

Table containing the number of patterns selected by our proposal for selecting contrast patterns, using $k=10\%$, and other contrast pattern selection methods of the state-of-the-art.

Octavio Loyola-González
octavioloyola@bioplantitas.cu

José Fco. Martínez-Trinidad
fmartine@inaoep.mx

Jesús Ariel Carrasco-Ochoa
ariel@inaoep.mx

Milton García-Borroto mgarciab@ceis.cujae.edu.cu

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Abstract

In this document we show supplementary material for the paper entitled “A Novel Contrast Pattern Selection Method for Class Imbalance Problems” submitted to the 9th Mexican Conference on Pattern Recognition (MCPR2017).

1 AUC Results

Table 1: Average of the number of kontras patterns selected by all the contrast patterns selection methods reported in the state-of-the-art and our proposal using $k=10\%$.

Databases	Best		Cover		Best K 10		Best K 50		Best K 80		Our Proposal 10		All CPs	
	Min	Maj	Min	Maj	Min	Maj	Min	Maj	Min	Maj	Min	Maj	Min	Maj
abalone17vs78910	0	1	17	38	172	205	863	1025	1380	1641	1568	205	1568	2051
abalone19	0	1	12	39	139	196	698	980	1117	1568	1244	196	1244	1960
abalone19vs10111213	0	1	12	36	132	161	662	809	1059	1294	1165	161	1165	1618
abalone20vs8910	0	1	9	20	68	74	342	374	547	599	611	74	611	749
abalone21vs8	0	1	4	8	21	19	108	98	172	157	179	19	179	197
abalone3vs11	0	1	1	1	0	0	3	3	4	4	6	0	6	6
abalone9vs18	0	1	13	25	104	118	522	594	834	950	927	118	927	1188
cargood	0	1	10	17	13	8	38	59	47	110	48	81	48	150
carvgood	0	1	6	11	7	3	28	20	38	36	38	24	38	53
cleveland0vs4	0	1	3	5	26	21	132	105	210	168	215	21	215	210
dermatology6	0	1	1	2	8	9	44	47	70	75	74	9	74	94
ecoli0vs1	0	1	3	3	9	12	47	59	75	81	95	12	95	82
ecoli01vs235	0	1	5	6	23	19	119	98	172	157	172	19	172	197
ecoli01vs5	0	1	4	5	12	7	62	39	99	62	103	7	103	78
ecoli0137vs26	0	1	2	5	10	6	53	34	75	54	75	7	75	69
ecoli0146vs5	0	1	3	7	14	9	72	48	115	76	118	9	118	96
ecoli0147vs2356	0	1	5	12	35	29	177	149	265	238	265	31	265	299
ecoli0147vs56	0	1	5	8	18	14	93	73	149	117	156	14	156	147
ecoli0234vs5	0	1	3	6	14	8	73	43	116	69	120	8	120	87
ecoli0267vs35	0	1	5	6	25	20	127	104	198	167	200	21	200	210
ecoli034vs5	0	1	3	6	15	8	79	43	123	70	126	8	126	87
ecoli0346vs5	0	1	4	7	18	11	92	59	144	94	145	11	145	118
ecoli0347vs56	0	1	4	8	25	18	126	90	199	145	203	18	203	181
ecoli046vs5	0	1	4	6	14	9	73	48	115	77	120	9	120	96
ecoli067vs35	0	1	4	7	24	21	122	104	194	166	197	21	197	209
ecoli067vs5	0	1	3	6	14	10	71	50	111	80	115	10	115	100
ecoli1	0	1	12	14	80	64	402	325	638	520	654	64	654	651
ecoli2	0	1	6	13	52	36	263	182	413	292	414	37	414	365
ecoli3	0	1	7	13	60	54	300	273	479	438	496	54	496	548
ecoli4	0	1	3	6	14	11	75	56	120	89	126	11	126	111
flareF	0	1	6	23	7	70	90	297	146	421	146	220	146	580
glass0	0	1	9	14	83	74	417	372	668	595	760	74	760	745
glass0123vs456	0	1	6	7	33	30	169	152	270	244	297	30	297	305
glass0146vs2	0	1	4	11	38	33	190	166	304	265	339	33	339	332
glass015vs2	0	1	4	9	37	32	189	164	302	263	337	32	337	330
glass016vs2	0	1	4	9	34	30	172	149	275	239	314	30	314	300
glass016vs5	0	1	1	4	9	6	48	34	77	54	84	6	84	68
glass04vs5	0	1	1	2	2	1	12	6	20	10	23	1	23	13
glass06vs5	0	1	1	3	6	4	32	22	52	35	60	4	60	44
glass1	0	1	12	14	112	104	562	524	900	839	1021	104	1021	1049
glass2	0	1	4	9	37	32	185	160	295	257	327	32	327	321
glass4	0	1	2	5	13	11	65	56	105	90	126	11	126	113
glass5	0	1	1	4	9	6	49	32	78	51	86	6	86	65
glass6	0	1	3	5	18	14	93	73	149	116	163	14	163	146
haberman	0	1	23	38	42	32	208	162	246	256	246	43	246	327
iris0	0	1	1	1	0	0	1	1	1	1	2	0	2	2
krvsconevsffteen	0	1	2	1	1	2	7	10	11	16	14	2	14	20
krvskthreevsleven	0	1	3	8	5	6	29	31	43	52	50	14	50	69
krvskzerovseight	0	1	3	6	4	5	18	28	27	45	27	14	27	60
krvskzerovsfifteen	0	1	2	1	1	1	7	9	11	14	14	1	14	18
krvskzeronevsdraw	0	1	5	12	5	6	21	38	31	63	38	19	38	80
led7digit02456789vs1	0	1	3	11	3	4	10	24	11	42	11	22	11	57
lymphographynormalfibrosis	0	1	2	2	8	8	43	40	63	64	64	9	64	81
newthyroid1	0	1	3	3	3	4	20	19	30	31	32	4	32	39
newthyroid2	0	1	3	3	4	4	20	20	31	32	33	4	33	40
pageblocks0	0	1	55	60	625	538	3111	2693	4853	4326	5352	596	5352	5444
pageblocks13vs4	0	1	1	5	8	7	42	37	67	59	83	7	83	75
pima	0	1	50	58	460	445	2304	2226	3687	3562	4230	445	4230	4453
poker8vs6	0	1	3	20	65	108	325	545	519	871	541	109	541	1089
poker89vs5	0	1	8	29	111	145	553	728	733	1161	733	173	733	1472
poker89vs6	0	1	6	26	93	145	467	728	747	1164	795	145	795	1456
poker9vs7	0	1	2	5	13	16	68	82	108	131	110	16	110	164
segment0	0	1	4	9	48	48	240	242	385	387	468	48	468	484
shuttle2vs5	0	1	1	1	1	1	7	6	11	9	14	1	14	12
shuttle6vs23	0	1	1	1	2	1	9	8	15	13	17	1	17	17
shuttlec0vsc4	0	1	1	1	1	1	6	7	10	11	14	1	14	15
shuttlec2vsc4	0	1	1	1	1	1	5	6	7	9	9	1	9	12
vehicle0	0	1	14	19	158	155	792	776	1267	1241	1506	155	1506	1552
vehicle1	0	1	37	58	460	533	2303	2669	3685	4270	4319	533	4319	5338
vehicle2	0	1	8	14	116	117	584	585	934	936	1114	117	1114	1171
vehicle3	0	1	41	55	486	498	2432	2492	3892	3988	4561	498	4561	4985
vowel0	0	1	5	8	44	46	221	235	354	377	431	46	431	471
winequalityred3vs5	0	1	3	10	36	37	184	185	294	296	342	37	342	371
winequalityred4	0	1	16	41	207	300	1037	1502	1660	2403	1917	300	1917	3004
winequalityred8vs6	0	1	6	16	60	66	299	330	479	528	539	66	539	660
winequalityred8vs67	0	1	5	17	69	82	348	412	557	659	633	82	633	824
winequalitywhite3vs7	0	1	7	11	53	68	269	343	430	548	499	68	499	686
winequalitywhite39vs5	0	1	8	19	90	132	452	662	723	1059	835	132	835	1324
winequalitywhite9vs4	0	1	1	4	10	7	50	38	80	61	89	7	89	77
wisconsin	0	1	13	10	75	56	378	279	605	447	626	56	626	559
yeast0256vs3789	0	1	26	42	189	209	944	1047	1512	1674	1574	209	1574	2093
yeast02570vs368	0	1	14	27	103	96	519	482	828	772	850	98	850	967
yeast0359vs78	0	1	15	27	120	125	602	628	964	1005	1015	125	1015	1257
yeast05670vs4	0	1	14	21	95	83	478	416	764	665	784	83	784	832
yeast1	0	1	94	122	1004	968	5022	4844	8033	7751	8671	971	8671	9692
yeast1vs7	0	1	8	22	83	84	416	421	661	673	663	85	663	842
yeast1289vs7	0	1	10	32	89	96	446	484	700	775	701	97	701	970
yeast1458vs7	0	1	12	28	105	108	528	543	841	869	852	109	852	1087
yeast2vs4	0	1	7	11	41	34	207	174	331	278	344	34	344	348
yeast2vs8	0	1	5	11	31	27	155	136	239	217	239	27	239	272
yeast3	0	1	25	37	196	162	982	812	1570	1300	1675	163	1675	1626
yeast4	0	1	16	30	134	127	672	635	1075	1015	1109	127	1109	1269
yeast5	0	1	7	11	48	38	240	189	382	303	396	38	396	380
yeast6	0	1	9	23	73	64	367	323	565	517	566	65	566	647
zoo3	0	1	1	5	10	7	53	39	77	63	77	13	77	83
Average	0.0	1.0	8.8	15.8	76.8	78.7	385.7	395.4	611.3	632.4	672.5	83.0	672.5	792.5

¹ It is a label to refer to the lymphography normalfibrosis database.