

Dataset	Source	C/R	Rows	Features	Base	Our $RL_1$	Exp-Red	Random
Higgs Boson	UCIrvine	C	50000	28	0.718	<b>0.729</b>	0.682	0.699
Amazon Employee	Kaggle	C	32769	9	0.712	<b>0.806</b>	0.744	0.740
PimaIndian	UCIrvine	C	768	8	0.721	<b>0.756</b>	0.712	0.709
SpectF	UCIrvine	C	267	44	0.686	0.788	<b>0.790</b>	0.748
SVMGuide3	LibSVM	C	1243	21	0.740	<b>0.776</b>	0.711	0.753
German Credit	UCIrvine	C	1001	24	0.661	<b>0.724</b>	0.680	0.655
Bikeshare DC	Kaggle	R	10886	11	0.393	<b>0.798</b>	0.693	0.381
Housing Boston	UCIrvine	R	506	13	0.626	<b>0.680</b>	0.621	0.637
Airfoil	UCIrvine	R	1503	5	0.752	<b>0.801</b>	0.759	0.752
AP-omentum-ovary	OpenML	C	275	10936	0.615	<b>0.820</b>	0.725	0.710
Lymphography	UCIrvine	C	148	18	0.832	<b>0.895</b>	0.727	0.680
Ionosphere	UCIrvine	C	351	34	0.927	<b>0.941</b>	0.939	0.934
Openml_618	OpenML	R	1000	50	0.428	<b>0.587</b>	0.411	0.428
Openml_589	OpenML	R	1000	25	0.542	<b>0.689</b>	0.650	0.571
Openml_616	OpenML	R	500	50	0.343	<b>0.559</b>	0.450	0.343
Openml_607	OpenML	R	1000	50	0.380	<b>0.647</b>	0.590	0.411
Openml_620	OpenML	R	1000	25	0.524	<b>0.683</b>	0.533	0.524
Openml_637	OpenML	R	500	50	0.313	<b>0.585</b>	0.581	0.313
Openml_586	OpenML	R	1000	25	0.547	<b>0.704</b>	0.598	0.549
Credit Default	UCIrvine	C	30000	25	0.797	<b>0.831</b>	0.802	0.766
Messidor_features	UCIrvine	C	1150	19	0.691	<b>0.752</b>	0.703	0.655
Wine Quality Red	UCIrvine	C	999	12	0.380	<b>0.387</b>	0.344	0.380
Wine Quality White	UCIrvine	C	4900	12	0.677	<b>0.722</b>	0.654	0.678
SpamBase	UCIrvine	C	4601	57	0.955	<b>0.961</b>	0.951	0.937