Ausgnment - 6

Machine learning

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) Mathematical solution

given teuble + Distance Matrix tor Sox Points

1		PIZZ	f2	13	1455	P5 >	16
-	Q,	0.0000	0.7327	0.2218	0.3688	0.3421	0.2347
1	1/2	0.2352	0 0000	0.1483	0-2042	8881.0	0.2540
1	``f3	0.2218	0.1483	0.0000	0-1513	0-2843	0.1100
	fy	0.3688	0.2042	0.1513	0.0000	0.2931	0.2216
1	15	6 - 3421	0.(388	0.2843	0-2932	0.0000	0.3921
	P6	0-2342	0-2540	0.1100	0-2216	0.392	0.0000
A Contract with the last	21					1	1

-> In high linkage the distance between two clusters is minimum distance you the members of two clusters.

So Pair [13 P6] -> 01100 / first cluster)

· •	1 9,	1 1/2	13 96	lu 1	ls.
81	6	0-2357	0.2218	0.3688	0.3421
82	0-23 51	6	0-1483	0-2042	0.1388
13 %	0-22:12	0.1483	200	0:/513 :	0-2843
14 1	0-3688	0.2042	0-1513	0	0-2932
85	0-3471	0.1388	0.2843	0.2932	0
			-	V.	

		.+ Y							i		•
			- 4.4	<u>. 6 . 2</u>	4-1-1						post and the
				하네이네요 교육시휴	12.						
										- \	
	-			2				10.52			
		-			5.6.		881.0	5		21	
G.			2 3	2	, a ali		* + + 17	2962		39	
						1		0	153		
		alejah)			8001		44	071382		0.11	1°
					V Y Y					0.11	
				į	V 18	2	5	071382		0.11	
				ý .		2	5	071383	3	0.11	70
	1887 A			Ÿ	V (V)	2	5	071382	3	0.10	70
				9		2	5	071382 071382 071382	3	0.11	70
				9	V (V)	2	5	071382	3	0.10	70
				9		2	5	071382 071382 071382	3	0.11	

		March control of the	the state of the s				
·	9, 1	12	P3	1 84	P5	1 86	
9,	D	0-2357	0-2218	0-3688	0-3421	0-2349	
12	0-2352	0	0.14.83	0.2042	0.1388	0.254	
P3	0-1213	0.1483	0	0.453	0.2843	0.11	
84	0-36 88	0-2042	0.1513	0	0-2932	0.2216	
Ps	0-3421	0.1388	0.2843	0.2932	0	0392	
P6	0-2349	0-254	(0.1100)	0.2216	0-3921	- 0	

complete linkage is the max distance byen the members of two clusters

here 13 4 P6 forms the 1st chapter

-		<u> </u>				32 31 31	
		ρ ρ,	l ₂	P3 P6	14	95	
	P	0	0.2352	0-2342	0-3688	0.3421	
	P2.	0-2352	0	0-254	02042	0.1388	
	1386	0-2342	0-254	0	1.2216	0-3921	
	184	0-3888	0-2042	0.2216	0	0-2932	
	P5	0.3421	0-1387	0-3921	0-2932	0	
				thoughton			

Abou 12/15 for the second cluster

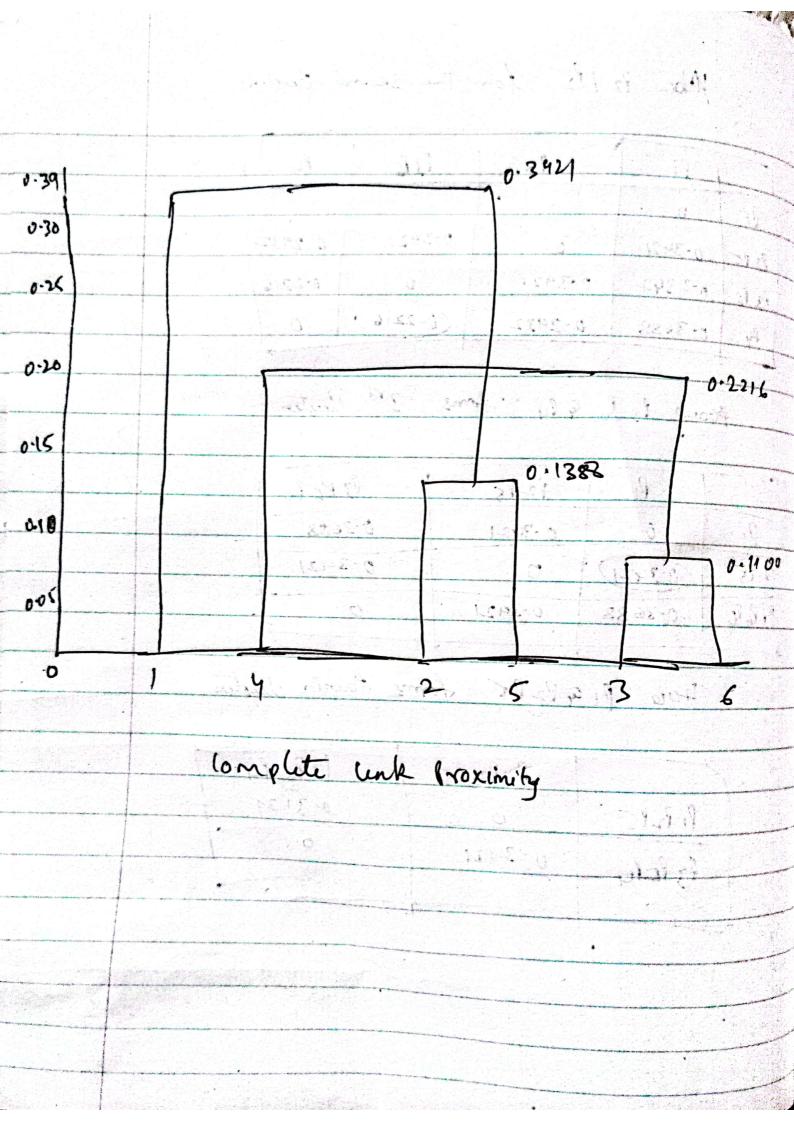
	Pi	1215	136	Py \
0,	0		and the same of th	
1215	0-3421	0	0-3921	0-2932
13 %	0-2347	0.3921	0	0.2216
Ry	0-3688	0-2932	0-2216	0

Adow 13 8 4 Ry forms 3rd cluster

	And the second section in the second	The state of the s	the state of the s	
	P ₁	1275	13 P6 14	
PI	6	0.3421	0.3688	
P2 85	0.3421)	D	0.3921	
P3 P6 P4	0.3688	0-3921	O	
L. L.				

Hore PiaP2P6 forms fourth cluster

1	P1 P2 P5	1386 84
Piles	0	0.3121
er le le	0.3121	0
1 3.0 4		



In Average link Proximity we use the average of the distance between members of two Mustons

	R1 1	12	P3 . 1	الأ	P5 1	PG
Pı	0.0000	0-2354	02218	0.3618	0-3424	0.2347
12	0-2357	0. 0000	0.1483	8-2042	0.1388	0.2540
13	02218	0.1413	0.0000	0.1813	0-2843	0: (100)
Py	0.3688	0.5045	0.1513	0.000	0.2932	D. 2216
15	0.36A	0-1388	0.2843	0:2932	0 2000	0.3421
96	0.2344	0-2140	0.1100	0.2216	0-3421	0.000

Now 13 and 86 terms the tirst claster

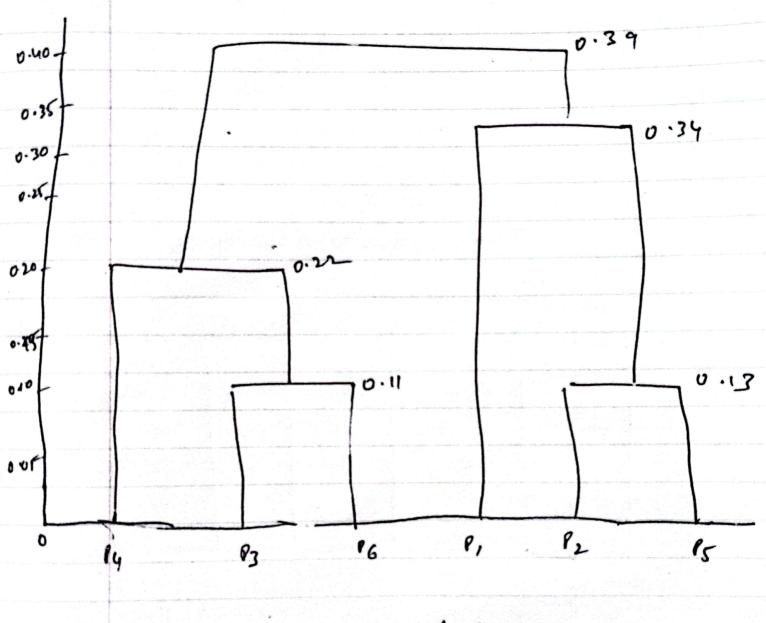
[0,]		0 04			
	Contract of the Contract of the	P3 P6	P4	15	
0 1 2	85-5		o . t	4.0	5
0.2364	0	0.2015	0.2042	Sid B	
022825	0.20115	0	0.18645	0.3382	
0.3688	0.2012	0.18645	0		
0.3421	0.1388	0.3382	0.2932	1.10	
		<u>Y</u>	<u>}</u>		
	0.3688	0.3688 0.20115	0.3688 0.2015 0	0.3688 0.2015 0 0.18645	0.3688 0.2015 0 0.18645 0.3382

Here 12 and 15 Boms the second claster

1. 1 P2 P5 1 P3 P611 P2 P5 0.2889 0 0.269875 02487 0-18645 8386 0-2282 026967 0 0-3421 (0.2437 (2.18647) 0 136 4.19 Now lets states forms a duster 12/5 / 13/6/4 Q, 0-2815 1285 0-2839 0-25 9184 0 0-2815 (0-2591845) Palchy D 57981.0 THE B. XX.25-6 here P2PT by 13P6 by forms a cluster 12/5 /3/6 Py elle o minima 60-285 0.285 12/5 13/6 kg 0

rivers into some and

and any court is consumed mountains among



complete les kage