

# clusters	Image-to-image search						Tag-to-image search			
	10	20	30	40	50	100	10	20	30	40
visual k-means	49.12	48.73	48.73	48.52	48.50	47.58	57.35	56.67	56.47	56.07
k-means	51.60	56.18	57.36	57.45	57.34	57.40	63.23	65.23	67.36	66.76
NC	54.86	62.33	61.90	61.21	60.65	56.65	63.75	76.05	74.90	72.58
NMF	54.01	55.45	57.51	56.63	55.98	53.07	64.44	66.58	67.03	67.41
pLSA	55.40	56.43	57.33	57.62	56.89	54.88	62.45	64.71	64.92	65.76

retrieval with the CCA (V+T+C) model. The second row shows results for visual clusters and the remaining rows for semantic (tag-based) clusters. The results are averaged over five different random initializations of the clustering methods. The performance of the CCA (V+T) baseline is 54.90