

Name	Score
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DS103
Fundamentals of Data Science
Exercise on k-Means Clustering

K=4

Dataset	C ₁ =10	C ₂ =12	C ₃ =20	C ₄ =25	Assigned Cluster
2	8	10	18	23	I
4	6	8	16	21	I
10	0	2	10	15	I
12	2	0	8	13	II
3	7	9	17	22	I
20	10	8	0	5	III
30	20	18	10	5	IV
11	1	1	9	14	I
25	15	13	5	0	IV

Dataset	C ₁ =6	C ₂ =12	C ₃ =20	C ₄ =27.5	Assigned Cluster
2	4	10	18	25.5	I
4	2	8	16	23.5	I
10	4	2	10	17.5	II
12	6	0	8	15.5	II
3	3	9	17	24.5	I
20	14	8	0	7.5	III
30	24	18	10	2.5	IV
11	5	1	9	16.5	II
25	19	13	5	2.5	IV

Dataset	C ₁ =3	C ₂ =11	C ₃ =20	C ₄ =27.5	Assigned Cluster
2	1	9	18	25.5	I
4	1	7	16	23.5	I
10	7	1	10	17.5	II
12	9	1	8	15.5	II
3	0	8	17	24.5	I
20	17	9	0	7.5	III
30	27	19	10	2.5	IV

11	8	0	9	16.5	II
25	22	14	5	2.5	IV

Iteration	I	\mathbf{C}_1	II	\mathbf{C}_2	III	\mathbf{C}_3	IV	\mathbf{C}_4
0		10		12		20		25
1	2, 4, 10, 3, 11	6	12	12	20	20	25, 30	27.5
2	2, 4, 3	3	10, 12, 11	11	20	20	30, 25	27.5
3	2, 4, 3	3	10, 12, 11	11	20	20	30, 25	27.5