APPENDIX

A THE DETAILED INFORMATION ABOUT THE 56 REAL-WORLD IMBALANCED CLASSIFICATION DATASETS

Table 1: The detailed information about the 56 real-world imbalanced classification datasets.

Name	Source	Sample Size	NoAttr	NoNAttr	NoCAttr (including label attribute)	NoCL	Dispmin	Dispmedian	Dispmax	UDS	IR
abalone	KEEL;UCI;LIBSVM;KDD;	4177	9	7	2	28	0.131482956	0.54166542	0.918496547	0.115160952	689
autos	KEEL;UCI;LIBSVM;KDD;	159	26	15	11	6	0	0.546344251	0.975919124	0.028349494	16
balance	KEEL;UCI;LIBSVM;KDD;	625	5	4	1	3	0.141920442	0.25	0.25	0	5.87755102
contraceptive	KEEL;UCI;LIBSVM;KDD;	1473	10	6	4	3	0.036169904	0.152555714	0.468489517	2.42142E-17	1.88888889
dermatology	KEEL;UCI;LIBSVM;KDD;	366	35	34	1	6	0.046245118	0.154020243	0.644844121	0.037939216	5.6
ecoli	KEEL;UCI;LIBSVM;KDD;	336	8	7	1	8	0.003487055	0.656015131	0.723519616	0.004853689	71.5
glass	KEEL;UCI;LIBSVM;KDD;	214	10	9	1	6	0.201496482	0.793769355	0.955172433	0.432724325	8.44444444
hayes-roth	KEEL;UCI;LIBSVM;KDD;	132	5	4	1	3	0.219458753	0.253819163	0.253819163	0	1.7
lymphography	KEEL;UCI;LIBSVM;KDD;	148	19	3	16	4	0.038117064	0.138688499	0.350529452	0.019375164	40.5
new-thyroid	KEEL;UCI;LIBSVM;KDD;	215	6	5	1	3	0.152958119	0.661715522	0.811078931	0.422895356	5
nursery	KEEL;UCI;LIBSVM;KDD;	12960	9	0	9	5	0.073196914	0.116014364	0.169957972	4.98E-17	2160
pageblocks	KEEL;UCI;LIBSVM;KDD;	548	11	10	1	5	0.06975219	0.844102882	0.93459493	0.25980626	164
penbased	KEEL;UCI;LIBSVM;KDD;	1100	17	16	1	10	0.328681055	0.575336571	0.618794952	0.355324154	1.0952381
shuttle	KEEL;UCI;LIBSVM;KDD;	2175	10	9	1	5	0.086529383	0.398288924	0.538206608	0.326758112	853
thyroid	KEEL;UCI;LIBSVM;KDD;	720	22	6	16	3	0	0.030445572	0.718940961	0.017331644	39.1764706
wine	KEEL;UCI;LIBSVM;KDD;	178	14	13	1	3	0.209587767	0.845321119	0.926522983	0.025451806	1.47916667
yeast	KEEL;UCI;LIBSVM;KDD;	1484	9	8	1	10	0.007310381	0.408092478	0.543532369	0.006106292	92.6
abalone-19_vs_10-11-12-13	KEEL;UCI;LIBSVM;KDD;	1622	9	7	2	2	0.013120829	0.5676469	0.955896632	0.365242025	49.6875
abalone19	KEEL;UCI;LIBSVM;KDD;	4174	9	7	2	2	0.00539544	0.54163398	0.918510617	0.397045772	129.4375
abalone9-18	KEEL;UCI;LIBSVM;KDD;	731	9	7	2	2	0.033347648	0.62252324	0.975517462	0.315429559	16.4047619
car-good	KEEL;UCI;LIBSVM;KDD;	1728	7	0	7	2	0.022498952	0.14737137	0.185961964	0	24.0434783
car-vgood	KEEL;UCI;LIBSVM;KDD;	1728	7	0	7	2	0.021501998	0.14737137	0.185961964	0	25.5846154
flare-F	KEEL;UCI;LIBSVM;KDD;	1066	12	0	12	2	0.004615494	0.057779322	0.217373845	0	23.7906977
glass-0-1-2-3_vs_4-5-6	KEEL;UCI;LIBSVM;KDD;	214	10	9	1	2	0.102336102	0.793769355	0.909608884	0.340048711	3.19607843
glass0	KEEL;UCI;LIBSVM;KDD;	214	10	9	1	2	0.117799236	0.793769355	0.909608884	0.347727464	2.05714286
glass1	KEEL;UCI;LIBSVM;KDD;	214	10	9	1	2	0.121239952	0.793769355	0.909608884	0.349849342	1.81578947
glass6	KEEL;UCI;LIBSVM;KDD;	214	10	9	1	2	0.07393544	0.793769355	0.909608884	0.328173862	6.37931034
iris0	KEEL;UCI;LIBSVM;KDD;	150	5	4	1	2	0.127032628	0.56242425	0.696355739	0.431233047	2
kddcup-buffer_overflow_vs_back	KEEL;UCI;LIBSVM;KDD;	2233	42	26	16	2	0	0.009355185	0.316290634	0.089189137	73.4333333
kddcup-guess_passwd_vs_satan	KEEL;UCI;LIBSVM;KDD;	1642	42	26	16	2	0	0.039305081	0.500797539	0.184343248	29.9811321
kddcup-land_vs_portsweep	KEEL;UCI;LIBSVM;KDD;	1061	42	26	16	2	0	0.024194624	0.399846246	0.001326279	49.5238095
kddcup-land_vs_satan	KEEL;UCI;LIBSVM;KDD;	1610	42	26	16	2	0	0.019704263	0.502149654	0.120994524	75.6666667
kddcup-rootkit-imap_vs_back	KEEL;UCI;LIBSVM;KDD;	2225	42	26	16	2	0	0.007981341	0.314911226	0.105023771	100.136364
kr-vs-k-one_vs_fifteen	KEEL;UCI;LIBSVM;KDD;	2244	7	0	7	2	0.019558731	0.230667688	0.262696256	0.022152189	27.7692308
kr-vs-k-three_vs_eleven	KEEL;UCI;LIBSVM;KDD;	2935	7	0	7	2	0.015817046	0.241005746	0.259693692	0	35.2345679
kr-vs-k-zero-one_vs_draw	KEEL;UCI;LIBSVM;KDD;	2901	7	0	7	2	0.019523253	0.255271861	0.258658087	0.198154101	26.6285714
kr-vs-k-zero_vs_eight	KEEL;UCI;LIBSVM;KDD;	1460	7	0	7	2	0.012642451	0.200304683	0.282206023	3.03803E-19	53.0740741
kr-vs-k-zero_vs_fifteen	KEEL;UCI;LIBSVM;KDD;	2193	7	0	7	2	0.008627757	0.226815774	0.263914927	0.008298894	80.2222222
lymphography-normal-fibrosis	KEEL;UCI;LIBSVM;KDD;	148	19	3	16	2	0.033950574	0.137535095	0.350529452	3.89769E-17	23.6666667
page-blocks0	KEEL;UCI;LIBSVM;KDD;	5472	11	10	1	2	0.038315344	0.68470738	0.803792539	0.251470876	8.78890877
segment0	KEEL;UCI;LIBSVM;KDD;	2308	20	19	1	2	0	0.783914966	0.951691118	0.549862404	6.01519757
zoo-3	KEEL;UCI;LIBSVM;KDD;	101	17	0	17	2	0.042697696	0.123582269	0.305459109	1.43006E-17	19.2
03subcl5-800-7-0-BI	KEEL;UCI;LIBSVM;KDD;	800	3	2	1	2	0.056363806	0.887310848	0.956179588	0.000350143	7
03subcl5-800-7-60-BI	KEEL;UCI;LIBSVM;KDD;	800	3	2	1	2	0.056363806	0.880549893	0.955193255	0.000199396	7
03subcl5-800-7-70-BI	KEEL;UCI;LIBSVM;KDD;	800	3	2	1	2	0.056363806	0.88342453	0.956433753	0.00018679	7
04clover5z-600-5-70-BI	KEEL;UCI;LIBSVM;KDD;	600	3	2	1	2	0.070433979	0.935367001	0.950308101	1.83901E-19	5
04clover5z-800-7-30-BI	KEEL;UCI;LIBSVM;KDD;	800	3	2	1	2	0.056363806	0.919020474	0.937589621	0	7
04clover5z-800-7-60-BI	KEEL;UCI;LIBSVM;KDD;	800	3	2	1	2	0.056363806	0.917710188	0.934618858	0	7
04clover5z-800-7-70-BI	KEEL;UCI;LIBSVM;KDD;	800	3	2	1	2	0.056363806	0.917366054	0.936119128	0	7
paw02a-600-5-70-BI	KEEL;UCI;LIBSVM;KDD;	600	3	2	1	2	0.070433979	0.929658499	0.934017844	0.000351053	5
paw02a-800-7-60-BI	KEEL;UCI;LIBSVM;KDD;	800	3	2	1	2	0.056363806	0.914408236	0.927398004	0.000258509	7
paw02a-800-7-70-BI	KEEL;UCI;LIBSVM;KDD;	800	3	2	1	2	0.056363806	0.916452858	0.921280428	0.000265954	7
arrhythmia	KEEL;UCI;LIBSVM;KDD;	452	279	205	74	2	0	0.210212286	0.964561298	0.637527957	17.08
coil_2000	KEEL;UCI;LIBSVM;KDD;	9822	86	85	1	2	0.000796923	0.091396689	0.358280384	0.072868733	15.7610922
letter_img	KEEL;UCI;LIBSVM;KDD;	20000	17	16	1	2	0.015884392	0.214211911	0.256647189	0.014935359	26.2479564
krkopt	KEEL;UCI;LIBSVM;KDD;	28056	7	3	4	18	0.117450678	0.202787743	0.237151724	5.99286E-18	168.62963