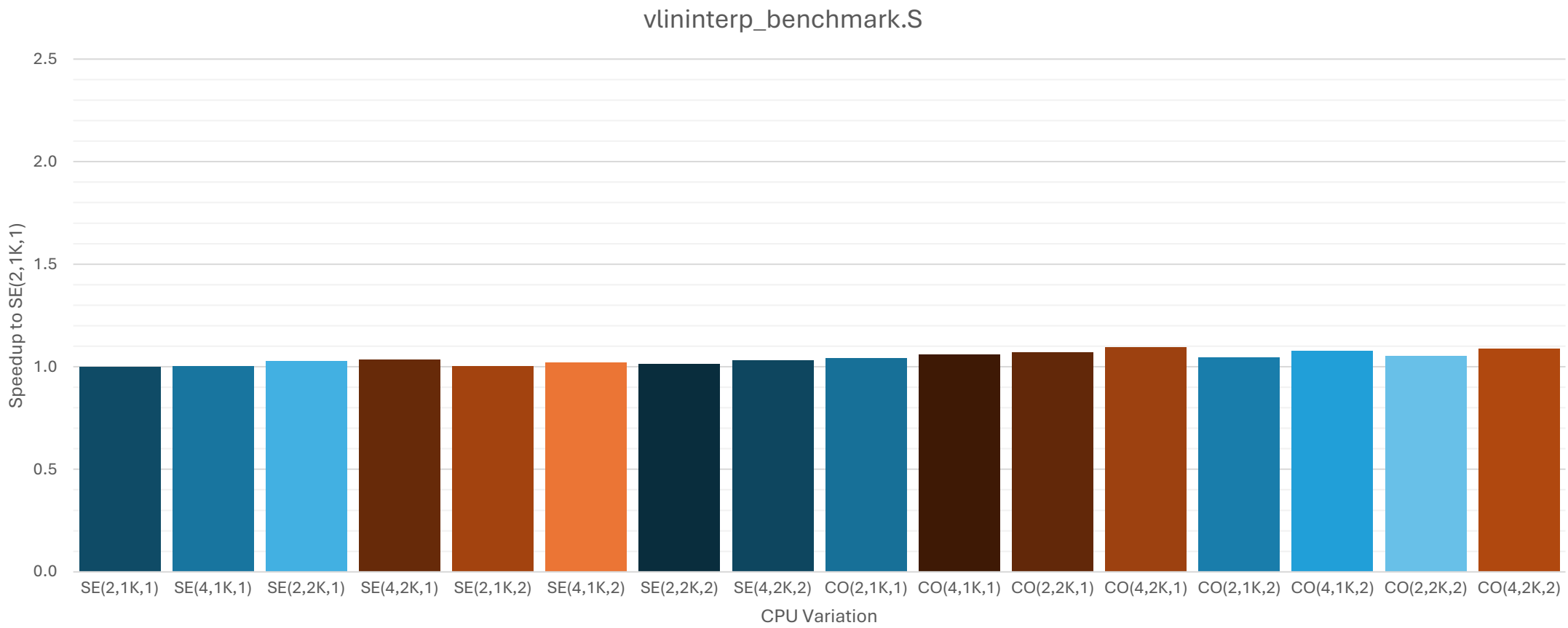
vadd_benchmark_e8



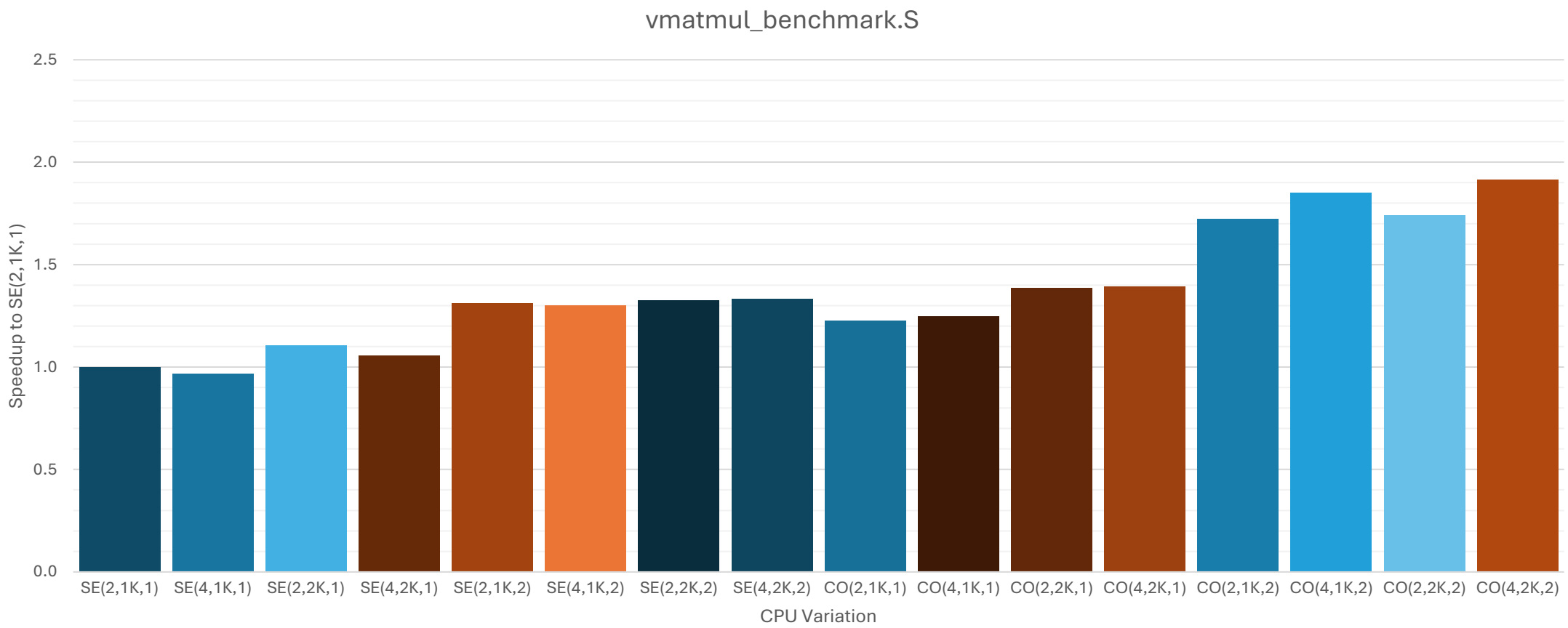
vfirfilter_benchmark



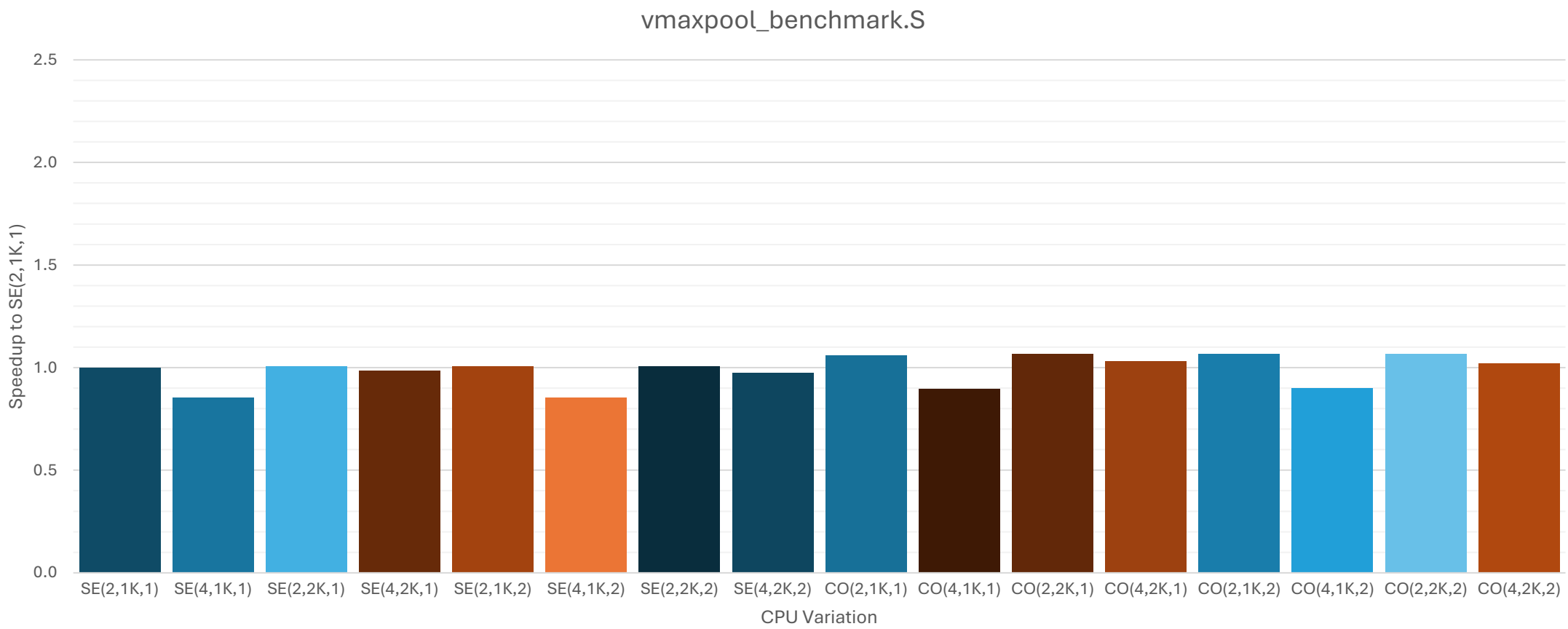
vlininterp_benchmark



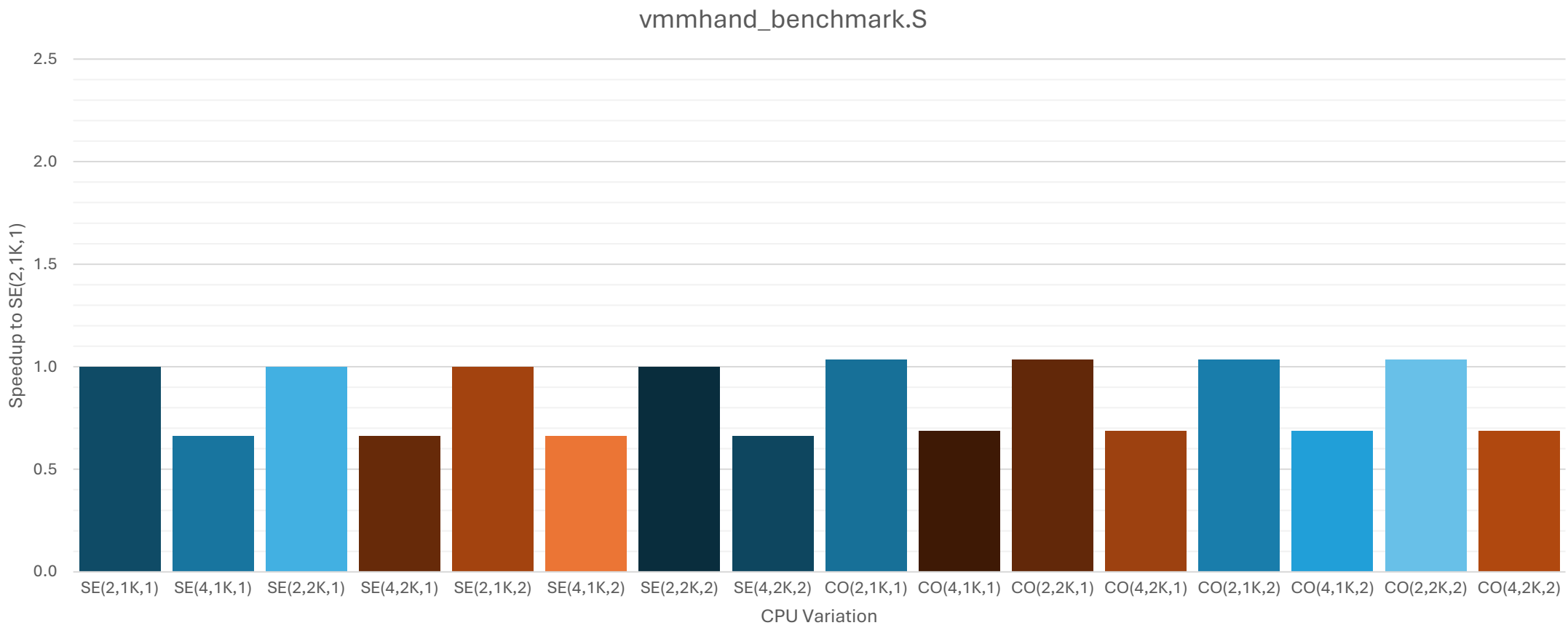
vmatmul_benchmark



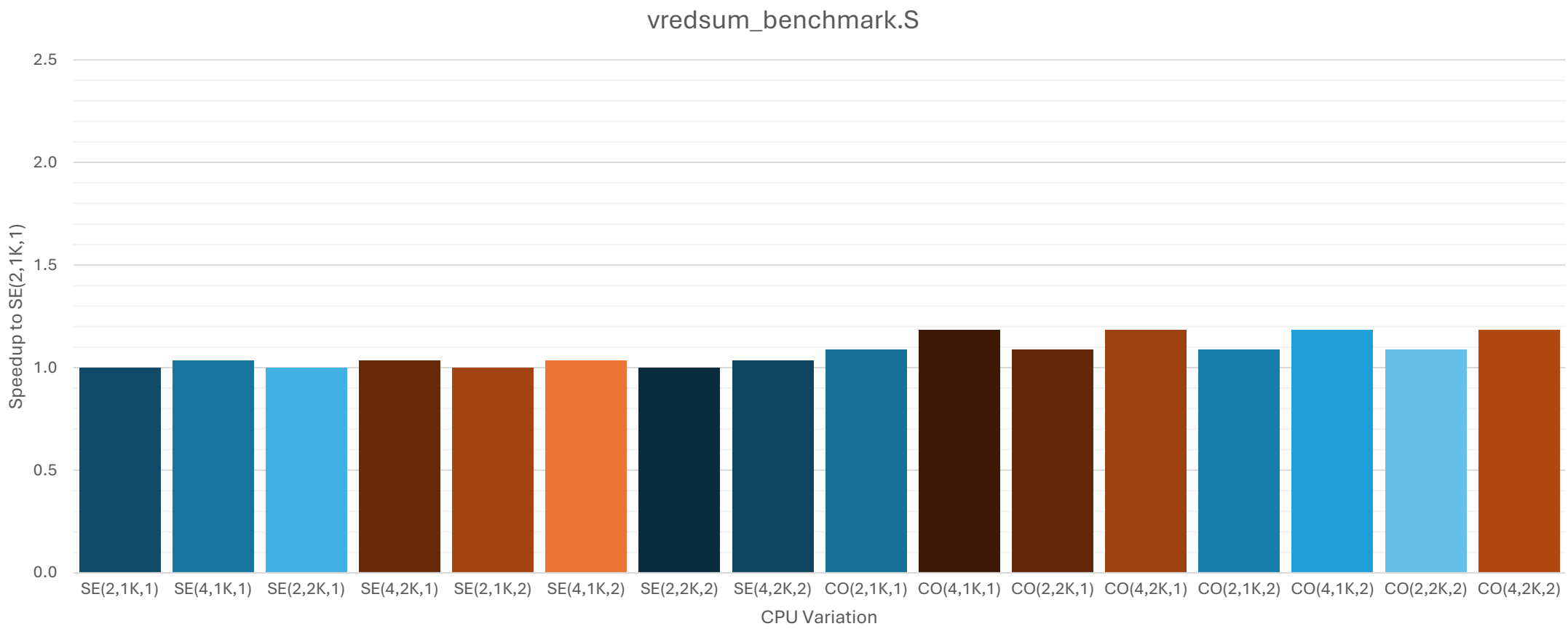
vmaxpool_benchmark



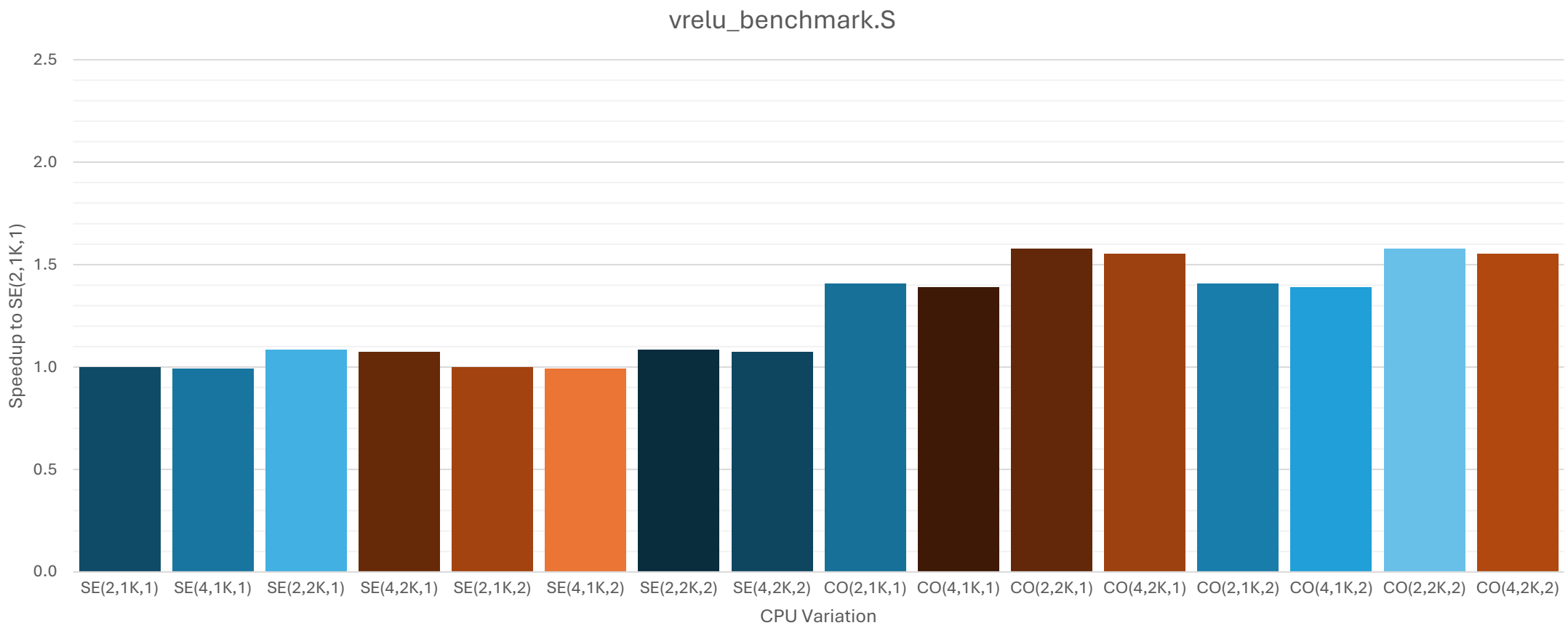
vmmhand_benchmark



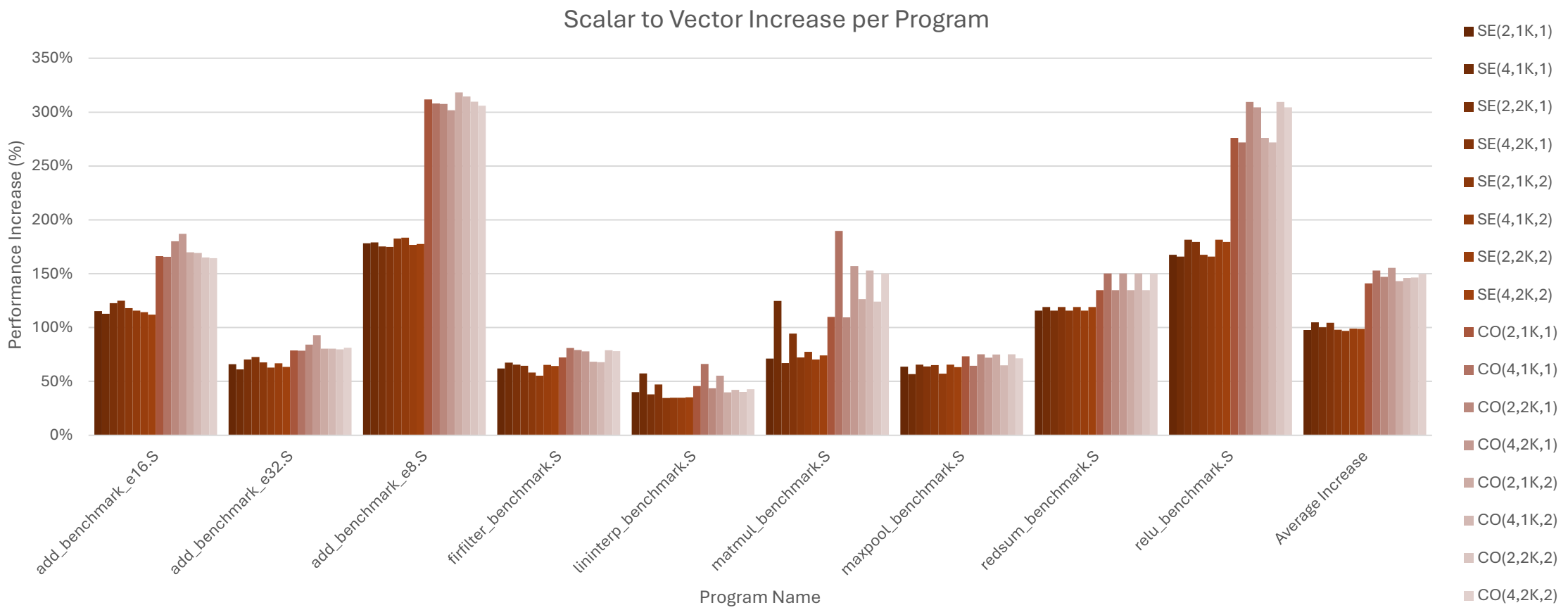
vredsum_benchmark



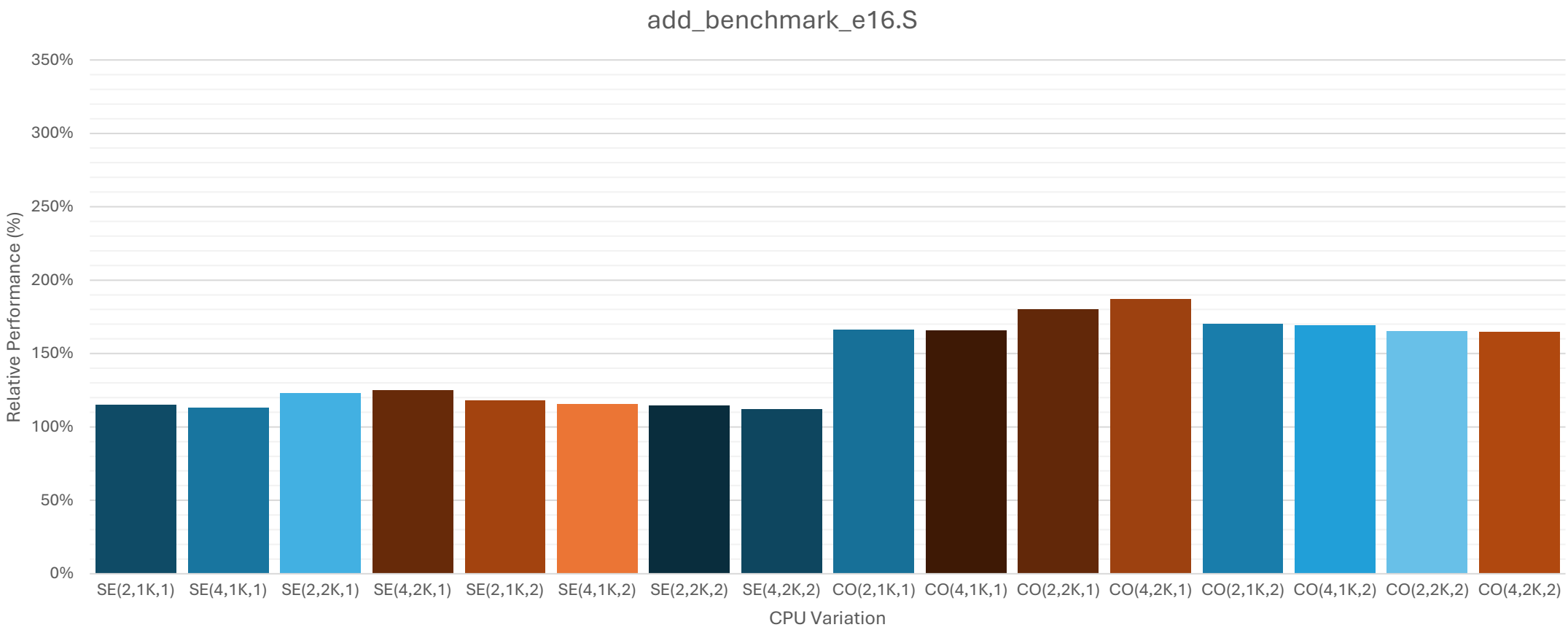
vrelu_benchmark



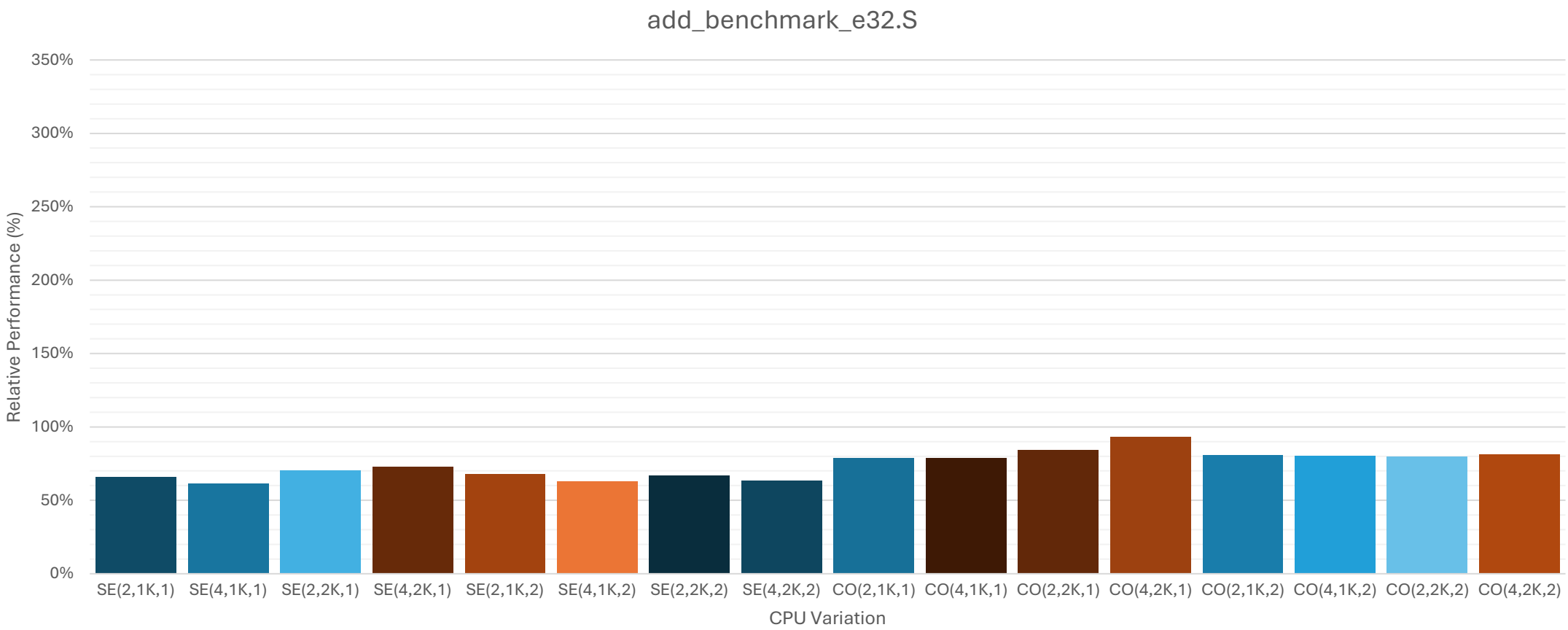
Scalar to Vector Increase



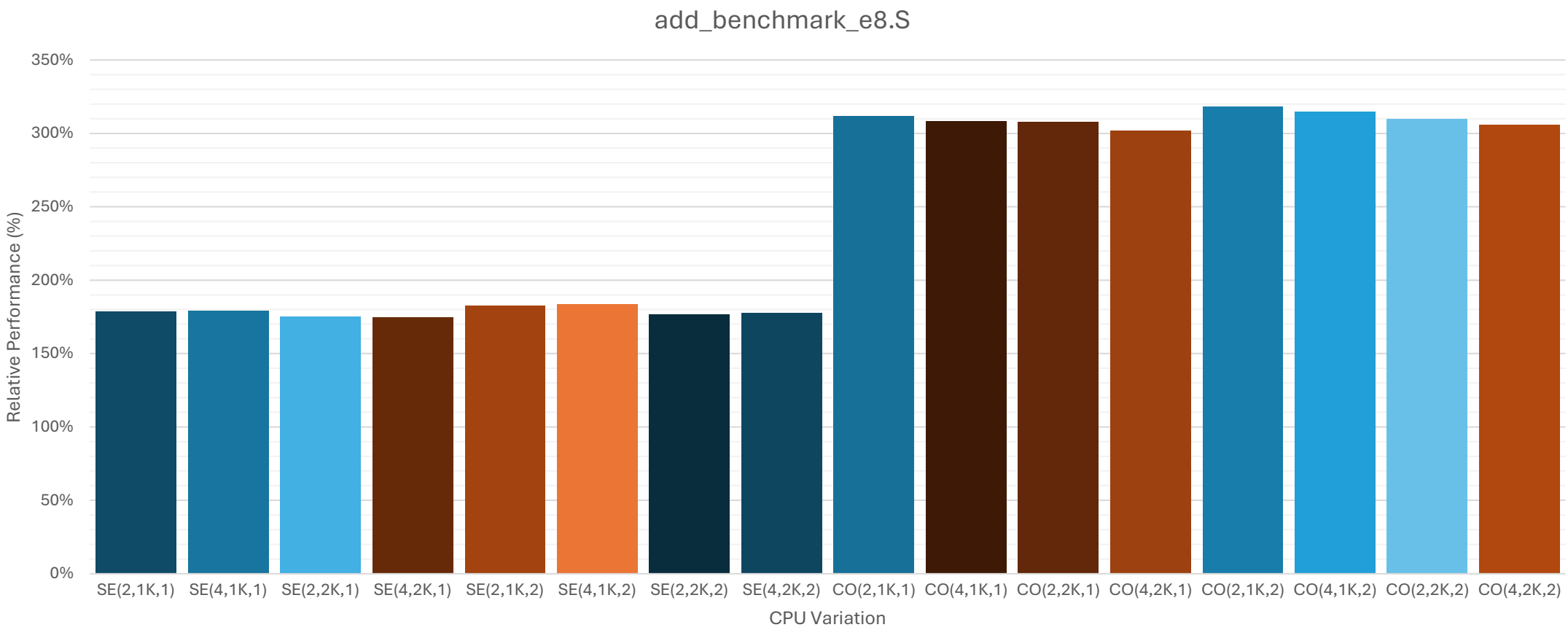
add_benchmark_e16



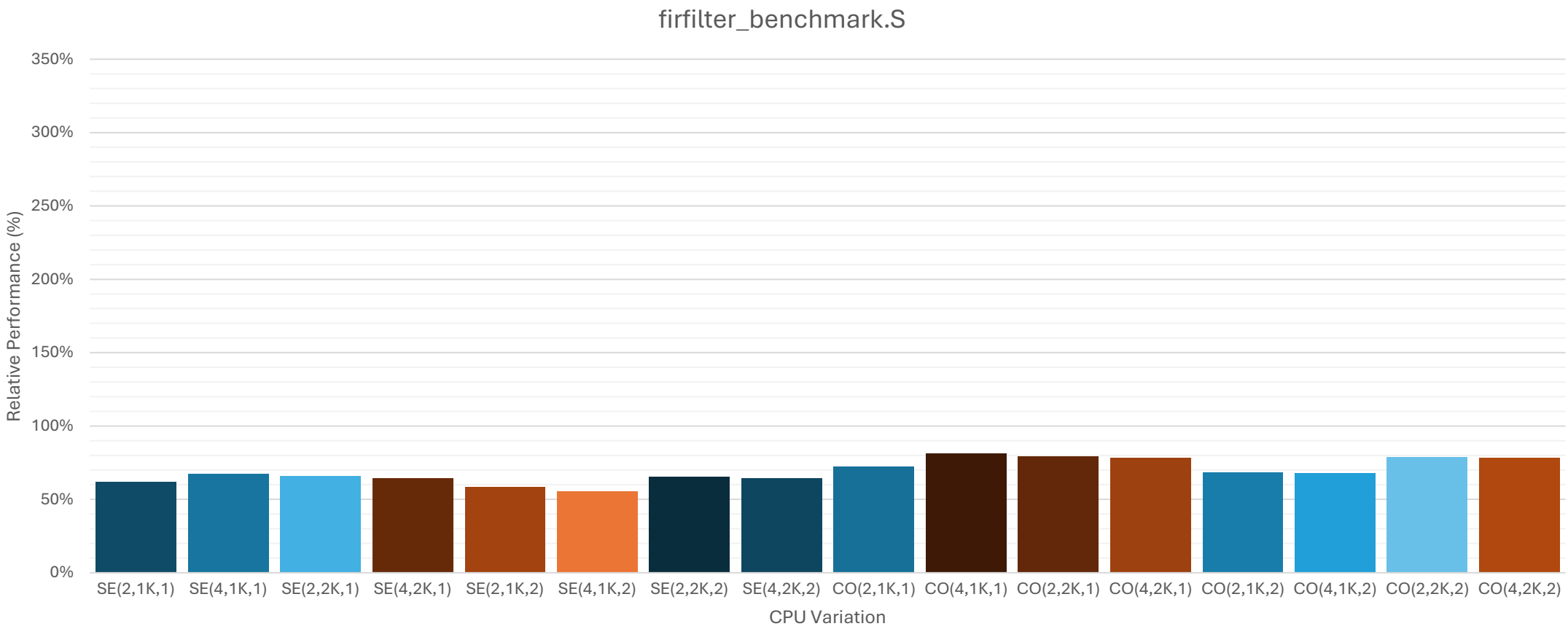
add_benchmark_e32



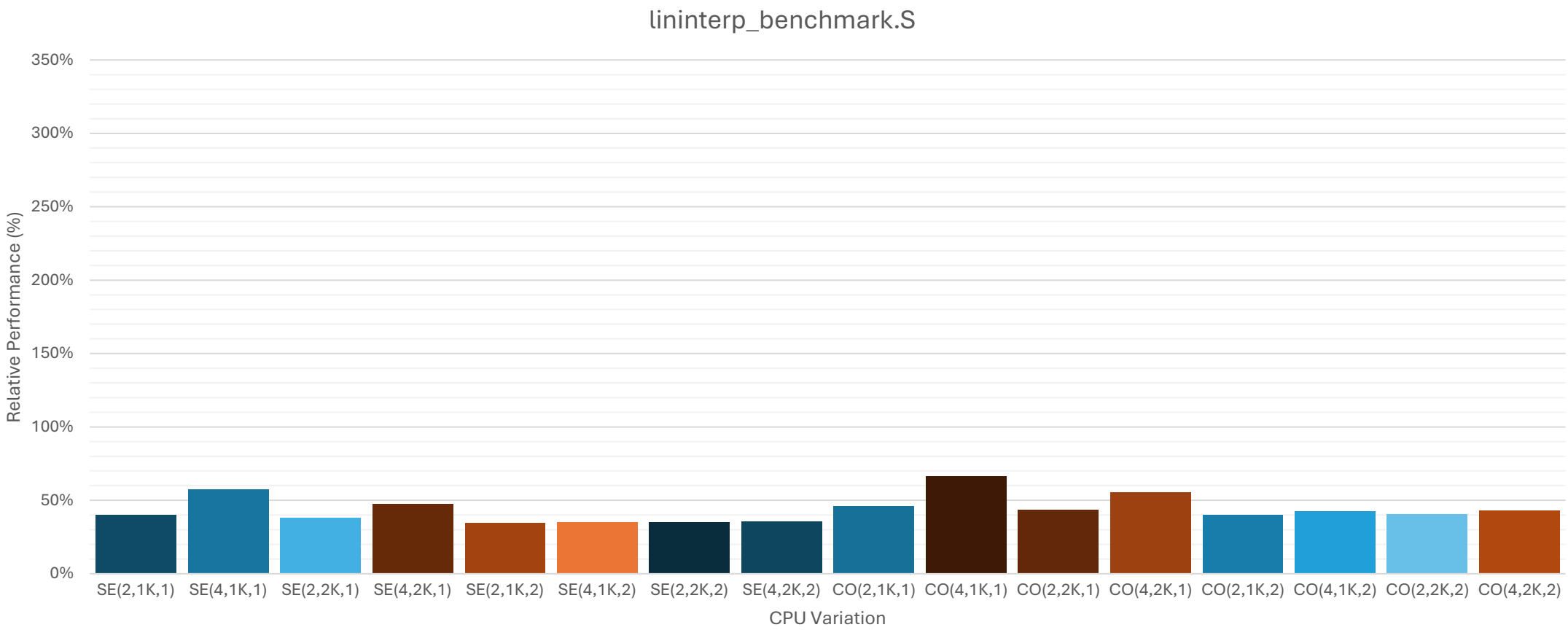
add_benchmark_e8



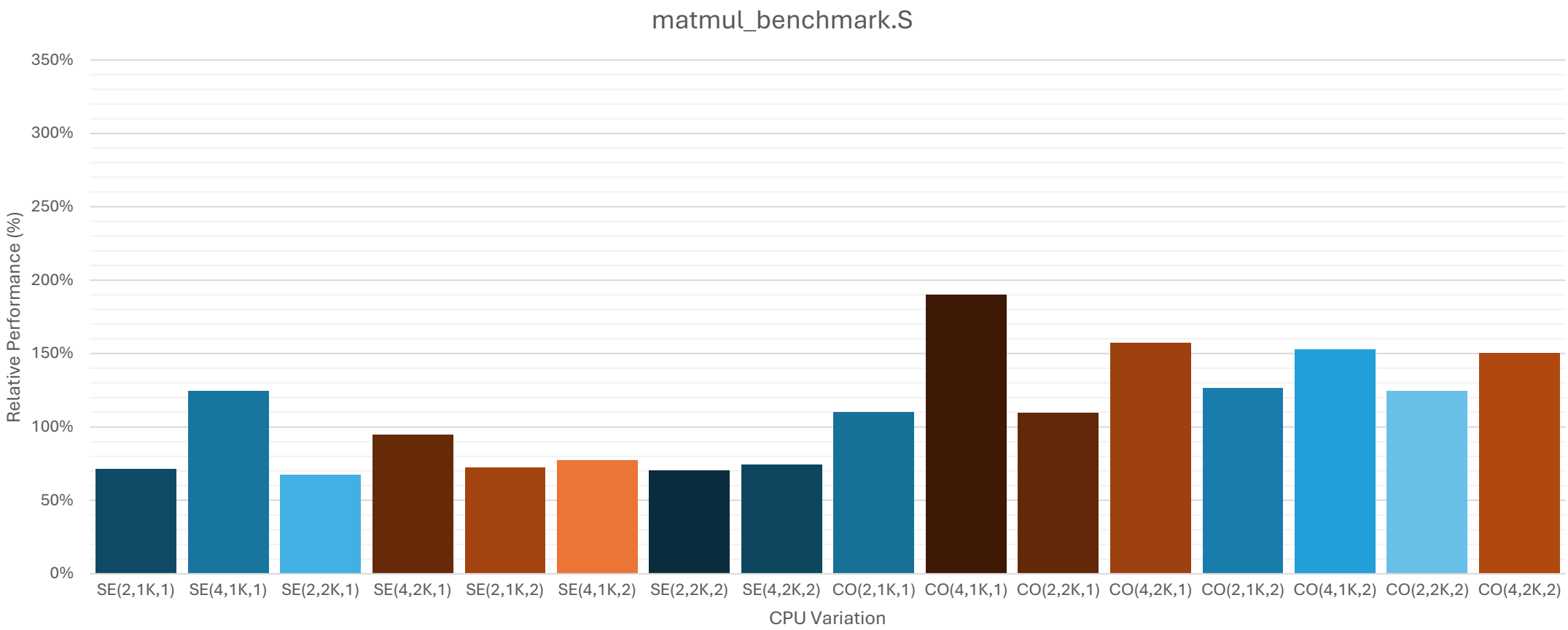
firfilter_benchmark



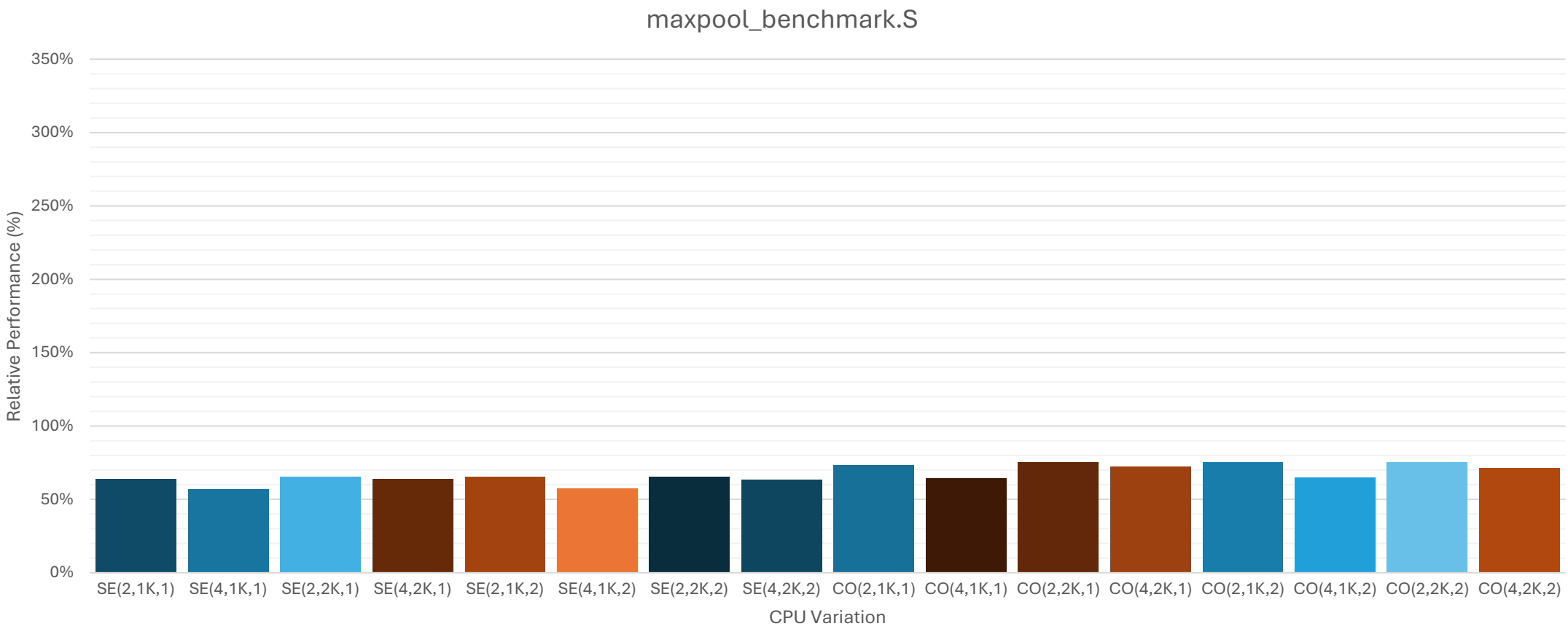
lininterp_benchmark



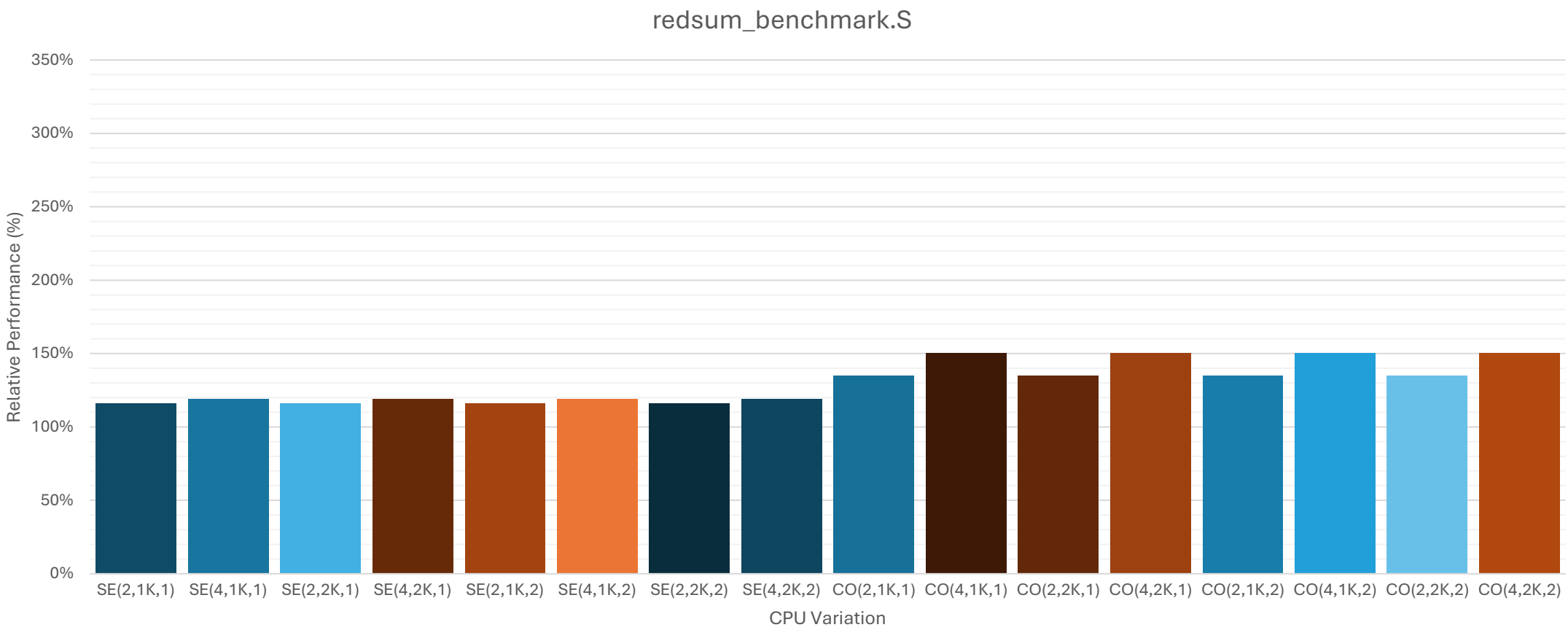
matmul_benchmark



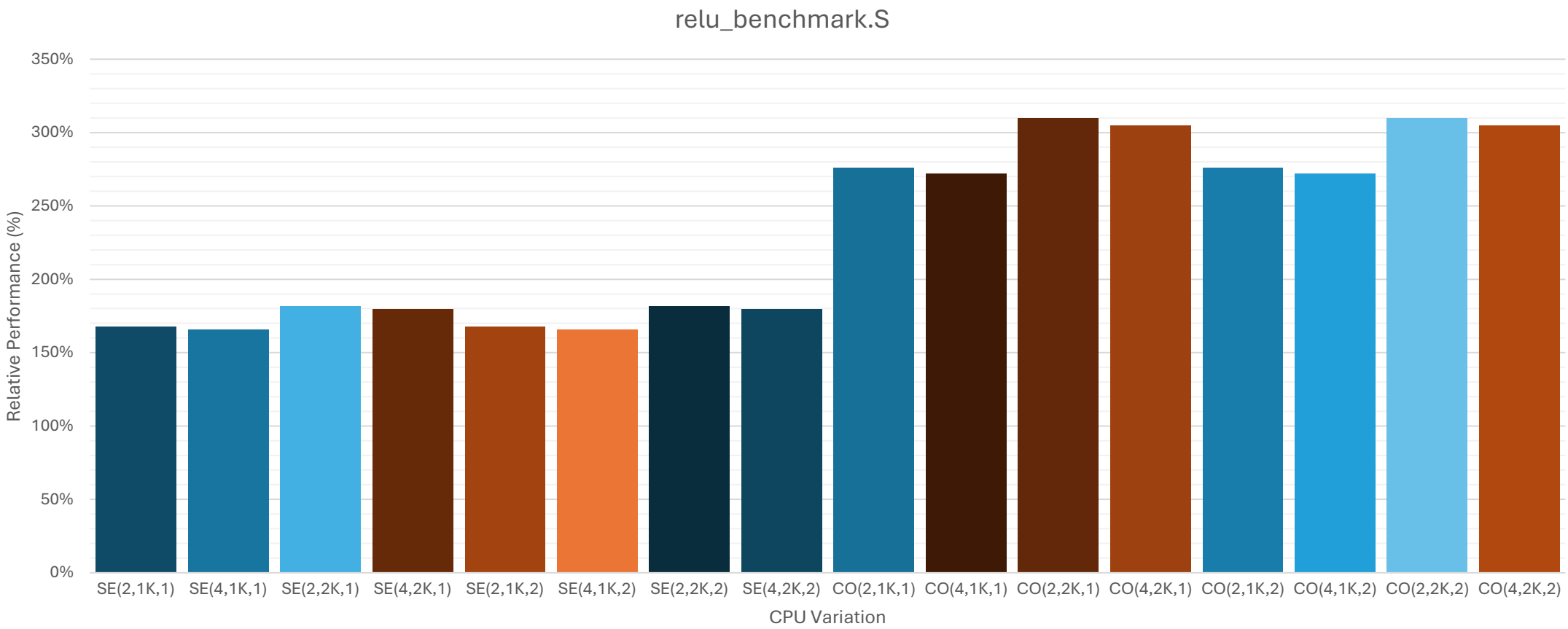
maxpool_benchmark



redsum_benchmark



relu_benchmark



Average Increase