K-NN RUSPINI DATASET NUR ROSYID M

RUSPINI DATASET

Data Training
Data Testing

#	Х	Υ	CLASS
1	4	53	1
2	5	63	1
3	10	59	1
4	9	77	1
5	13	49	1
6	13	69	1
7	12	88	1
8	15	75	1
9	18	61	1
10	19	65	1
11	22	74	1
12	27	72	1
13	28	76	1
14	24	58	1
15	27	55	1
16	28	60	1
17	30	52	1
18	31	60	1
19	32	61	1
20	36	72	1

#	Х	Υ	CLASS
1	86	132	2
2	85	115	2
3	85	96	2
4	78	94	2
5	74	96	2
6	97	122	2
7	98	116	2
8	98	124	2
9	99	119	2
10	99	128	2
11	101	115	2
12	108	111	2
13	110	111	2
14	108	116	2
15	111	126	2
16	115	117	2
17	117	115	2

#	Х	Υ	CLASS
1	28	147	3
2	32	149	3
3	35	153	3
4	33	154	3
5	38	151	3
6	41	150	3
7	38	145	3
8	38	143	3
9	32	143	3
10	34	141	3
11	44	156	3
12	44	149	3
13	44	143	3
14	46	142	3
15	47	149	3
16	49	152	3
17	50	142	3
18	53	144	3
19	52	152	3
20	55	155	3
21	54	124	3
22	60	136	3
23	63	139	3

#	X	Υ	CLASS
1	70	4	4
2	77	12	4
3	83	21	4
4	61	15	4
5	69	15	4
6	78	16	4
7	66	18	4
8	58	13	4
9	64	20	4
10	69	21	4
11	66	23	4
12	61	25	4
13	76	27	4
14	72	31	4
15	64	30	4

DATA TRAINING 75% DAN DATA TESTING 25% HOLDOUT METHOD

data trainir	ng 75%		
1	4	53	1
2	5	63	1
3	10	59	1
4	9	77	1
5	13	49	1
6	13	69	1
7	12	88	1
8	15	75	1
9	18	61	1
10	19	65	1
11	22	74	1
12	27	72	1
13	28	76	1
14	24	58	1
15	27	55	1
16	86	132	2
17	85	115	2
18	85	96	2
19	78	96	2
20	74	96	2
21	97	122	2
22	98	116	
			2
23 24	98	124	2
		119	
25	99	128	2
26	101	115	2
27	108	111	2
28	110	111	
29	28	147	3
30	32	149	3
31	35	153	
32	33	154	3
33	38	151	3
34	41	150	
35 36	38 38	145 143	3
37	38	143	3
38	34	143	3
	44		3
39		156	
40	44	149	3
41 42	44	143 142	3
42			3
44	47	149 152	3
	-		
45	50	142	3
46 47	53	144	4
	70	4	4
48	77	12	
49	83	21	4
50 51	61 69	15 15	4
			4
52	78	16	4
53	66	18	
54	58	13	4
55	64	20	
56	69	21	4
57	66	23	4
58	61	25	4

data testin	g 25%		
1	28	60	1
2	30	52	1
3	31	60	1
4	32	61	1
5	36	72	1
6	108	116	2
7	111	126	2
8	115	117	2
9	117	115	2
10	52	152	3
11	55	155	3
12	54	124	3
13	60	136	3
14	63	139	3
15	76	27	4
16	72	31	4
17	64	30	4

1	28	60	1			
#	Х	Υ	CLASS	Jarak	kelas asal	1
14	24	58	1	4,472	kelas hasil	1
15	27	55	1	5,099		
9	18	61	1	10,050	hasil	benar
10	19	65	1	10,296		
12	27	72	1	12,042		
11	22	74	1	15,232		
13	28	76	1	16,000		
6	13	69	1	17,493		
3	10	59	1	18,028		
5	13	49	1	18,601		
8	15	75	1	19,849		
2	5	63	1	23,195		
1	4	53	1	25,000		
4	9	77	1	25,495		
7	12	88	1	32,249		
58	61	25	4	48,104		
57	66	23	4	53,038		

2	30	52	1			
#	Х	Υ	CLASS	Jarak	kelas asal	1
15	27	55	1	4,243	kelas hasil	1
14	24	58	1	8,485		
9	18	61	1	15,000	hasil	benar
10	19	65	1	17,029		
5	13	49	1	17,263		
12	27	72	1	20,224		
3	10	59	1	21,190	ALC: N	
11	22	74	1	23,409		
6	13	69	1	24,042		
13	28	76	1	24,083		
1	4	53	1	26,019		
2	5	63	1	27,313		
8	15	75	1	27,459		
4	9	77	1	32,650		
7	12	88	1	40,249		
58	61	25	4	41,110		
57	66	23	4	46,228		

3	31	60	1					4	32	61	1			
#	Х	Υ	CLASS	Jarak	kelas	asal 1	1	#	Х	Υ	CLASS	Jarak	kelas asal	1
15	27	55	1	6,403	kelas	hasil 1	1	15	27	55	1	7,810	kelas hasil	1
14	24	58	1	7,280				14	24	58	1	8,544		
12	27	72	1	12,649	hasil	benar		12	27	72	1	12,083	hasil	benar
10	19	65	1	13,000				10	19	65	1	13,601		
9	18	61	1	13,038				9	18	61	1	14,000		
13	28	76	1	16,279				13	28	76	1	15,524		
11	22	74	1	16,643				11	22	74	1	16,401		
6	13	69	1	20,125				6	13	69	1	20,616		
3	10	59	1	21,024				8	15	75	1	22,023		
5	13	49	1	21,095				3	10	59	1	22,091		
8	15	75	1	21,932				5	13	49	1	22,472		
2	5	63	1	26,173				2	5	63	1	27,074		
4	9	77	1	27,803				4	9	77	1	28,018		
1	4	53	1	27,893				1	4	53	1	29,120		
7	12	88	1	33,838				7	12	88	1	33,601		
58	61	25	4	46,098				58	61	25	4	46,228		
57	66	23	4	50,931				57	66	23	4	50,990		

5	36	72	1				6	108	116	2			
			14										
#	Х	Υ	CLASS	Jarak	kelas asal	1	#	Х	Υ	CLASS	Jarak	kelas asal	2
13	28	76	1	8,944	kelas hasil	1	27	108	111	2	5,000	kelas hasi	1 2
12	27	72	1	9,000			28	110	111	2	5,385		
11	22	74	1	14,142	hasil benar		26	101	115	2	7,071	hasil	benar
10	19	65	1	18,385			24	99	119	2	9,487		
14	24	58	1	18,439			22	98	116	2	10,000		
15	27	55	1	19,235			21	97	122	2	12,530		
9	18	61	1	21,095			23	98	124	2	12,806		
8	15	75	1	21,213			25	99	128	2	15,000		
6	13	69	1	23,195			17	85	115	2	23,022		
4	9	77	1	27,459			16	86	132	2	27,203		
7	12	88	1	28,844			18	85	96	2	30,480		
3	10	59	1	29,069			19	78	94	2	37,202		
2	5	63	1	32,280			20	74	96	2	39,446		
5	13	49	1	32,527			46	53	144	3	61,717		
1	4	53	1	37,216			45	50	142	3	63,561		
20	74	96	2	44,944			42	46	142	3	67,231		
19	78	94	2	47,413			44	49	152	3	69,116		

7	111	126	2				8	115	117	2			
l la com													
#	Х	Υ	CLASS	Jarak	kelas asal	2	#	Х	Υ	CLASS	Jarak	kelas asal	2
25	99	128	2	12,166	kelas hasil	2	28	110	111	2	7,810	kelas hasil	2
23	98	124	2	13,153			27	108	111	2	9,220		
24	99	119	2	13,892	hasil	benar	26	101	115	2	14,142	hasil	benar
21	97	122	2	14,560			24	99	119	2	16,125		
26	101	115	2	14,866			22	98	116	2	17,029		
28	110	111	2	15,033			23	98	124	2	18,385		
27	108	111	2	15,297			21	97	122	2	18,682		
22	98	116	2	16,401			25	99	128	2	19,416		
16	86	132	2	25,710			17	85	115	2	30,067		1977
17	85	115	2	28,231			16	86	132	2	32,650		
18	85	96	2	39,699			18	85	96	2	36,620		
19	78	94	2	45,967			19	78	94	2	43,566		
20	74	96	2	47,634			20	74	96	2	46,065		
46	53	144	3	60,729			46	53	144	3	67,624		

9	117	115	2				10	52	152	3			
#	Х	Υ	CLASS	Jarak	kelas asal	2	#	Х	Υ	CLASS	Jarak	kelas asal	3
28	110	111	2	8,062	kelas hasi	1 2	44	49	152	3	3,000	kelas hasil	3
27	108	111	2	9,849			43	47	149	3	5,831		
26	101	115	2	16,000	hasil	benar	46	53	144	3	8,062	hasil	benar
24	99	119	2	18,439			40	44	149	3	8,544		
22	98	116	2	19,026			39	44	156	3	8,944		
23	98	124	2	21,024			45	50	142	3	10,198		
21	97	122	2	21,190			34	41	150	3	11,180		
25	99	128	2	22,204			42	46	142	3	11,662		
17	85	115	2	32,000			41	44	143	3	12,042		
16	86	132	2	35,355			33	38	151	3	14,036		
18	85	96	2	37,216			35	38	145	3	15,652		
19	78	94	2	44,294			36	38	143	3	16,643		
20	74	96	2	47,011			31	35	153	3	17,029		
46	53	144	3	70,264			32	33	154	3	19,105		BOT I
45	50	142	3	72,236			30	32	149	3	20,224		
42	46	142	3	75,961			38	34	141	3	21,095		

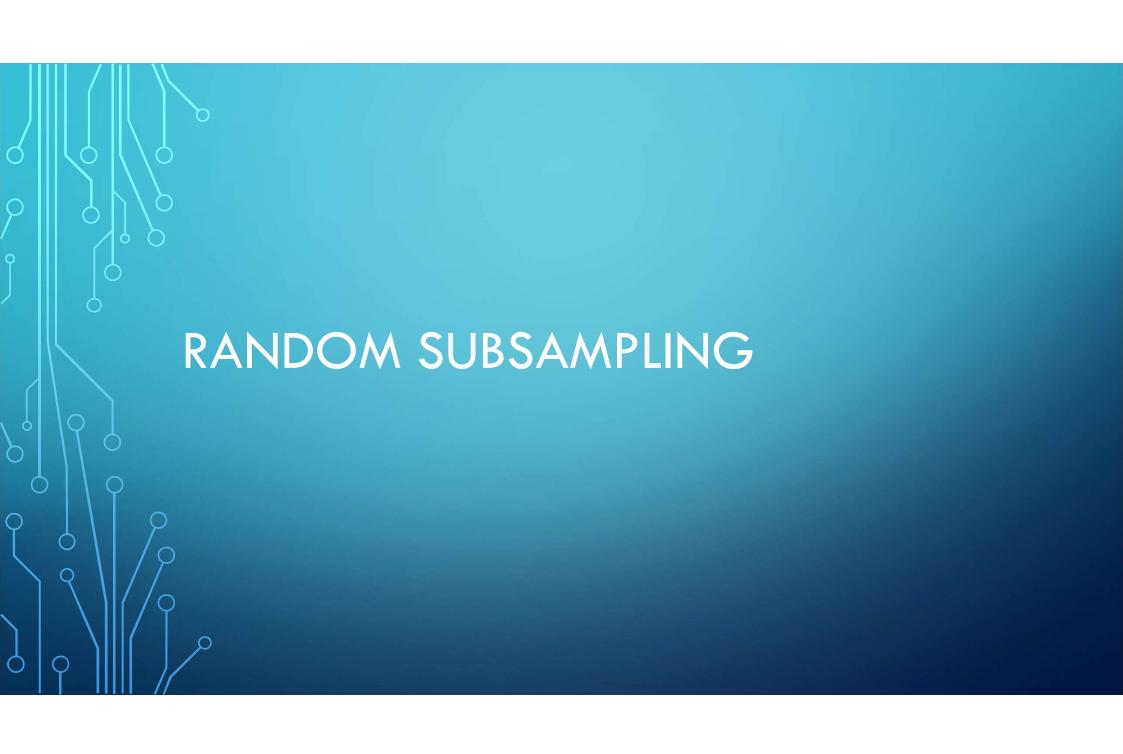
11	55	155	3				12	54	124	3			
		T _e	L.										
#	Х	Υ	CLASS	Jarak	kelas asal	3	#	Х	Υ	CLASS	Jarak	kelas asal	3
44	49	152	3	6,708	kelas hasil	3	45	50	142	3	18,439	kelas hasil	
43	47	149	3	10,000			42	46	142	3	19,698		
39	44	156	3	11,045	hasil	benar	46	53	144	3	20,025	hasil	benar
46	53	144	3	11,180			41	44	143	3	21,471		
40	44	149	3	12,530			36	38	143	3	24,839		
45	50	142	3	13,928			43	47	149	3	25,962		
34	41	150	3	14,866			38	34	141	3	26,249		
42	46	142	3	15,811			35	38	145	3	26,401		
41	44	143	3	16,279			40	44	149	3	26,926		
33	38	151	3	17,464			44	49	152	3	28,443		
35	38	145	3	19,723			34	41	150	3	29,069		
31	35	153	3	20,100			37	32	143	3	29,069		
36	38	143	3	20,809			33	38	151	3	31,385		
32	33	154	3	22,023			17	85	115	2	32,280		
30	32	149	3	23,770			16	86	132	2	32,985		
38	34	141	3	25,239			30	32	149	3	33,302		
37	32	143	3	25,942			39	44	156	3	33,526		
29	28	147	3	28,160			20	74	96	2	34,409		

13	60	136	3				14	63	139	3			
#	X	Υ	CLASS	Jarak	kelas asal	3	#	X	Υ	CLASS	Jarak	kelas asal	3
46	53	144	3	10,630	kelas hasil	3	46	53	144	3	11,180	kelas hasil	3
45	50	142	3	11,662			45	50	142	3	13,342		
42	46	142	3	15,232	hasil	benar	42	46	142	3	17,263	hasil	benar
41	44	143	3	17,464			43	47	149	3	18,868		
43	47	149	3	18,385			44	49	152	3	19,105		
44	49	152	3	19,416			41	44	143	3	19,416		
40	44	149	3	20,616			40	44	149	3	21,471		
36	38	143	3	23,087			16	86	132	2	24,042		开
34	41	150	3	23,601			34	41	150	3	24,597		
35	38	145	3	23,770			36	38	143	3	25,318		
39	44	156	3	25,612			39	44	156	3	25,495		
16	86	132	2	26,306			35	38	145	3	25,710		
38	34	141	3	26,476			33	38	151	3	27,731		
33	38	151	3	26,627			38	34	141	3	29,069		
37	32	143	3	28,862			37	32	143	3	31,257		
31	35	153	3	30,232			31	35	153	3	31,305		
30	32	149	3	30,871			17	85	115	2	32,558		
32	33	154	3	32,450			30	32	149	3	32,573		
17	85	115	2	32,650			32	33	154	3	33,541		

Jarak Jarak # Χ Υ CLASS kelas asal # Х Υ CLASS kelas asal kelas hasil 10,000 kelas hasil 9,220 10,440 9,220 10,770 hasil 12,530 hasil benar benar 11,180 13,601 13,454 14,318 13,892 14,866 13,892 16,155 15,033 16,279 15,133 19,416 19,209 19,647 22,804 22,804 27,074 23,770 56,436 51,000 60,539 55,073 66,528 60,877 66,731 61,685 67,030 61,774 67,231 62,936 68,505 62,968 68,593 63,285

17	64	30	4				
#	Х	Υ	CLASS	Jarak	kelas asal	4	
58	61	25	4	5,831	kelas hasil	4	
57	66	23	4	7,280			
55	64	20	4	10,000	hasil	benar	
56	69	21	4	10,296			
53	66	18	4	12,166			
50	61	15	4	15,297			
51	69	15	4	15,811			
54	58	13	4	18,028			
52	78	16	4	19,799			
49	83	21	4	21,024			
48	77	12	4	22,204			
47	70	4	4	26,683			
15	27	55	1	44,654			
14	24	58	1	48,826			
5	13	49	1	54,424			
9	18	61	1	55,471			
12	27	72	1	55,973			
10	19	65	1	57,009			
13	28	76	1	58,412			
11	22	74	1	60,828			

3-NN, 7-NN • Hasilnya sama dengan 1 –NN • Data Ruspini terpisah secara sempurna



RANDOM SUBSAMPLING

RUSPINI DATASET

Data Training 80%
Data Testing 20%

#	Х	Υ	CLASS
1	4	53	1
2	5	63	1
3	10	59	1
4	9	77	1
5	13	49	1
6	13	69	1
7	12	88	1
8	15	75	1
9	18	61	1
10	19	65	1
11	22	74	1
12	27	72	1
13	28	76	1
14	24	58	1
15	27	55	1
16	28	60	1
17	30	52	1
18	31	60	1
19	32	61	1
20	36	72	1

#	Х	Υ	CLASS
1	86	132	2
2	85	115	2
3	85	96	2
4	78	94	2
5	74	96	2
6	97	122	2
7	98	116	2
8	98	124	2
9	99	119	2
10	99	128	2
11	101	115	2
12	108	111	2
13	110	111	2
14	108	116	2
15	111	126	2
16	115	117	2
17	117	115	2

#	X	Υ	CLASS
1	28	147	3
2	32	149	3
3	35	153	3
4	33	154	3
5	38	151	3
6	41	150	3
7	38	145	3
8	38	143	3
9	32	143	3
10	34	141	3
11	44	156	3
12	44	149	3
13	44	143	3
14	46	142	3
15	47	149	3
16	49	152	3
17	50	142	3
18	53	144	3
19	52	152	3
20	55	155	3
21	54	124	3
22	60	136	3
23	63	139	3

#	Х	Υ	CLASS	
1	70	4	4	
2	77	12	4	
3	83	21	4	
4	61	15	4	
5	69	15	4	
6	78	16	4	
7	66	18	4	
8	58	13	4	
9	64	20	4	
10	69	21	4	
11	66	23	4	
12	61	25	4	
13	76	27	4	
14	72	31	4	
15	64	30	4	

RANDOM SUBSAMPLING EXP 1

4	9	77	1	
		Tage 1		
#	Х	Υ	CLASS	Jarak
6	13	69	1	8,944
7	12	88	1	11,402
11	22	74	1	13,342
2	5	63	1	14,560
10	19	65	1	15,620
3	10	59	1	18,028
9	18	61	1	18,358
12	27	72	1	18,682
13	28	76	1	19,026

8	15	75	1	
#	Х	Υ	CLASS	Jarak
6	13	69	1	6,325
11	22	74	1	7,071
10	19	65	1	10,770
12	27	72	1	12,369
13	28	76	1	13,038
7	12	88	1	13,342
9	18	61	1	14,318
2	5	63	1	15,620
3	10	59	1	16,763
16	28	60	1	19,849
20	36	72	1	21,213

	14	24	58	1	
ļ					
5	# ~	ΧΨ	Ϋ́	CLASS ~	Jarak↓↑
2	15	27	55	1	4,243
)	16	28	60	1	4,472
9	9	18	61	1	6,708
3	18	31	60	1	7,280
2	19	32	61	1	8,544
3	10	19	65	1	8,602
3	3	10	59	1	14,036
9	5	13	49	1	14,213
3	12	27	72	1	14,318
					-

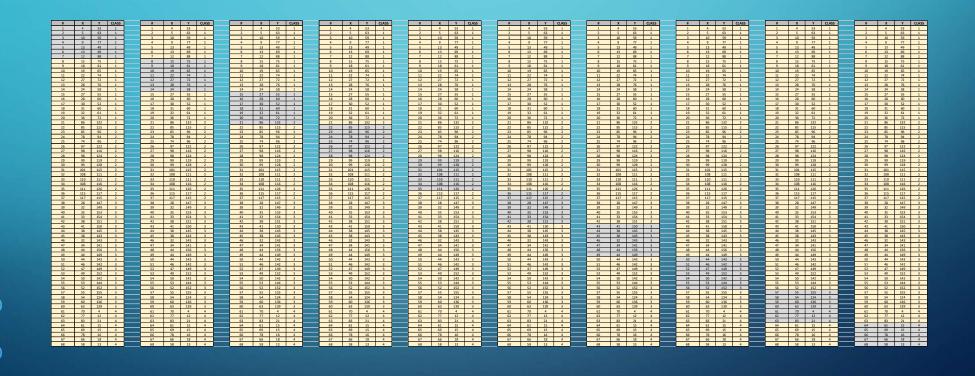
	6	97	122	2	
I					
ı	#	Х	Υ	CLASS	Jarak
	8	98	124	2	2,236
	9	99	119	2	3,606
	7	98	116	2	6,083
	10	99	128	2	6,325
	11	101	115	2	8,062
	14	108	116	2	12,530
	2	85	115	2	13,892
	15	111	126	2	14,560
	1	86	132	2	14,866

12	108	111	2	
#	X	Υ	CLASS	Jarak
13	110	111	2	2,000
14	108	116	2	5,000
11	101	115	2	8,062
17	117	115	2	9,849
7	98	116	2	11,180
9	99	119	2	12,042
15	111	126	2	15,297
8	98	124	2	16,401
10	99	128	2	19,235
2	85	115	2	23,345

16	115	117	2	
1	4,5			
#	Х	Υ	CLASS	Jarak
17	117	115	2	2,828
14	108	116	2	7,071
13	110	111	2	7,810
15	111	126	2	9,849
11	101	115	2	14,142
9	99	119	2	16,125
7	98	116	2	17,029
8	98	124	2	18,385
10	99	128	2	19,416
2	85	115	2	30,067



K-FOLD CROSS VALIDATION





LEAVE-ONE-OUT CROSS VALIDATION

+	X	Y CLASS	ŧ	X	Y	CLASS	1		X	Y	LASS	ŧ	χ	γ	CLASS	ŧ	X	Y	CLASS	ŧ	X	Y	CLASS	ŧ	X	γ	CLASS	ŧ	X	Y	CLASS	‡	X	Y	CLASS	;	X	γ (CLASS	
1	4	53 1	1	4	53	1	1		4	53	1	1	4	53	1	1	4	53	1	1	4	53	1	1	4	53	1	1	4	53	1	1	4	53	1	1	4	53	1	
2	5	63 1	2	5	63	1	2		5	63	1	2	5	63	1	2	5	63	1	2	5	63	1	2	5	63	1	2	5	63	1	2	5	63	1	2	5	63	1	
3	10	59 1	3	10	59	1	3		10	59	1	3	10	59	1	3	10	59	1	3	10	59	1	3	10	59	1	3	10	59	1	3	10	59	1	3	10	59	1	
4	9	77 1	4	9	17	1	4		9	77	1	4	9	11	1	4	9	77	1	4	9	77	1	4	9	77	1	4	9	77	1	4	9	77	1	4	9	77	1	
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