Running without specifying OMP\_NUM\_THREADS

K = 50

Max Value: 1000

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Point | | | 100 | | |
| Dimensions | 100 | 1000 | | 10000 | 100000 |
| Matrix Calc Time | 0.001135 | 0.010645 | | 0.254758 | 2.189028 |
| Avg. Seeking Time | 0.000011 | 0.000011 | | 0.000011 | 0.000011 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Point | | | 1000 | | |
| Dimensions | 100 | 1000 | | 10000 | 100000 |
| Matrix Calc Time | 0.113594 | 1.07526 | | 12.135 | 114.907067 |
| Avg. Seeking Time | 0.000112 | 0.000112 | | 0.000112 | 0.000112 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Point | | | 10000 | | |
| Dimensions | 100 | 1000 | | 10000 | 100000 |
| Matrix Calc Time | 11.424268 | 115.140866 | | - | - |
| Avg. Seeking Time | 0.001842 | 0.001534 | | - | - |

Running with different number of threads of OMP

Data Point = 10000

Dimension =1000

K = 50

Max. Value = 1000

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # of Threads | 1 | 2 | 4 | 8 | 16 | 32 | 64 | 128 |
| Matrix Calc Time | 112.225433 | 57.634890 | 23.642496 | 12.352129 | 8.208957 | 8.573828 | 10.698535 | 7.235651 |
| Avg. Seeking Time | 0.001507 | 0.001295 | 0.001234 | 0.001228 | 0.024881 | 0.001324 | 0.001685 | 0.001407 |

Running with different number of threads of OMP

Dimension =10

K = 5

Max. Value = 1000

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| # of Threads | 1 | 2 | 4 | 8 | 16 | 32 |
| Data Points | 1000 | 2000 | 4000 | 8000 | 16000 | 32000 |
| Matrix Calc Time | 0.016090 | 0.106470 | 0.226557 | 1.617753 | 6.170178 | 44.985105 |
| Avg. Seeking Time | 0.000111 | 0.000296 | 0.000408 | 0.001045 | 0.026584 | 0.004360 |