

For 1 Thread:

`./omp_optics -i clus50k.txt -m 5 -e 60 -t 1 -o omp_clus50k_mst.o`
Input Parameters: minPts 5 eps 60
Number of threads 1
Reading points from file: clus50k.txt
Points 50000 Dimensions 10
Reading points took 0.198209 seconds.
Building kdtree took 0.0317547 seconds.
Computing local MSTs in parallel took: 11.6925 seconds.
Computing global MST from local MSTs in parallel took: 0.00998149 seconds.
Total time taken by parallel MST based OPTICS: 11.7025 seconds.
Edges in global MST 49950
Saving MST to file took: 0.322207 seconds.

For 2 Threads:

`./omp_optics -i clus50k.txt -m 5 -e 60 -t 2 -o omp_clus50k_mst.o`
Input Parameters: minPts 5 eps 60
Number of threads 2
Reading points from file: clus50k.txt
Points 50000 Dimensions 10
Reading points took 0.215901 seconds.
Building kdtree took 0.0315533 seconds.
Computing local MSTs in parallel took: 6.02965 seconds.
Computing global MST from local MSTs in parallel took: 0.0102017 seconds.
Total time taken by parallel MST based OPTICS: 6.0399 seconds.
Edges in global MST 49950
Saving MST to file took: 0.406089 seconds.

For 4 Threads:

`./omp_optics -i clus50k.txt -m 5 -e 60 -t 4 -o omp_clus50k_mst.o`
Input Parameters: minPts 5 eps 60
Number of threads 4
Reading points from file: clus50k.txt
Points 50000 Dimensions 10
Reading points took 0.21065 seconds.
Building kdtree took 0.0316455 seconds.
Computing local MSTs in parallel took: 3.03715 seconds.
Computing global MST from local MSTs in parallel took: 0.0115989 seconds.
Total time taken by parallel MST based OPTICS: 3.04881 seconds.
Edges in global MST 49950
Saving MST to file took: 0.32929 seconds.

For 8 Threads:

`./omp_optics -i clus50k.txt -m 5 -e 60 -t 8 -o omp_clus50k_mst.o`
Input Parameters: minPts 5 eps 60
Number of threads 8
Reading points from file: clus50k.txt
Points 50000 Dimensions 10
Reading points took 0.198587 seconds.
Building kdtree took 0.0316371 seconds.

Computing local MSTs in parallel took: 1.57136 seconds.
Computing global MST from local MSTs in parallel took: 0.0139104 seconds.
Total time taken by parallel MST based OPTICS: 1.58531 seconds.
Edges in global MST 49950
Saving MST to file took: 0.320913 seconds.

For 16 Threads:

./omp_optics -i clus50k.txt -m 5 -e 60 -t 16 -o omp_clus50k_mst.o
Input Parameters: minPts 5 eps 60
Number of threads 16
Reading points from file: clus50k.txt
Points 50000 Dimensions 10
Reading points took 0.177365 seconds.
Building kdtree took 0.0315605 seconds.
Computing local MSTs in parallel took: 1.06371 seconds.
Computing global MST from local MSTs in parallel took: 0.0195582 seconds.
Total time taken by parallel MST based OPTICS: 1.08331 seconds.
Edges in global MST 49950
Saving MST to file took: 0.328439 seconds.

For 24 Threads:

./omp_optics -i clus50k.txt -m 5 -e 60 -t 24 -o omp_clus50k_mst.o
Input Parameters: minPts 5 eps 60
Number of threads 24
Reading points from file: clus50k.txt
Points 50000 Dimensions 10
Reading points took 0.165422 seconds.
Building kdtree took 0.0319224 seconds.
Computing local MSTs in parallel took: 0.797175 seconds.
Computing global MST from local MSTs in parallel took: 0.0300154 seconds.
Total time taken by parallel MST based OPTICS: 0.827236 seconds.
Edges in global MST 49950
Saving MST to file took: 0.367795 seconds.

For 1 million data objects:

For 1 Thread:

./omp_optics -i test1.txt -m 5 -e 60 -t 1 -o omp_clus50k_mst.o
Input Parameters: minPts 5 eps 60
Number of threads 1
Reading points from file: test1.txt
Points 999999 Dimensions 10
Reading points took 3.56395 seconds.
Building kdtree took 53.4662 seconds.
Computing local MSTs in parallel took: 32.324 seconds.
Computing global MST from local MSTs in parallel took: 0.24263 seconds.
Total time taken by parallel MST based OPTICS: 32.5427 seconds.
Edges in global MST 999998
Saving MST to file took: 5.75953 seconds.

For 2 Threads:

./omp_optics -i test1.txt -m 5 -e 60 -t 2 -o omp_clus50k_mst.o
Input Parameters: minPts 5 eps 60
Number of threads 2
Reading points from file: test1.txt
Points 999999 Dimensions 10
Reading points took 3.43227 seconds.
Building kdtree took 53.4737 seconds.
Computing local MSTs in parallel took: 17.4774 seconds.
Computing global MST from local MSTs in parallel took: 0.23864 seconds.
Total time taken by parallel MST based OPTICS: 17.8204 seconds.
Edges in global MST 999998
Saving MST to file took: 5.79085 seconds.

For 4 Threads:

./omp_optics -i test1.txt -m 5 -e 60 -t 4 -o omp_clus50k_mst.o
Input Parameters: minPts 5 eps 60
Number of threads 4
Reading points from file: test1.txt
Points 999999 Dimensions 10
Reading points took 3.42915 seconds.
Building kdtree took 53.6126 seconds.
Computing local MSTs in parallel took: 8.333 seconds.
Computing global MST from local MSTs in parallel took: 0.283992 seconds.
Total time taken by parallel MST based OPTICS: 8.6172 seconds.
Edges in global MST 999998
Saving MST to file took: 5.74219 seconds.

For 8 Threads:

./omp_optics -i test1.txt -m 5 -e 60 -t 8 -o omp_clus50k_mst.o
Input Parameters: minPts 5 eps 60
Number of threads 8
Reading points from file: test1.txt
Points 999999 Dimensions 10
Reading points took 3.43341 seconds.
Building kdtree took 54.7523 seconds.
Computing local MSTs in parallel took: 4.4402 seconds.
Computing global MST from local MSTs in parallel took: 0.279645 seconds.
Total time taken by parallel MST based OPTICS: 4.7201 seconds.
Edges in global MST 999998
Saving MST to file took: 5.64567 seconds.

For 16 Threads:

./omp_optics -i test1.txt -m 5 -e 60 -t 16 -o omp_clus50k_mst.o
Input Parameters: minPts 5 eps 60
Number of threads 16
Reading points from file: test1.txt
Points 999999 Dimensions 10
Reading points took 3.6267 seconds.

Building kdtree took 54.7544 seconds.
Computing local MSTs in parallel took: 3.8638 seconds.
Computing global MST from local MSTs in parallel took: 0.27745 seconds.
Total time taken by parallel MST based OPTICS: 3.3751 seconds.
Edges in global MST 999998
Saving MST to file took: 5.7425 seconds.

For 24 Threads:

./omp_optics -i test1.txt -m 5 -e 60 -t 24 -o omp_clus50k_mst.o
Input Parameters: minPts 5 eps 60
Number of threads 24
Reading points from file: test1.txt
Points 999999 Dimensions 10
Reading points took 3.3562 seconds.
Building kdtree took 54.4576 seconds.
Computing local MSTs in parallel took: 2.1343 seconds.
Computing global MST from local MSTs in parallel took: 0.289345 seconds.
Total time taken by parallel MST based OPTICS: 2.6512 seconds.
Edges in global MST 999998
Saving MST to file took: 5.7644 seconds.