

Dataset	Objects	Features	Clusters	1% CS								COPKM	LCC	CSC	DILS	KMEAN
				PCCC-N2-S	PCCC-N3-S	PCCC-N4-S	PCCC-N5-S	PCCC-N6-S	PCCC-N2-S-RD							
Bananas	5,300	2	2	6.8	6.6	6.9	6.8	6.7	22.7	—	114.5	3,774.8	3,629.6	0		
Letter20	20,000	16	26	79.4	168.7	231.8	317.2	360.1	260.7	841.7	3,785.3	—	4,568.9	0		
Shuttle57	57,999	9	7	13.3	23.0	40.3	48.5	72.4	35.9	—	—	—	—	0		
CIFAR10	60,000	3,072	10	1,128.2	1,074.9	1,166.0	1,415.7	1,194.0	1,801.4	—	—	—	—	16		
CIFAR100	60,000	3,072	100	3,628.1	2,609.1	3,311.9	3,628.3	3,625.1	3,611.7	—	—	—	—	83		
MNIST70	70,000	784	10	960.4	1,931.3	2,819.8	2,348.1	2,258.1	2,920.2	—	—	—	—	4		
Sum				5,816.2	5,813.6	7,576.7	7,764.6	7,516.3	8,652.5	18,841.7*	18,299.8*	21,774.8*	22,598.5*	105		

*Nan values (—) are replaced with 3,600 before computing the sum.

Table W118: Average running times (in seconds) of the versions of the PCCC algorithm and the four state-of-the-art algorithms (COPKM, CSC, DILS, LCC) for the constraint sets of size 1% CS. Higher values indicate better separated clusters. The lowest values are stated in bold. The column KMEANS reports the average running time of the unconstrained k-means algorithm. The hyphen indicates that the respective algorithm returned no solution within the time limit of 1,800 seconds.