Speedup Analysis

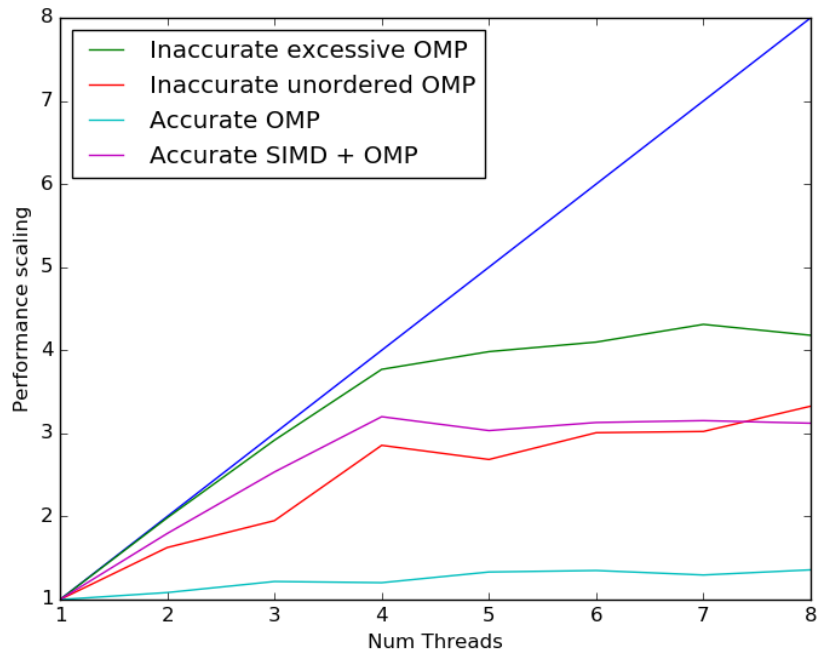| Implementation	Total Time (s)	Speedup (x serial C)	Speedup (x serial Python)
Serial Python	553.949	0.008	1.000
Serial C	4.446	1.000	124.6
OMP	1.987	2.237	278.7
OMP Unordered	0.618	7.196	896.6
OMP Alternate	14.852	0.299	37.30
SIMD + OMP	**0.472**	**9.414**	**1173**
GPU	1.397	3.182	396.5

Multiplicative Speedup over Python Code
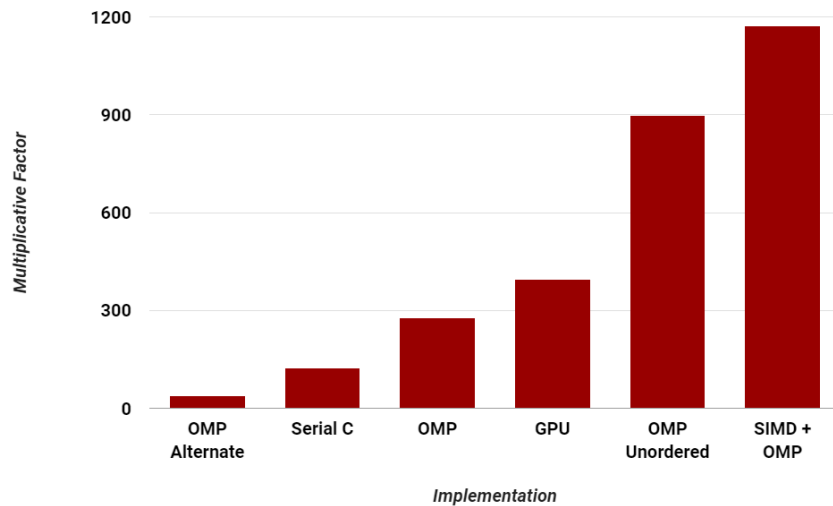
Multiplicative Speedup over C Code
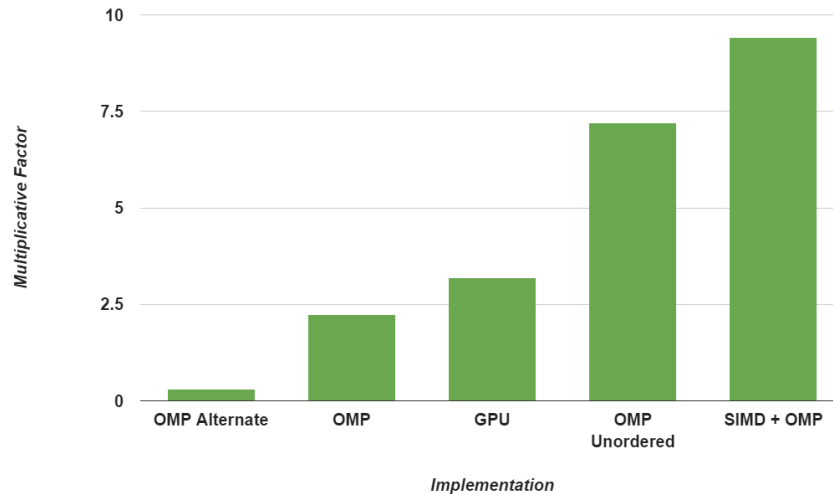
Scaling Plot

Roofline Analysis

- 18% away from peak performance, given our algorithm
- Arithmetic Intensity = 32/20 = 1.6 Flops/Byte
- CPU SIMD Performance = 43.78 GFlops/s
- Possible L3 Performance = 41.6 GFlops/s
- Possible L2 Performance = 52.8 GFlops/s