Data domain

Features: Zero, One, Two, Three, Four, Five, Six, Seven, Eight, Nine, Ten, Eleven, Twelve, Thirteen, Fourteen, Fifteen, Sixteen, Seventeen, Eighteen (total: 19 features)
Target: Cluster2

Rule induction algorithm

Rule ordering: unordered
Covering algorithm: weighted
Gamma: 0.7
Evaluation measure: wracc
Beam width: 5
Minimum rule coverage: 1
Maximum rule length: 5
Default alpha: 1.0
Parent alpha: 1.0

Induced rules

	IF conditions		THEN class	Distribution	Probabilities [%]	Quality	Length
	Seven≤0.931773556 AND Four≤-0.175690617 AND Fifteen≥-2.289481746 AND Nine≥-2.7679664 AND One≤2.633477088	→	Cluster2=1	[989, 705]	58 : 42	0.084	5
1	Four≤-0.461010186 AND Seven≤0.844397038 AND Nine≥-2.7679664 AND Eleven≤2.89772573 AND Seventeen≥-2.844221816	→	Cluster2=1	[641.3, 556.0]	54 : 46	0.061	5
2	Seven≤0.935537454 AND Four≤-0.211821145 AND Seven≤0.048806696 AND One≤2.633477088	→	Cluster2=1	[405.2, 407.0]	50 : 50	0.042	4
3	Fifteen≥-1.194909852 AND Four≥1.710508525 AND Seven≥-1.346254302 AND Six≤2.578520921	→	Cluster2=1	[315.0, 177.0]	64 : 36	0.044	4
4	Fifteen≥-1.194909852 AND Fifteen≤0.563215906 AND Three≤2.234410434 AND Eighteen≥-2.41675694 AND Zero≥-2.952728135	→	Cluster2=1	[483.1, 997.0]	33 : 67	0.034	5
5	Four≤-0.461010186 AND Seven≤0.575300396 AND Seventeen≥-2.611970627 AND Eleven≤3.047406494 AND One≥-2.115129896	→	Cluster2=1	[291.4, 459.0]	39 : 61	0.034	5
6	Fifteen≥-2.650595749 AND Four≥1.915819513 AND Seven≥-1.629609543 AND Six≤2.979302058	→	Cluster2=1	[178.9, 152.0]	54 : 46	0.029	4
7	Four≤-0.445310971 AND Seven≤1.489051355 AND Three≤2.422934991 AND Fifteen≥-2.612400144 AND Eleven≥-1.785789034	→	Cluster2=1	[273.0, 737.0]	27 : 73	0.025	5
8	Four≥1.307863548 AND Seven≤-0.597371308 AND Fifteen≤-0.185583218 AND Seventeen≥-2.179585372	→	Cluster2=1	[135.0, 107.0]	56 : 44	0.025	4
9	Fifteen≤1.024317894 AND Fifteen≥-2.650595749 AND Fifteen≤-0.99821052 AND Three≤2.307330918	→	Cluster2=1	[329.5, 1331.0]	20 : 80	0.023	4
10	Fifteen≥-2.650595749 AND Four≥2.393726282	→	Cluster2=1	[74.2, 81.0]	48 : 52	0.015	2
11	Fifteen≥-2.650595749 AND Four≤-0.028427013 AND Three≤2.816682647	→	Cluster2=1	[252.9, 1380.0]	16 : 84	0.016	3
12	Fifteen≥-2.650595749 AND Fifteen≤0.758689027 AND Fifteen≥-0.505567426 AND Four≥-1.530515213 AND Eighteen≥-2.41675694	→	Cluster2=1	[137.8, 787.0]	15 : 85	0.012	5
13	Fifteen≥-2.650595749 AND Four≤-0.770421093 AND Seven≤0.105112835 AND Seventeen≥-2.583749729	→	Cluster2=1	[67.4, 276.0]	20 : 80	0.010	4
14	Fifteen≥-2.650595749 AND Fifteen≤0.281653976 AND Zero≤1.073480029 AND Sixteen≤1.133924468 AND Fifteen≥-2.289481746	→	Cluster2=1	[122.9, 885.0]	12 : 88	0.010	5
15	Four≥2.774184617 AND Nine≥2.265302504 AND Three≥-2.158462583 AND Seven≥-3.204131886	→	Cluster2=1	[29.1, 14.0]	67 : 33	0.007	4
16	Fifteen≥-2.650595749 AND Seven≥0.118917937 AND Fifteen≤1.40774388 AND Sixteen≥-1.370869161 AND Eighteen≥1.771075706	→	Cluster2=1	[113.4, 923.0]	11 : 89	0.010	5
17	Fifteen≥-2.650595749 AND Two≥1.014417886 AND Fifteen≥-0.984026296 AND Seven≤2.173441454 AND Nine≥-1.291991847	→	Cluster2=1	[151.1, 1778.0]	8 : 92	0.008	5
18	Fifteen≥-2.650595749 AND Nine≥1.689985486 AND Twelve≥0.836879627 AND Eighteen≤1.904756889 AND Six≥-1.152462246	→	Cluster2=1	[125.7, 1975.0]	6 : 94	0.005	5
19	Eight≤-0.064950989 AND Fifteen≥-2.650595749 AND Three≤2.174559695 AND Seventeen≤1.231688959 AND Thirteen≤0.061591594	→	Cluster2=1	[40.5, 613.0]	6 : 94	0.004	5
20	Twelve≥0.406945596 AND Fifteen≥-2.357380346 AND One≥-1.591591216 AND Seven≤3.110803921 AND Seven≥-0.842220006	→	Cluster2=1	[37.7, 663.0]	6 : 94	0.003	5
21	Twelve≤0.148214007 AND Three≤-0.359546521 AND Fifteen≥-2.632040893 AND Seven≤2.854045266 AND Nine≥1.124752908	→	Cluster2=1	[26.7, 482.0]	5 : 95	0.003	5
22	Six≤-0.305457087 AND Fifteen≥-2.394109125 AND Thirteen≥-1.806986234 AND Twelve≤0.61476046 AND Three≥-1.371713044	→	Cluster2=1	[32.6, 684.0]	5 : 95	0.003	5
23	Six≥0.903693536 AND Fourteen≤1.272154533 AND Fifteen≥-2.632040893 AND Nine≤1.17198601 AND Eight≥-2.15967574	→	Cluster2=1	[19.7, 408.0]	5 : 95	0.002	5
24	Fifteen≥-2.289481746 AND Twelve≥0.044790513 AND Three≥-0.015392368 AND Six≥-0.553938286 AND Seven≥-2.120032051	→	Cluster2=1	[20.8, 426.0]	5 : 95	0.002	5
25	Eighteen≥0.30051367 AND Fifteen≥-2.2848328 AND Fourteen≤0.39291639 AND Five≥-2.043793018 AND Eleven≥2.698662735	→	Cluster2=1	[25.9, 723.0]	4 : 96	0.002	5
26	Eighteen≤-0.072519922 AND Fifteen≥-2.289481746 AND Ten≥1.89468137 AND Five≥-1.121099374 AND Nine≥1.657659501	→	Cluster2=1	[34.7, 1097.0]	3 : 97	0.002	5
27	Fifteen≥-2.650595749 AND Zero≤0.876027406 AND Eighteen≥-0.326534544 AND One≤1.48261897 AND Eleven≥-1.95304858	→	Cluster2=1	[39.5, 1471.0]	3 : 97	0.002	5
28	Seven≤1.253706514 AND Six≥-1.645483871 AND Seventeen≤1.966786791 AND Fifteen≥-0.335718587	→	Cluster2=1	[36.5, 1631.0]	2 : 98	0.002	4
29	Zero≥-0.119219874 AND One≥1.802789332 AND Two≥1.192814438 AND Fifteen≤0.994391232 AND Fifteen≥-3.60607008	→	Cluster2=1	[18.2, 888.0]	2 : 98	0.001	5
30	Zero≥-0.824877946 AND Seven≥2.252230877 AND Eighteen≤0.787988998 AND Fourteen≤1.335529569 AND Fifteen≥-2.650595749	→	Cluster2=1	[8.6, 413.0]	2 : 98	8.65e-04	5
31	Zero≥-0.396404592 AND Fifteen≥-3.60607008 AND Two≥-1.493319937 AND Eighteen≥-2.097316291 AND Three≤2.801916855	→	Cluster2=1	[27.4, 1906.0]	1 : 99	8.35e-04	5
32	Zero≥-0.284341565 AND Sixteen≥-1.32244026 AND Fifteen≥-2.650595749 AND Six≤1.670076286 AND Seven≥-2.887829209	→	Cluster2=1	[13.9, 1037.0]	1 : 99	9.05e-04	5
33	Two≤-0.763064991 AND Twelve≤1.507602583 AND Fourteen≥-1.469573279 AND Fifteen≤0.342037611 AND Fifteen≥-3.509985847	→	Cluster2=1	[4.3, 252.0]	2 : 98	5.80e-04	5
34	Zero≥-1.077724961 AND Fifteen≥-1.569492176 AND One≤-3.052105413 AND One≥-2.21898916 AND Three≤2.801916855	→	Cluster2=1	[23.1, 2375.0]	1 : 99	6.76e-04	5
35	Three≥-0.333958274 AND Fifteen≥-3.509985847 AND Seven≤2.986033317 AND One≤2.123798835 AND	→	Cluster2=1	[8.9, 1115.0]	1 : 99	4.19e-	5

#	Rule						
	Eleven≥-2.437942842						
36	Three≥-0.48077319 AND Fifteen≥-2.289481746 AND Six≤1.660917595	→	Cluster2=1	[13.4, 1978.0]	1 : 99	5.32e-04	3
37	Zero≤-0.929313178 AND Eleven≥-0.475221359 AND Seven≤2.257211316 AND Fifteen≥-2.650595749 AND Three≥-1.52823771	→	Cluster2=1	[2.3, 308.0]	1 : 99	2.69e-04	5
38	Eleven≤-0.434675342 AND Zero≥-1.008339003 AND Fourteen≤1.222679542 AND Sixteen≤1.798778639 AND Fifteen≥-3.290103671	→	Cluster2=1	[4.4, 736.0]	1 : 99	3.20e-04	5
39	Eleven≥0.266937004 AND Twelve≤0.132130508 AND Six≤3.031848882 AND Six≥0.543886584 AND Seventeen≥-0.762502249	→	Cluster2=1	[2.5, 387.0]	1 : 99	2.74e-04	5
40	Eighteen≥-0.974121013 AND Nine≥-0.439396495 AND Fifteen≥-2.650595749 AND Seventeen≥-1.037655637 AND Ten≥-1.531581231	→	Cluster2=1	[1.6, 239.0]	1 : 99	2.06e-04	5
41	Ten≤3.595659083 AND Ten≤-1.270821866 AND Fourteen≤1.157067841 AND Ten≥-2.088703154 AND Five≤1.418975744	→	Cluster2=1	[1.3, 213.0]	1 : 99	1.66e-04	5
42	Ten≤3.595659083 AND Zero≥-0.235999283 AND Eighteen≥-1.361192497 AND Ten≥-2.086042031 AND Fifteen≥-3.60607008	→	Cluster2=1	[7.0, 1729.0]	0 : 100	2.32e-04	5
43	Zero≤-0.824877946 AND Fifteen≥-2.650595749 AND Ten≤1.763658442 AND Seventeen≥-1.050763337	→	Cluster2=1	[2.2, 519.0]	1 : 99	1.90e-04	4
44	Fifteen≥-3.60607008 AND Ten≤3.595659083 AND Ten≥-2.249827767 AND Sixteen≥-3.335874337 AND Sixteen≤2.684032739	→	Cluster2=1	[9.1, 3223.0]	0 : 100	5.85e-05	5
45	Fifteen≥-3.60607008 AND Sixteen≥-3.335874337 AND Sixteen≤2.684032739 AND Twelve≤3.837959852	→	Cluster2=1	[6.4, 3262.0]	0 : 100	3.05e-05	4
46	Seventeen≤3.904494254 AND Zero≤0.100029401 AND Fifteen≥-2.650595749 AND Eighteen≥-3.020259674 AND Eighteen≤1.758652468	→	Cluster2=1	[2.4, 1624.0]	0 : 100	7.52e-05	5
47	Zero≥-0.046437795 AND Fifteen≥-3.60607008 AND Seven≤3.323198186 AND Eighteen≥-2.147342904 AND Seven≤2.601674404	→	Cluster2=1	[2.1, 1551.0]	0 : 100	1.06e-04	5
48	Zero≤-0.164894849 AND Seven≤2.221224431 AND Fifteen≥-2.650595749 AND Nine≥-3.050197461	→	Cluster2=1	[1.4, 1283.0]	0 : 100	5.77e-05	4
49	Zero≤-0.119219874 AND Fifteen≥-3.60607008 AND Eighteen≥-2.097316291 AND Two≤2.423094898 AND Three≤2.801916855	→	Cluster2=1	[1.6, 1699.0]	0 : 100	6.51e-05	5
50	Zero≤-0.103034042 AND Fifteen≥-2.650595749	→	Cluster2=1	[1.1, 1487.0]	0 : 100	3.73e-05	2
51	Zero≤-0.068704225 AND Seven≤3.323198186 AND Fifteen≥-3.60607008 AND Two≤2.423094898 AND Three≤2.801916855	→	Cluster2=1	[1.1, 1642.0]	0 : 100	4.83e-05	5
52	Fifteen≥-3.60607008 AND Twelve≤3.837959852	→	Cluster2=1	[1.6, 3272.0]	0 : 100	6.79e-06	2
53	Fifteen≥-3.60607008	→	Cluster2=1	[1.1, 3273.0]	0 : 100	4.66e-06	1
54	Four≥-0.461010186 AND Four≤2.393726282 AND Eight≥-2.502593441 AND Nine≥-2.518112834 AND Ten≤3.595659083	→	Cluster2=2	[429, 2136]	17 : 83	0.087	5
55	Four≥-0.445310971 AND Four≤2.074073178 AND Thirteen≥-2.153911248 AND Five≥2.53221551 AND Ten≤3.595659083	→	Cluster2=2	[354.0, 1407.1]	20 : 80	0.074	5
56	Four≤1.710508525 AND Seven≥0.522094527 AND Fourteen≥-2.223360804 AND Four≥1.236922959 AND Thirteen≥-2.703755186	→	Cluster2=2	[267.0, 953.4]	22 : 78	0.064	5
57	Four≥-0.211821145 AND Four≤1.948398914	→	Cluster2=2	[276.0, 797.2]	26 : 74	0.060	2
58	Four≤1.710508525 AND Seven≥0.104821716 AND Three≥-2.153231849 AND Twelve≥-2.549018071 AND Thirteen≥-2.703755186	→	Cluster2=2	[411.0, 803.2]	34 : 66	0.055	5
59	Four≥-0.733379293 AND Four≤2.774184617 AND Seven≤0.110368003 AND Four≥-0.175690617 AND Fourteen≤2.831183984	→	Cluster2=2	[152.0, 466.4]	25 : 75	0.055	5
60	Four≥-0.733379293 AND Four≤2.395054669 AND Three≤1.468231304 AND One≤2.128667995 AND Two≥-1.809415943	→	Cluster2=2	[489.0, 626.3]	44 : 56	0.043	5
61	Seven≥0.935537454 AND Four≥-0.267643343 AND Fourteen≥-2.095114939 AND Eight≥-2.502132336 AND Thirteen≥-2.644400929	→	Cluster2=2	[84.0, 241.9]	26 : 74	0.038	5
62	Fifteen≥1.043690003 AND Ten≥-1.119544971 AND Four≥1.49316236 AND Fourteen≥-2.097099764 AND Seventeen≥-1.701284473	→	Cluster2=2	[443.0, 447.7]	50 : 50	0.035	5
63	Four≥1.307863548 AND Seven≥0.048806696 AND Three≥-2.075498398 AND Eight≤2.602101004 AND Twelve≥-2.549018071	→	Cluster2=2	[381.0, 370.0]	51 : 49	0.037	5
64	Four≥-0.054206891 AND Four≤2.774184617 AND Seven≤-0.554681057 AND Fourteen≤2.831183984 AND Six≥-2.262510352	→	Cluster2=2	[69.0, 172.2]	29 : 71	0.036	5
65	Four≤3.4919321 AND Four≤2.774184617 AND Four≥-0.03674638 AND Seven≤0.137079622 AND Fourteen≤2.22001747	→	Cluster2=2	[140.0, 175.1]	44 : 56	0.030	5
66	Four≤3.4919321 AND Four≤2.239914611 AND Seven≥-0.475013842 AND Four≥1.307863548 AND Twelve≥-2.336387324	→	Cluster2=2	[612.0, 378.3]	62 : 38	0.031	5
67	Six≤0.903693536 AND Eighteen≤0.876318048 AND Zero≥-0.850439207 AND Four≤3.445339791 AND Eight≥-1.294765801	→	Cluster2=2	[711.0, 335.4]	68 : 32	0.022	5
68	Four≤3.4919321 AND Two≥-0.975348815 AND Fourteen≥-2.057145467 AND Sixteen≥-2.441149951 AND Five≥2.12269294	→	Cluster2=2	[1256.0, 437.1]	74 : 26	0.015	5
69	Zero≥-0.40002711 AND Six≥-0.239332984 AND Ten≥-1.884290849 AND Four≥3.374094969 AND Three≥1.023457382	→	Cluster2=2	[246.0, 86.3]	74 : 26	0.011	5
70	Four≤3.4919321 AND Nine≥-2.185833083 AND Eight≤0.466454383 AND Eight≥-0.343660735 AND Thirteen≥1.680956648	→	Cluster2=2	[427.0, 125.5]	77 : 23	0.013	5
71	Four≤3.4919321 AND Four≤2.498718983 AND Four≥-0.471871947 AND One≥-3.052105413 AND Seven≤0.128246296	→	Cluster2=2	[178.0, 77.4]	70 : 30	0.017	5
72	Four≤3.4919321 AND Four≤-2.206828602 AND Fourteen≥-1.697511482 AND Sixteen≥-2.707861612 AND Eight≥-1.909825889	→	Cluster2=2	[111.0, 38.4]	74 : 26	0.008	5
73	Four≤3.4919321 AND Four≤2.239914611 AND Four≥0.099691912 AND Fifteen≤-0.433377999 AND Six≥-2.457983625	→	Cluster2=2	[28.0, 30.9]	48 : 52	0.011	5
74	Four≤3.4919321 AND Four≤2.239914611 AND Seven≥0.844397038 AND Four≤-0.581610805 AND Four≥-2.75652939	→	Cluster2=2	[70.0, 38.1]	64 : 36	0.011	5
75	Four≤3.4919321 AND Four≤2.239914611 AND Seven≥-1.795650396 AND Sixteen≥-2.441149951 AND Five≥-1.880261629	→	Cluster2=2	[1178.0, 222.8]	84 : 16	0.013	5
76	Four≤3.4919321 AND Four≥-0.629675758 AND Five≥-1.93519278 AND Eighteen≥-1.077343717 AND One≤2.02290325	→	Cluster2=2	[564.0, 88.6]	86 : 14	0.008	5
77	Four≤3.4919321 AND Four≤-1.831175544 AND One≥-1.309359952 AND Twelve≥-1.010557815 AND Fourteen≤-1.499018511	→	Cluster2=2	[156.0, 29.9]	84 : 16	0.006	5
78	Eighteen≤-0.848963495 AND Three≤1.429752204 AND Four≥-1.479386002 AND Eleven≥-1.426468166 AND Thirteen≤-1.284282162	→	Cluster2=2	[153.0, 26.4]	85 : 15	0.005	5
79	Four≤3.4919321 AND Zero≥0.376634064 AND Four≤2.629858687 AND Fifteen≥1.043307119 AND Nine≥-1.713469274	→	Cluster2=2	[181.0, 31.5]	85 : 15	0.007	5
80	Twelve≥0.631228658 AND Sixteen≥-1.770270011 AND Six≤0.515052041 AND Eighteen≥-1.218557811 AND Thirteen≥-1.139596402	→	Cluster2=2	[207.0, 29.2]	87 : 13	0.005	5
81	Twelve≤-0.786888248 AND Four≤3.258899138 AND Fourteen≥-2.182878232 AND Ten≥-0.602544191	→	Cluster2=2	[239.0, 29.5]	89 : 11	0.004	4
82	Thirteen≤-0.918440452 AND Eighteen≥-1.263231134 AND Eight≥-1.122252136 AND Four≥3.315420285 AND Seventeen≥-1.38348455	→	Cluster2=2	[185.0, 23.9]	88 : 12	0.004	5

83	Thirteen≥-0.229040636 AND Seventeen≤0.862738755 AND Four≤3.4919321 AND One≤1.623152766	→ Cluster2=2	[689.0, 66.2]	91 : 9	0.006	4
84	Four≤3.4919321 AND Fourteen≥-1.37002938 AND Five≤0.549067216 AND Two≤1.700785946 AND Twelve≥-2.376231024	→ Cluster2=2	[961.0, 74.7]	93 : 7	0.005	5
85	Five≥0.357021077 AND Zero≥-2.957452741 AND Four≤3.445339791 AND Zero≥-1.440908842 AND Twelve≥-2.139575663	→ Cluster2=2	[522.0, 35.6]	93 : 7	0.004	5
86	Four≤3.4919321 AND Twelve≥-0.857287845 AND Four≤1.710508525 AND Eighteen≤0.301049584 AND Five≥-2.277280711	→ Cluster2=2	[601.0, 34.5]	94 : 6	0.003	5
87	Eight≤-0.472882 AND Four≤3.407350102 AND Five≤0.751167615 AND Twelve≤1.609337733	→ Cluster2=2	[373.0, 20.0]	95 : 5	0.003	4
88	Eight≥0.217171344 AND Four≤2.860744404 AND Sixteen≥-1.793312834 AND Thirteen≥-2.789423518 AND Nine≥-1.702139648	→ Cluster2=2	[563.0, 27.4]	95 : 5	0.003	5
89	Eight≤0.090096803 AND Four≤3.4919321 AND Six≤2.082317693 AND Fourteen≥-2.088349849 AND Ten≤3.011713244	→ Cluster2=2	[812.0, 30.7]	96 : 4	0.002	5
90	Eight≥-0.143404431 AND Four≤3.503004631 AND Thirteen≥-2.708759008 AND Four≥2.896558691 AND Sixteen≥-2.929886568	→ Cluster2=2	[829.0, 26.7]	97 : 3	0.002	5
91	Eight≥-0.169642044 AND Four≤3.445339791 AND Five≥-2.83931827 AND Five≤1.969182317 AND Six≥-2.419855807	→ Cluster2=2	[680.0, 17.5]	97 : 3	0.001	5
92	Four≤3.4919321 AND Eight≥-0.276729021 AND Sixteen≥-1.775435453 AND Thirteen≥-2.708759008 AND Ten≥-1.078583388	→ Cluster2=2	[759.0, 17.6]	98 : 2	0.002	5
93	Four≤3.4919321 AND Thirteen≤-0.509005499 AND Twelve≤0.45772905 AND Five≤1.022936643 AND Four≤2.998160289	→ Cluster2=2	[236.0, 5.6]	97 : 3	0.001	5
94	Four≤3.4919321 AND Four≥-0.028427013 AND Seven≤-1.342107902 AND Fourteen≤1.459687627 AND Four≥0.302772983	→ Cluster2=2	[29.0, 3.0]	88 : 12	0.002	5
95	Sixteen≥0.771513807 AND Eighteen≥0.193935506 AND Four≤3.067655001 AND Six≥-1.281204305 AND Twelve≥-2.371878033	→ Cluster2=2	[114.0, 3.1]	97 : 3	8.08e-04	5
96	Fourteen≥1.181206613 AND Four≤2.936311757 AND Four≥-1.037210737 AND Seven≥-2.473807414	→ Cluster2=2	[70.0, 2.1]	96 : 4	6.30e-04	4
97	Two≥1.012673478 AND Twelve≥-0.747009297 AND Eleven≥0.983983345 AND Ten≥-2.028556323 AND Sixteen≤2.203020923	→ Cluster2=2	[119.0, 2.7]	97 : 3	6.01e-04	5
98	Two≤-0.388475015 AND Four≤3.375847289 AND Eight≥-1.826627467 AND Thirteen≥-1.315364209 AND Two≥-2.503713378	→ Cluster2=2	[473.0, 7.7]	98 : 2	8.71e-04	5
99	Four≤3.4919321 AND Two≥-0.301548347 AND Eleven≥1.581954335 AND Fourteen≤2.114623863 AND Sixteen≤2.233415786	→ Cluster2=2	[891.0, 12.3]	99 : 1	0.001	5

+ 16 more