

Benchmark Raw Data

Number Threads	Number Samples	Number Dimensions	Number Clusters	Spread	Seed	Run Time (s)	Did Reach Convergence?	Iteration Count	Max Centroid Difference
1	1000000	25	50	3.5	1234	150.197	yes	250	0
1	1000000	25	50	3.5	1234	150.37	yes	250	0
1	1000000	25	50	3.5	1234	147.955	yes	250	0
1	1000000	25	50	3.5	1234	147.631	yes	250	0
1	1000000	25	50	3.5	1234	148.533	yes	250	0
1	1000000	25	50	3.5	1234	147.78	yes	250	0
1	1000000	25	50	3.5	1234	147.993	yes	250	0
1	1000000	25	50	3.5	1234	147.573	yes	250	0
1	1000000	25	50	3.5	1234	147.832	yes	250	0
1	1000000	25	50	3.5	1234	148.09	yes	250	0
2	1000000	25	50	3.5	1234	74.8901	yes	250	0
2	1000000	25	50	3.5	1234	75.3035	yes	250	0
2	1000000	25	50	3.5	1234	74.3914	yes	250	0
2	1000000	25	50	3.5	1234	74.3824	yes	250	0
2	1000000	25	50	3.5	1234	74.2317	yes	250	0
2	1000000	25	50	3.5	1234	74.3321	yes	250	0
2	1000000	25	50	3.5	1234	74.2427	yes	250	0
2	1000000	25	50	3.5	1234	74.2887	yes	250	0
2	1000000	25	50	3.5	1234	74.2649	yes	250	0
2	1000000	25	50	3.5	1234	74.2541	yes	250	0
3	1000000	25	50	3.5	1234	49.6321	yes	250	0
3	1000000	25	50	3.5	1234	49.7728	yes	250	0
3	1000000	25	50	3.5	1234	49.951	yes	250	0
3	1000000	25	50	3.5	1234	49.401	yes	250	0
3	1000000	25	50	3.5	1234	49.4516	yes	250	0
3	1000000	25	50	3.5	1234	49.3766	yes	250	0
3	1000000	25	50	3.5	1234	49.3972	yes	250	0
3	1000000	25	50	3.5	1234	49.3619	yes	250	0
3	1000000	25	50	3.5	1234	49.3992	yes	250	0
3	1000000	25	50	3.5	1234	49.3772	yes	250	0
4	1000000	25	50	3.5	1234	37.4253	yes	250	0
4	1000000	25	50	3.5	1234	37.3168	yes	250	0
4	1000000	25	50	3.5	1234	37.2954	yes	250	0
4	1000000	25	50	3.5	1234	37.3251	yes	250	0
4	1000000	25	50	3.5	1234	37.3192	yes	250	0
4	1000000	25	50	3.5	1234	37.3445	yes	250	0
4	1000000	25	50	3.5	1234	37.2388	yes	250	0
4	1000000	25	50	3.5	1234	37.2925	yes	250	0
4	1000000	25	50	3.5	1234	37.351	yes	250	0
4	1000000	25	50	3.5	1234	37.2357	yes	250	0
5	1000000	25	50	3.5	1234	29.918	yes	250	0
5	1000000	25	50	3.5	1234	29.8547	yes	250	0
5	1000000	25	50	3.5	1234	29.8619	yes	250	0
5	1000000	25	50	3.5	1234	29.8742	yes	250	0
5	1000000	25	50	3.5	1234	29.8745	yes	250	0
5	1000000	25	50	3.5	1234	29.7736	yes	250	0
5	1000000	25	50	3.5	1234	29.7754	yes	250	0
5	1000000	25	50	3.5	1234	29.7483	yes	250	0
5	1000000	25	50	3.5	1234	30.0206	yes	250	0
5	1000000	25	50	3.5	1234	29.7446	yes	250	0
5	1000000	25	50	3.5	1234	29.7835	yes	250	0
6	1000000	25	50	3.5	1234	24.8187	yes	250	0
6	1000000	25	50	3.5	1234	24.8102	yes	250	0
6	1000000	25	50	3.5	1234	24.7968	yes	250	0
6	1000000	25	50	3.5	1234	24.8146	yes	250	0
6	1000000	25	50	3.5	1234	24.8279	yes	250	0
6	1000000	25	50	3.5	1234	24.7905	yes	250	0
6	1000000	25	50	3.5	1234	24.7774	yes	250	0
6	1000000	25	50	3.5	1234	24.803	yes	250	0
6	1000000	25	50	3.5	1234	24.813	yes	250	0
6	1000000	25	50	3.5	1234	24.791	yes	250	0
7	1000000	25	50	3.5	1234	21.3777	yes	250	0
7	1000000	25	50	3.5	1234	21.4261	yes	250	0
7	1000000	25	50	3.5	1234	21.2979	yes	250	0
7	1000000	25	50	3.5	1234	21.3308	yes	250	0
7	1000000	25	50	3.5	1234	21.2918	yes	250	0
7	1000000	25	50	3.5	1234	21.2688	yes	250	0
7	1000000	25	50	3.5	1234	21.2804	yes	250	0
7	1000000	25	50	3.5	1234	21.2693	yes	250	0
7	1000000	25	50	3.5	1234	21.2699	yes	250	0
7	1000000	25	50	3.5	1234	21.2876	yes	250	0
8	1000000	25	50	3.5	1234	18.9205	yes	250	0
8	1000000	25	50	3.5	1234	18.8488	yes	250	0
8	1000000	25	50	3.5	1234	18.7427	yes	250	0
8	1000000	25	50	3.5	1234	18.7696	yes	250	0
8	1000000	25	50	3.5	1234	18.8258	yes	250	0
8	1000000	25	50	3.5	1234	18.7464	yes	250	0
8	1000000	25	50	3.5	1234	18.7339	yes	250	0
8	1000000	25	50	3.5	1234	18.7277	yes	250	0
8	1000000	25	50	3.5	1234	18.7351	yes	250	0
8	1000000	25	50	3.5	1234	18.7419	yes	250	0
9	1000000	25	50	3.5	1234	16.8055	yes	250	0
9	1000000	25	50	3.5	1234	16.6196	yes	250	0
9	1000000	25	50	3.5	1234	16.5489	yes	250	0
9	1000000	25	50	3.5	1234	16.5502	yes	250	0
9	1000000	25	50	3.5	1234	16.5464	yes	250	0
9	1000000	25	50	3.5	1234	16.5311	yes	250	0
9	1000000	25	50	3.5	1234	16.5331	yes	250	0
9	1000000	25	50	3.5	1234	16.6002	yes	250	0
9	1000000	25	50	3.5	1234	16.6001	yes	250	0
9	1000000	25	50	3.5	1234	16.6116	yes	250	0
10	1000000	25	50	3.5	1234	15.1372	yes	250	0
10	1000000	25	50	3.5	1234	14.9729	yes	250	0
10	1000000	25	50	3.5	1234	14.9165	yes	250	0
10	1000000	25	50	3.5	1234	14.9776	yes	250	0
10	1000000	25	50	3.5	1234	14.9405	yes	250	0
10	1000000	25	50	3.5	1234	14.9766	yes	250	0
10	1000000	25	50	3.5	1234	14.9959	yes	250	0
10	1000000	25	50	3.5	1234	14.9196	yes	250	0
10	1000000	25	50	3.5	1234	14.9103	yes	250	0
10	1000000	25	50	3.5	1234	14.9265	yes	250	0

Number of Threads	Number of Samples (Average)	Number Dimensions (Average)	Number Clusters (Average)	Spread (Average)	Seed (Average)	Run Time (s) (Average)	Run Time (s) (STDDEV)	Iteration Count (Average)	Speedup	Efficiency	Karp-Flatt
1	1000000	25	50	3.5	1234	148.4354	1.003	250	1.000	100.000%	0.001
2	1000000	25	50	3.5	1234	74.4632	0.368	250	1.993	99.670%	0.003
3	1000000	25	50	3.5	1234	49.47206	0.137	250	3.000	100.013%	-0.000
4	1000000	25	50	3.5	1234	37.31448	0.055	250	3.978	99.449%	0.002
5	1000000	25	50	3.5	1234	29.83018	0.088	250	4.976	99.520%	0.001
6	1000000	25	50	3.5	1234	24.8351	0.057	250	5.977	99.817%	0.001
7	1000000	25	50	3.5	1234	21.3100	0.053	250	6.966	99.507%	0.001
8	1000000	25	50	3.5	1234	18.7791	0.065	250	7.904	98.803%	0.002
9	1000000	25	50	3.5	1234	16.59767	0.083	250	8.943	99.368%	0.001
10	1000000	25	50	3.5	1234	14.9674	0.067	250	9.917	99.173%	0.001

