

Dataset	Objects	Features	Clusters	5% CS					DILS
				PCCC-N2-S	PCCC-N2-S-RD	COPKM	LCC	CSC	
Banana	5,300	2	2	0.3	0.3	–	–	4,386.9	4,283.3
Letter	20,000	16	26	128.0	751.7	–	–	–	4,109.1
Shuttle	57,999	9	7	24.1	25.6	–	–	–	–
CIFAR10	10,000	3,072	10	22.2	22.0	–	–	–	–
CIFAR100	10,000	3,072	100	681.2	3,147.0	–	–	–	–
MNIST	10,000	784	10	26.7	26.9	–	–	–	–
Sum				882.5	3,973.5	21,600.0*	21,600.0*	22,386.9*	22,792.4*

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

Table W111: Average running times (in seconds) of the PCCC and the PCCC-R algorithms and the four state-of-the-art algorithms (COPKM, CSC, DILS, LCC) for the constraint sets of size 5% 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.