Purity-based evaluation for K-means

In this analysis, let **k = r = 3**. The contingency table is shown as follow:

NO.		T_1 iris-setosa	T_2iris-versicolor	T_3 iris-virginica	n	Purity Score
1	C_1	50	0	0	50	0.887
	C_2	0	47	14	47	
	C_3	0	3	36	36	
					133	
2	C_1	0	2	36	36	0.893
	C_2	50	0	0	50	
	C_3	0	48	14	48	
					134	
3	C_1	0	48	14	48	0.893
	C_2	50	0	0	50	
	C_3	0	2	36	36	
					134	
4	C_1	50	0	0	50	0.893
	C_2	0	2	36	36	
	C_3	0	48	14	48	
					134	
5	C_1	0	3	36	36	0.887
	C_2	0	47	14	47	
	C_3	50	0	0	50	
					133	
6	C_1	0	48	14	48	0.893
	C_2	50	0	0	50	
	C_3	0	2	36	36	
					134	
7	C_1	50	0	0	50	0.893
	C_2	0	2	36	36	
	C_3	0	48	14	48	
					134	
8	C_1	0	3	36	36	0.887
	C_2	0	47	14	47	
	C_3	50	0	0	50	
					133	
9	C_1	0	47	50	50	0.667
	C_2	26	3	0	26	
	C_3	24	0	0	24	
					100	
10	C_1	0	48	14	48	0.893
	C_2	0	2	36	36	
	C_3	50	0	0	50	
					134	

The program is run for 10 times, and the best purity score is 0.893.