

1 **Table S1.** Classification accuracies of 5 - Nearest Neighbors (5NN) on four different *Ratios*.

Dataset	Method	R = 10%				R = 20%				R = 30%				R = 40%			
		Supervised	Semi-Supervised	Active Random	Combination	Supervised	Semi-Supervised	Active Random	Combination	Supervised	Semi-Supervised	Active Random	Combination	Supervised	Semi-Supervised	Active Random	Combination
anneal		83.739	81.960	85.416	87.421	86.195	85.861	87.865	91.424	87.865	86.307	88.085	93.206	87.975	87.310	90.648	93.206
arrhythmia		55.527	54.870	55.092	55.768	55.314	54.208	54.865	55.971	54.865	53.986	56.411	57.077	55.527	54.425	57.285	58.169
audiology		35.316	26.542	43.340	34.901	47.411	35.810	52.727	43.696	53.182	39.427	55.771	50.810	54.012	43.340	53.933	50.810
autos		39.905	37.000	41.929	39.952	41.857	42.786	48.786	52.571	49.762	47.214	49.881	50.690	50.786	53.095	55.095	55.048
balance-scale		82.230	82.063	84.155	84.790	84.316	87.517	85.755	85.906	85.914	87.842	87.040	86.229	87.197	88.641	88.152	86.086
breast-cancer		69.951	71.059	69.951	73.498	70.702	71.736	69.963	71.712	70.308	72.401	71.687	72.746	71.700	72.044	70.640	73.424
bridges-version1		43.545	43.545	43.545	43.545	51.273	53.273	52.273	47.455	54.364	55.455	56.000	52.455	56.000	58.091	57.000	56.273
bridges-version2		43.727	43.727	43.727	43.727	47.455	46.545	53.273	52.455	52.455	52.364	55.182	57.182	56.182	56.091	57.909	57.182
cleveland		79.871	81.505	77.860	80.161	80.172	80.806	80.473	83.151	80.462	81.140	82.796	84.462	83.129	81.796	83.118	83.140
cmc		42.565	40.735	44.599	43.724	43.998	44.265	44.670	44.129	44.806	46.227	45.686	45.214	45.210	46.975	46.437	48.611
column_2C		74.839	74.194	77.097	79.355	79.355	76.452	78.387	78.065	77.419	77.742	78.387	77.742	77.742	78.065	79.032	81.613
column_3C		67.097	66.774	69.355	69.677	74.194	71.613	76.129	75.484	76.452	74.516	75.161	74.516	76.129	72.581	75.161	76.452
credit-rating		83.478	82.464	84.348	84.783	84.928	84.928	84.348	84.638	84.493	85.217	84.638	85.942	85.217	85.507	85.507	86.377
cylinder-bands		58.333	58.519	61.296	60.556	62.037	60.000	63.704	64.815	63.889	64.444	65.556	66.111	65.556	64.815	67.037	66.296
dermatology		78.941	79.512	85.233	89.880	89.077	88.228	92.350	95.908	92.905	92.635	94.279	95.383	93.731	93.994	94.002	95.923
ecoli		71.471	72.059	74.991	81.560	80.330	79.750	80.330	84.804	80.330	80.339	84.510	84.216	83.904	83.619	84.225	85.686
flags		49.079	43.289	48.974	43.842	44.395	41.842	50.105	48.500	50.658	46.921	51.632	56.737	52.237	50.079	59.368	54.632
german_credit		69.300	69.800	69.400	71.100	68.900	68.900	69.800	71.900	69.800	70.500	70.700	70.800	70.300	69.900	71.700	72.100
glass		44.870	43.550	45.866	47.186	56.515	54.719	58.442	62.186	61.775	60.325	62.208	64.545	63.160	60.801	63.658	63.593
haberman		70.312	70.290	68.978	70.989	72.226	71.258	71.237	72.559	71.570	70.591	73.527	72.559	71.237	70.280	70.903	71.581
heart-statlog		78.889	77.778	76.296	76.667	79.630	76.667	76.296	81.111	76.296	76.667	80.000	79.630	79.259	78.519	80.741	78.889
hepatitis		81.875	81.875	80.042	80.750	79.458	79.458	83.958	82.667	83.292	81.375	81.417	83.792	82.708	80.083	83.250	83.208
horse-colic		82.853	77.417	80.143	79.332	80.428	80.143	79.887	80.150	79.887	80.706	79.887	80.413	80.706	80.983	80.961	82.057
hungarian-heart		81.690	82.701	82.713	83.011	83.034	84.057	83.046	83.368	83.046	84.402	81.333	82.000	82.356	83.011	82.333	81.989
hypothyroid		92.126	92.100	92.047	92.710	92.232	92.445	92.577	92.975	92.577	92.657	93.028	93.266	92.710	92.710	93.240	93.266
ionosphere		70.389	67.817	75.817	81.532	78.103	73.817	77.246	82.095	76.675	76.103	80.952	84.040	80.103	78.103	82.365	83.754
iris		71.333	72.000	85.333	90.000	89.333	89.333	96.000	98.000	96.667	96.667	96.667	97.333	97.333	96.000	96.667	96.000
kr-vs-kp		81.947	77.222	85.296	88.268	86.485	83.761	90.207	93.963	90.269	87.734	92.678	96.465	92.584	89.079	94.087	96.872
labor		56.000	56.000	56.000	56.000	71.333	65.000	73.667	80.667	73.667	70.000	79.333	79.000	79.333	81.000	84.667	88.000
letter		77.415	76.345	82.525	84.095	85.835	85.535	89.385	92.310	89.385	89.545	91.905	94.970	91.175	91.710	93.375	95.425
lymphography		63.524	62.143	71.667	66.238	79.048	72.857	78.286	83.667	77.571	78.905	78.238	81.000	79.619	77.571	83.000	83.714
mushroom		99.335	99.360	99.532	100.000	99.791	99.791	99.877	100.000	99.877	99.889	99.914	100.000	99.889	99.865	99.926	100.000
optdigits		95.605	96.299	96.655	98.292	97.278	97.598	97.776	98.665	97.776	98.043	98.149	98.541	98.132	98.185	98.399	98.541
page-blocks		93.477	93.514	94.099	95.487	94.427	94.336	94.756	95.652	94.756	94.573	94.957	95.798	94.738	94.829	95.231	95.725
pendigits		96.443	96.570	97.207	99.081	97.853	98.181	98.499	99.345	98.499	98.626	98.872	99.345	98.772	98.926	99.127	99.290
pima_diabetes		68.882	67.838	69.911	71.615	71.350	71.620	71.494	71.615	72.013	72.404	70.448	71.224	72.273	70.841	71.092	72.397
postoperative		68.889	68.889	68.889	68.889	68.889	70.000	70.000	71.111	70.000	70.000	68.889	70.000	68.889	71.111	68.889	71.111
primary-tumor		30.045	25.339	34.180	34.189	35.945	33.316	40.989	37.424	40.989	36.560	41.872	39.804	42.460	40.080	47.175	45.116
segment		86.926	86.580	89.567	90.433	90.606	91.602	92.771	94.502	92.727	92.727	93.853	95.152	93.377	93.203	94.459	95.065
sick		94.379	94.512	94.644	95.281	94.988	94.856	95.333	95.970	95.333	95.068	95.068	95.997	95.069	95.069	95.599	96.182
solar-flare		59.885	57.840	62.572	61.871	66.335	61.698	69.347	67.588	70.133	65.543	70.174	68.968	70.310	67.553	68.901	70.041
sonar		60.619	57.738	60.190	60.690	63.476	63.071	64.952	71.167	67.810	70.286	70.262	73.119	67.286	71.262	73.619	77.905
soybean		53.853	51.081	62.801	68.201	71.289	67.624	77.148	81.982	77.295	75.107	82.266	85.784	81.978	80.215	85.350	89.738
spambase		84.937	83.133	85.046	86.916	86.241	84.959	87.111	88.741	87.067	86.394	87.633	89.480	87.937	87.394	88.763	89.915
spect		63.953	64.316	66.140	66.339	70.962	66.524	69.596	64.309	70.105	64.927	69.557	70.304	69.557	66.617	69.309	70.381
sponge		92.500	92.500	92.500	92.500	92.500	92.500	92.500	92.500	92.500	92.500	92.500	92.500	92.500	92.500	92.500	92.500
tae		38.375	39.667	41.000	38.958	35.042	34.333	40.375	42.333	41.708	42.375	41.708	47.583	43.708	49.667	47.667	51.625
tic-tac-toe		69.514	70.874	74.745	76.932	78.083	75.993	85.390	91.124	85.390	82.770	93.633	98.225	91.752	85.798	97.807	98.851
vehicle		52.482	52.483	56.994	57.329	62.920	61.136	64.200	63.018	64.436	63.616	66.202	68.339	64.667	65.738	67.615	69.627
vote		88.531	89.450	89.915	93.340	91.744	90.814	91.956	94.265	91.956	90.576	91.734	93.811	91.728	90.581	92.421	92.664
vowel		14.646	11.717	15.051	16.465	19.394	17.778	28.687	29.899	29.091	26.566	43.838	47.778	40.808	37.071	63.939	65.960
waveform		76.660	77.460	77.380	78.440	78.340	78.720	78.320	79.060	78.320	79.880	78.220	79.040	78.220	79.180	78.960	78.840
wine		79.967	79.902	87.157	93.268	94.902	94.314	95.490	96.667	95.490	96.667	96.111	97.190	96.111	95.556	96.667	96.601
wisconsin-breast		95.851	95.851	95.565	96.565	96.137	95.994	96.422	96.422	96.422	95.994	96.708	96.565	96.565	95.851	96.851	96.565
zoo		50.636	50.636	50.636	50.636	69.364	68.364	75.364	85.182	80.364	77.364	84.273	92.182	84.273	81.273	86.273	94.091
Average		69.064	68.189	71.007	71.941	73.699	72.522	75.534	76.852	75.867	75.069	77.298	78.496	77.197	76.520	78.946	79.784

2 Table S2. Classification accuracies of Logistic Regression (Logistic) on four different Ratios.

Method Dataset	R = 10%				R = 20%				R = 30%				R = 40%			
	Supervised	Semi-Supervised	Active Random	Combination	Supervised	Semi-Supervised	Active Random	Combination	Supervised	Semi-Supervised	Active Random	Combination	Supervised	Semi-Supervised	Active Random	Combination
anneal	75.943	76.833	80.620	78.622	79.844	84.181	83.851	85.290	84.072	86.077	86.074	85.412	85.628	88.409	86.192	86.300
arrhythmia	49.111	46.720	52.000	54.246	52.652	54.425	53.546	55.092	54.435	52.435	57.087	56.203	55.739	55.734	54.425	52.213
audiology	36.798	38.439	45.593	42.490	49.170	52.668	57.984	58.419	57.984	57.075	66.403	72.095	65.040	63.300	73.004	75.632
autos	41.310	42.405	45.786	47.714	52.643	50.190	56.071	55.500	57.024	54.595	56.881	57.548	56.452	54.571	64.262	63.238
balance-scale	85.745	86.723	89.273	88.643	89.593	89.593	88.482	90.714	88.482	88.641	90.077	91.672	88.802	88.802	89.598	90.230
breast-cancer	59.113	56.638	53.818	61.133	61.884	57.709	63.202	60.825	62.143	63.190	67.833	66.379	67.069	65.665	68.867	70.936
bridges-version1	46.545	46.545	46.545	46.545	46.273	52.182	51.455	53.364	56.364	50.818	55.273	51.273	54.273	51.364	60.364	62.000
bridges-version2	44.545	44.545	44.545	44.545	50.091	53.182	51.091	48.545	55.273	55.273	56.364	53.455	55.364	52.727	60.182	55.273
cleveland	70.269	71.258	66.591	72.892	75.570	76.871	76.570	77.505	77.892	77.570	81.849	77.871	80.183	79.527	84.817	82.183
cmc	45.896	45.623	49.150	47.591	49.356	48.474	51.526	51.325	51.458	49.352	51.936	51.189	51.527	51.121	50.442	52.274
column_2C	80.968	80.645	81.613	83.871	83.226	83.226	84.516	84.839	84.516	84.516	84.839	84.194	84.839	85.161	84.839	84.516
column_3C	77.097	78.065	77.742	83.548	79.032	79.677	85.161	84.516	85.161	84.516	84.194	84.194	85.161	84.839	85.806	85.161
credit-rating	72.464	73.768	72.319	75.797	79.275	79.565	81.884	81.739	81.304	81.014	83.333	83.043	82.899	83.188	84.203	84.203
cylinder-bands	63.704	61.852	61.667	66.111	67.037	68.704	70.000	71.111	70.741	66.852	72.593	72.593	72.407	68.704	72.778	74.259
dermatology	87.680	87.695	92.350	92.635	93.686	94.009	94.812	95.083	95.653	96.464	94.557	95.916	95.631	95.893	95.353	95.916
ecoli	66.684	70.553	75.018	70.597	78.271	77.665	79.162	80.062	79.162	78.289	81.845	83.316	79.750	80.936	82.415	84.519
flags	43.368	44.868	41.368	45.947	45.474	44.447	47.684	44.816	45.026	45.526	46.000	50.132	43.947	40.474	47.079	42.395
german_credit	63.400	65.200	66.400	66.200	68.200	68.400	72.400	70.900	72.400	72.200	74.500	73.900	74.300	73.600	76.300	75.500
glass	51.905	52.835	54.264	57.965	54.177	52.294	60.238	58.377	60.693	61.212	60.238	62.641	60.671	59.242	63.009	61.645
haberman	61.398	61.075	70.570	65.634	71.849	71.849	70.903	74.172	71.559	70.925	74.183	72.839	74.183	73.849	74.806	75.774
heart-statlog	68.889	71.852	70.370	71.111	75.185	76.667	80.000	78.148	80.370	80.000	81.481	78.889	80.000	80.000	82.222	81.111
hepatitis	76.000	75.458	80.583	81.292	74.250	74.208	74.208	74.417	78.083	77.500	78.083	74.917	74.958	71.167	79.292	78.625
horse-colic	70.450	67.147	69.032	69.362	63.296	66.839	71.456	73.919	69.039	68.506	72.297	70.646	70.375	72.815	75.000	74.452
hungarian-heart	74.839	74.851	77.598	74.207	75.885	76.241	79.655	78.632	80.322	78.977	81.000	77.287	81.023	80.667	84.368	82.736
hypothyroid	93.506	93.638	94.884	96.581	95.520	95.573	96.077	97.005	95.838	96.077	96.288	97.190	96.368	96.368	96.527	97.005
ionosphere	80.071	80.087	80.651	77.500	79.206	76.921	80.063	82.048	79.492	81.770	79.754	81.484	80.611	80.627	84.056	86.595
iris	88.000	88.000	84.667	90.667	90.000	90.667	94.667	92.667	94.000	94.667	94.000	94.667	94.667	95.333	94.667	96.667
kr-vs-kp	92.991	92.679	93.742	96.059	95.089	95.182	96.966	97.466	97.060	97.029	97.185	97.999	96.904	96.872	97.529	97.936
labor	73.000	73.000	73.000	73.000	72.000	82.000	82.333	85.667	82.333	87.667	78.333	91.000	78.333	82.333	86.000	93.333
letter	74.480	74.410	75.810	73.130	76.080	76.055	76.710	75.050	76.710	76.630	77.085	75.930	77.020	77.025	77.250	77.100
lymphography	69.762	69.000	73.000	75.000	75.667	77.619	70.333	80.286	72.381	74.333	70.905	72.286	70.190	76.381	73.048	72.952
mushroom	99.606	99.618	99.606	99.938	99.926	99.902	99.963	99.975	99.963	99.963	99.975	100.000	99.975	99.975	99.975	99.975
optdigits	86.904	92.295	91.993	90.338	93.790	93.897	89.680	93.043	89.609	93.060	92.242	94.093	91.619	92.064	92.918	94.075
page-blocks	95.249	95.176	95.267	96.218	95.651	95.688	96.072	96.400	96.090	96.145	96.145	96.382	96.327	96.273	96.382	96.602
pendigits	90.384	90.293	92.476	93.832	93.932	93.941	94.805	95.588	94.814	94.787	95.297	95.633	95.051	95.042	95.579	95.615
pima_diabetes	74.745	74.226	75.398	75.137	76.700	76.700	76.569	76.179	76.958	76.567	76.048	77.220	75.530	76.699	76.828	77.216
postoperative	62.222	62.222	62.222	62.222	52.222	52.222	47.778	54.444	48.889	50.000	56.667	54.444	54.444	53.333	53.333	57.778
primary-tumor	30.089	28.583	29.153	31.230	32.103	30.053	31.533	28.012	31.533	33.021	30.089	32.727	33.342	33.057	35.695	35.695
segment	87.922	86.147	91.082	90.346	92.511	92.597	93.290	94.113	93.550	93.636	94.632	95.022	94.589	94.459	94.805	95.325
sick	94.406	94.273	90.041	96.924	96.023	96.023	96.235	97.110	96.262	96.262	90.368	97.057	96.288	96.315	90.686	96.871
solar-flare	63.528	64.014	66.704	66.662	67.297	67.360	65.812	68.216	65.411	66.011	69.354	67.680	68.476	68.382	70.866	69.583
sonar	64.976	61.548	63.071	59.762	68.405	62.595	66.857	67.333	69.714	67.762	71.190	73.476	67.310	64.452	70.810	72.595
soybean	73.325	75.539	80.211	82.999	82.726	84.192	85.507	88.142	86.974	86.969	86.984	90.043	87.415	86.087	87.709	89.606
spambase	88.024	88.502	89.741	90.915	90.480	90.567	91.284	92.414	91.284	91.241	92.067	92.914	91.849	91.849	92.306	92.914
spect	58.869	57.010	61.455	59.225	65.899	60.276	64.503	67.675	65.684	66.013	71.554	68.723	70.242	65.064	66.184	69.988
sponge	74.286	74.286	74.286	74.286	91.250	92.500	87.500	92.500	92.500	92.500	91.250	92.321	93.750	91.250	90.893	93.750
tae	33.125	33.125	45.583	35.042	42.417	42.375	43.083	45.000	46.375	44.333	50.292	52.375	47.625	47.625	48.875	51.542
tic-tac-toe	95.615	95.196	93.739	97.599	95.724	95.411	96.451	97.808	96.764	96.659	97.601	98.121	97.077	97.497	97.079	98.329
vehicle	70.931	70.461	73.416	71.765	76.366	76.015	78.146	78.847	77.434	77.319	78.266	79.088	78.382	77.555	78.615	79.440
vote	92.410	93.795	92.616	93.552	93.108	92.421	93.568	96.089	93.578	93.118	92.907	96.094	91.971	93.340	94.017	93.562
vowel	39.091	38.283	46.465	47.980	56.768	57.879	65.455	60.505	64.949	62.020	68.687	68.990	67.677	65.960	73.333	72.525
waveform	82.080	82.080	83.720	84.260	84.680	84.660	85.600	86.140	85.600	85.500	85.960	86.480	86.280	86.200	86.420	86.740
wine	92.712	93.791	89.902	96.111	92.712	94.379	95.523	96.634	94.935	94.967	97.222	97.190	96.667	97.222	96.634	96.078
wisconsin-breast	94.563	94.990	94.277	94.563	94.414	94.414	95.561	96.565	95.561	95.561	95.994	96.565	95.706	95.563	96.137	96.708
zoo	79.273	79.273	79.273	79.273	86.273	85.273	85.273	94.091	88.273	87.273	85.273	93.091	86.273	86.273	89.182	94.091
Average	71.096	71.221	72.768	73.469	74.925	75.248	76.528	77.460	77.085	76.916	78.155	78.798	77.785	77.422	79.345	79.987

4 **Table S3.** Classification accuracies of Logistic Model Trees (LMT) on four different Ratios.

Method Dataset	R = 10%				R = 20%				R = 30%				R = 40%			
	Supervised	Semi-Supervised	Active Random	Combination	Supervised	Semi-Supervised	Active Random	Combination	Supervised	Semi-Supervised	Active Random	Combination	Supervised	Semi-Supervised	Active Random	Combination
anneal	83.287	83.745	84.071	87.976	85.629	89.086	89.642	92.090	89.532	93.773	91.427	94.876	90.200	93.657	90.870	95.432
arrhythmia	56.217	54.657	59.768	64.184	63.947	65.942	65.053	66.604	63.942	68.343	68.135	69.242	67.473	69.473	70.353	71.488
audiology	43.004	43.478	54.862	50.138	58.458	57.905	68.221	69.881	67.767	69.960	73.518	76.542	72.569	73.439	80.573	81.324
autos	44.333	41.810	49.690	48.238	56.048	55.595	58.881	60.881	61.857	65.714	61.833	65.167	64.810	63.786	69.714	71.619
balance-scale	86.866	86.073	88.464	86.861	88.633	87.837	85.763	87.688	86.557	88.162	88.003	90.553	88.477	87.683	89.281	88.971
breast-cancer	65.702	64.717	66.059	66.453	67.869	70.677	71.675	70.579	71.675	73.067	70.320	70.579	70.296	73.436	70.246	76.576
bridges-version1	46.545	46.545	46.545	46.545	56.000	58.000	59.182	55.091	64.000	62.909	63.000	66.636	61.000	63.091	68.636	64.818
bridges-version2	44.545	44.545	44.545	44.545	49.182	49.273	61.818	50.364	61.818	58.000	62.000	60.909	61.000	65.000	68.545	63.000
cleveland	75.194	73.161	75.226	74.849	77.871	78.570	82.462	78.849	82.473	80.828	82.796	82.161	80.505	80.538	84.151	82.172
cmc	45.349	45.621	47.925	47.588	47.794	46.705	52.205	50.442	51.864	49.421	52.141	51.663	52.003	51.257	51.871	51.535
column_2C	81.290	81.613	81.613	78.710	80.000	82.581	82.903	84.194	82.581	83.548	83.226	85.484	84.194	83.226	84.194	86.129
column_3C	82.581	80.000	81.613	82.903	83.871	82.581	83.226	85.484	85.161	82.258	84.516	84.194	85.161	85.484	84.516	86.129
credit-rating	82.464	83.913	83.623	83.623	84.203	84.348	84.203	84.203	84.348	85.072	84.058	84.638	83.333	84.638	84.348	84.928
cylinder-bands	62.222	63.889	58.333	62.407	61.667	62.037	65.926	63.519	65.370	68.148	69.444	71.296	68.333	70.926	72.963	75.370
dermatology	84.662	84.144	92.350	95.661	93.176	93.191	94.820	97.553	95.368	94.272	94.827	97.560	95.383	94.550	95.938	97.275
ecoli	73.556	75.597	75.936	80.954	81.569	80.963	83.930	85.392	83.930	84.207	85.704	85.704	85.410	86.301	86.578	87.496
flags	52.132	53.053	52.632	52.158	54.316	57.421	57.395	61.447	56.737	58.842	57.895	59.868	58.868	57.763	60.789	63.500
german_credit	68.200	68.800	70.300	72.100	69.900	72.500	74.300	73.500	74.300	73.700	73.500	73.800	73.600	73.000	75.500	74.100
glass	51.450	52.792	51.104	53.355	55.260	56.147	60.736	60.779	58.009	61.645	59.827	62.597	62.641	64.372	66.320	64.913
haberman	70.290	70.290	73.204	73.839	74.828	73.849	73.183	74.473	73.516	71.258	73.860	73.527	72.527	72.860	74.151	72.871
heart-statlog	76.667	75.556	75.556	78.148	77.037	75.185	79.630	80.741	79.630	75.926	80.370	80.741	77.778	79.259	81.852	82.593
hepatitis	76.167	78.167	79.417	80.625	80.083	76.833	80.000	82.500	79.917	80.583	78.708	81.167	80.542	79.250	81.292	82.542
horse-colic	77.695	78.799	80.976	80.165	82.883	83.416	78.791	81.779	79.602	83.416	82.598	80.968	81.216	83.956	83.393	83.408
hungarian-heart	80.299	81.000	80.690	83.402	80.011	82.057	78.609	82.046	79.966	78.276	82.713	79.000	81.379	80.322	81.667	81.747
hypothyroid	96.846	97.430	98.145	99.099	98.277	98.330	98.834	99.125	98.781	98.648	99.099	99.125	99.046	98.887	99.072	99.549
ionosphere	78.659	79.802	83.492	82.659	84.619	83.770	87.468	88.611	86.905	85.754	88.048	90.040	87.468	86.603	89.746	92.595
iris	88.000	80.000	88.000	94.000	93.333	92.000	94.667	93.333	95.333	94.667	96.000	96.000	96.000	97.333	96.667	94.667
kr-vs-kp	95.213	94.931	97.309	98.687	97.560	98.029	98.529	99.531	98.623	98.905	99.343	99.750	99.061	99.186	99.281	99.750
labor	45.667	45.667	45.667	45.667	68.333	57.667	77.333	71.000	77.333	76.333	69.667	77.667	69.667	75.000	79.000	86.333
letter	78.710	78.205	81.540	83.150	83.805	83.570	86.970	88.650	86.970	86.260	88.685	90.500	88.045	88.500	90.305	91.415
lymphography	65.476	65.619	67.524	66.333	70.762	70.190	72.810	72.857	76.286	76.333	81.667	78.190	76.952	79.619	80.333	83.048
mushroom	99.581	99.569	99.618	99.815	99.803	99.791	99.902	99.938	99.889	99.889	99.938	99.963	99.938	99.938	99.865	99.975
optdigits	93.879	93.630	94.698	96.103	95.231	95.391	95.854	97.046	95.819	95.872	96.637	97.082	96.370	96.637	96.779	97.278
page-blocks	95.194	95.669	96.072	96.602	95.815	96.072	96.382	96.876	96.181	95.998	96.602	97.131	96.620	96.565	96.730	96.876
pendigits	95.897	96.206	96.780	97.853	97.162	97.007	97.553	98.317	97.617	97.535	97.853	98.426	97.689	98.126	98.244	98.372
pima_diabetes	75.135	74.354	73.568	76.827	75.531	76.042	75.783	77.473	75.654	76.567	74.357	77.086	75.138	77.348	77.215	76.693
postoperative	66.667	66.667	66.667	66.667	68.889	66.667	71.111	70.000	70.000	67.778	64.444	71.111	66.667	65.556	66.667	68.889
primary-tumor	32.139	29.483	37.442	34.510	35.062	38.886	41.542	39.483	41.542	41.872	40.098	42.772	41.533	40.704	44.528	46.889
segment	92.641	92.857	93.723	93.463	93.723	93.117	93.853	95.368	94.545	94.502	94.762	96.234	94.892	95.065	96.364	96.494
sick	97.056	96.924	97.031	98.568	97.587	97.932	98.144	98.860	97.746	98.197	98.356	98.966	98.382	98.436	98.781	99.019
solar-flare	69.475	68.015	70.649	69.792	70.766	70.923	70.494	70.619	70.555	69.335	72.418	70.544	69.827	70.759	71.699	72.902
sonar	60.524	59.143	59.595	60.571	66.000	68.333	73.024	69.286	70.190	74.524	70.286	73.048	76.476	73.619	75.524	76.476
soybean	72.023	71.164	82.864	83.148	84.763	84.908	87.396	90.034	88.129	88.431	90.328	92.965	90.627	90.622	92.969	92.526
spambase	90.198	89.524	91.175	92.176	91.132	91.241	91.784	92.610	91.588	91.914	92.479	92.849	91.827	92.458	92.088	93.067
spect	61.932	61.747	60.792	63.228	68.337	68.784	69.802	68.584	71.839	73.029	74.548	75.474	72.974	71.717	79.108	76.902
sponge	92.500	92.500	92.500	92.500	92.500	92.500	92.500	92.500	92.500	92.500	92.500	92.500	92.500	92.500	92.500	92.500
tae	38.458	41.792	47.042	41.125	38.375	44.250	47.708	47.583	47.583	46.292	49.625	55.000	47.000	42.375	48.917	51.583
tic-tac-toe	75.569	71.607	88.620	88.297	94.047	86.846	93.934	98.329	93.524	92.277	97.285	98.329	96.762	94.779	97.495	98.329
vehicle	68.322	69.035	70.097	72.584	74.951	73.527	76.486	77.433	79.564	75.542	80.513	80.739	79.448	78.272	80.405	80.280
vote	95.640	95.640	95.407	95.640	94.958	94.498	95.412	96.099	95.412	95.407	96.327	95.640	96.327	95.180	95.862	95.634
vowel	48.384	46.162	58.889	55.556	67.273	67.071	75.960	79.394	76.566	75.354	83.636	86.667	82.424	82.424	90.404	88.182
waveform	84.820	84.840	84.940	86.420	85.660	86.040	86.180	87.120	86.180	85.960	86.320	86.720	86.160	86.560	86.620	86.740
wine	85.425	88.693	89.902	93.235	90.458	93.791	96.078	96.634	96.634	96.667	95.000	98.889	95.490	96.078	94.379	96.667
wisconsin-breast	93.565	92.565	94.992	95.422	95.990	95.282	95.418	96.565	95.275	95.422	96.280	95.994	95.992	95.994	95.565	96.137
zoo	61.545	61.545	61.545	61.545	74.273	73.273	79.273	84.273	85.273	84.273	86.273	90.182	87.273	84.273	89.273	92.182
Average	72.834	72.599	74.923	75.576	77.367	77.426	79.832	80.247	80.181	80.243	80.978	82.263	80.787	81.061	82.730	83.416

6 **Table S4.** Classification accuracies of LogitBoost on four different *Ratios*.

Method Dataset	R = 10%				R = 20%				R = 30%				R = 40%			
	Supervised	Semi-Supervised	Active Random	Combination	Supervised	Semi-Supervised	Active Random	Combination	Supervised	Semi-Supervised	Active Random	Combination	Supervised	Semi-Supervised	Active Random	Combination
anneal	93.869	93.874	94.878	97.880	96.213	95.433	97.548	98.216	97.548	97.770	98.327	98.663	97.994	97.658	98.105	98.772
arrhythmia	60.193	60.845	61.763	64.841	63.942	64.614	65.478	68.826	66.367	67.478	68.812	70.812	69.686	70.580	67.271	73.686
audiology	44.783	46.996	54.447	58.024	57.154	58.893	69.960	69.071	69.960	68.636	73.498	73.439	73.893	74.763	79.684	80.968
autos	43.881	42.429	48.310	51.143	54.976	54.952	59.976	62.905	60.476	61.905	68.667	70.762	68.238	66.286	72.548	74.500
balance-scale	79.841	79.672	81.429	86.400	83.671	84.165	84.501	87.693	86.249	84.324	86.073	86.897	87.207	85.591	87.673	87.522
breast-cancer	65.382	65.025	64.310	65.049	71.330	66.392	68.498	69.581	67.796	70.567	70.985	70.936	72.044	70.985	72.734	71.330
bridges-version1	44.545	44.545	44.545	44.545	51.364	54.273	60.273	59.091	57.182	62.818	62.727	64.909	64.727	60.727	63.455	61.909
bridges-version2	45.636	45.636	45.636	45.636	42.727	44.636	56.273	51.091	61.727	59.818	59.182	63.909	60.182	62.000	67.000	62.000
cleveland	74.527	71.849	73.151	76.882	77.559	76.882	81.172	77.161	80.839	77.161	79.495	79.462	78.172	78.183	76.516	79.194
cmc	49.356	50.780	52.751	52.956	52.683	51.800	55.666	53.628	55.462	52.679	54.244	54.713	55.058	54.039	54.106	54.239
column_2C	78.065	77.419	75.161	79.032	79.355	78.387	80.000	80.968	78.387	81.290	81.935	81.613	81.613	79.677	83.548	80.968
column_3C	76.129	76.452	75.806	80.645	81.290	80.000	81.290	80.968	80.323	80.645	78.387	81.935	81.613	81.290	81.290	82.258
credit-rating	81.739	81.304	83.623	82.899	84.493	85.507	85.507	85.652	84.928	84.638	85.217	85.797	83.623	84.203	86.377	85.507
cylinder-bands	62.593	67.407	67.407	67.407	66.481	66.481	69.444	70.370	69.630	68.704	69.444	69.259	69.444	69.815	72.778	69.815
dermatology	89.902	89.069	93.161	93.709	95.105	94.820	94.827	96.194	94.827	96.186	94.827	96.456	95.375	95.916	96.471	96.471
ecoli	67.638	66.417	71.791	75.036	75.303	74.421	79.153	83.922	79.153	80.089	81.542	83.610	82.745	81.524	82.139	83.930
flags	49.079	49.079	52.658	52.763	49.632	52.763	54.184	56.895	57.368	55.711	58.868	64.026	58.342	57.868	59.842	60.395
german_credit	70.300	69.900	69.600	71.800	69.700	69.000	72.700	72.600	72.700	71.700	71.300	71.800	72.100	72.200	68.800	71.900
glass	51.926	51.948	54.329	55.260	60.303	61.753	63.636	64.935	61.732	65.022	63.095	67.359	60.281	65.043	69.567	70.130
haberman	68.269	65.978	69.882	70.237	72.194	70.226	72.204	71.860	72.882	71.237	73.538	75.505	71.903	74.495	73.204	74.817
heart-statlog	70.000	72.222	71.852	75.926	74.444	75.556	79.630	80.370	78.519	75.926	76.667	82.963	77.407	76.667	77.037	80.741
hepatitis	77.292	78.542	79.292	74.167	75.333	79.958	79.333	78.042	79.875	80.625	76.583	81.958	77.250	78.458	87.000	84.458
horse-colic	70.661	70.646	74.459	76.044	76.336	77.973	76.907	81.239	74.167	74.752	77.432	81.261	78.566	78.814	77.733	83.138
hungarian-heart	75.218	78.977	79.322	79.230	78.609	79.287	74.839	78.276	74.897	76.885	79.207	79.989	78.230	80.655	79.644	80.989
hypothyroid	98.065	97.986	98.542	99.602	98.913	98.940	99.205	99.576	99.178	99.099	99.311	99.549	99.231	99.205	99.390	99.496
ionosphere	76.659	76.659	84.357	85.492	86.040	85.762	89.167	92.603	88.913	87.468	91.183	90.881	89.190	89.468	92.032	89.762
iris	89.333	90.667	89.333	94.667	94.000	95.333	95.333	94.000	96.000	96.000	94.667	96.667	96.000	95.333	95.333	95.333
kr-vs-kp	93.554	93.712	93.836	94.055	93.774	93.805	93.836	94.306	93.836	93.930	93.836	93.836	93.836	93.680	93.836	93.836
labor	65.333	65.333	65.333	65.333	67.667	76.000	73.667	81.333	73.667	73.667	78.333	87.667	78.333	83.667	84.000	86.000
letter	70.955	69.870	71.900	68.925	72.175	70.970	72.845	70.505	72.845	71.450	73.100	71.920	72.940	71.960	73.045	72.315
lymphography	69.571	69.571	70.333	75.762	76.905	77.048	76.238	75.619	81.762	77.571	80.905	77.619	79.619	78.381	80.429	80.333
mushroom	98.560	98.621	98.621	99.680	99.003	98.375	98.979	99.557	98.979	98.523	98.905	99.508	98.659	98.178	98.412	99.015
optdigits	88.754	89.039	90.160	90.801	90.142	90.552	91.228	91.957	91.281	91.157	91.388	92.082	91.174	91.174	91.495	92.082
page-blocks	95.669	95.359	96.017	96.949	96.364	96.236	96.455	97.205	96.437	96.071	96.455	97.058	96.528	96.638	96.711	96.985
pendigits	90.011	89.929	90.784	90.866	91.203	90.366	91.430	91.921	91.203	90.648	92.313	92.140	91.985	90.994	92.031	92.376
pima_diabetes	71.488	72.531	71.615	73.184	75.005	75.530	76.567	73.060	75.660	74.352	73.698	74.484	74.875	74.612	74.609	73.698
postoperative	60.000	60.000	60.000	60.000	61.111	56.667	58.889	55.556	62.222	56.667	57.778	62.222	61.111	56.667	60.000	61.111
primary-tumor	33.904	35.089	40.080	37.184	39.189	39.474	42.451	42.763	42.451	44.813	43.307	45.107	43.039	44.207	46.916	44.251
segment	92.251	92.338	93.377	94.545	93.810	93.074	94.286	96.190	94.589	93.593	95.022	95.671	95.065	95.065	95.238	95.498
sick	97.587	97.693	97.375	98.011	97.879	97.693	97.879	98.038	97.879	98.091	97.906	97.852	97.905	97.852	97.879	97.905
solar-flare	67.981	69.039	71.162	70.742	70.771	69.730	70.566	71.409	70.925	69.966	71.491	72.098	72.108	71.146	73.091	72.019
sonar	61.952	62.905	61.929	65.405	67.738	65.357	66.095	67.286	73.071	72.095	74.976	75.952	72.095	74.071	77.476	77.357
soybean	72.621	73.050	84.471	84.041	86.377	86.522	89.011	91.647	89.450	89.889	91.799	93.700	90.774	91.650	92.679	93.114
spambase	90.132	89.632	90.936	91.849	90.849	90.524	91.219	91.589	91.262	90.719	91.806	91.741	91.415	91.219	91.675	92.023
spect	66.108	65.175	68.536	66.108	67.837	68.577	67.171	75.166	70.791	68.531	73.654	73.020	72.534	74.085	76.553	73.097
sponge	88.214	88.214	88.214	88.214	92.500	92.500	92.500	92.500	93.750	93.750	92.500	93.750	93.750	92.500	93.750	93.750
tae	32.417	33.750	39.667	37.042	40.333	39.708	43.667	44.333	42.375	41.083	45.667	44.333	43.708	46.958	47.625	46.917
tic-tac-toe	70.461	69.942	71.708	71.925	72.544	70.765	73.596	73.805	74.534	72.963	73.693	74.011	73.069	72.753	72.751	74.012
vehicle	61.473	59.817	65.486	65.612	65.616	65.496	68.209	69.508	67.499	67.501	71.289	69.272	70.342	70.220	69.986	70.209
vote	94.265	93.573	94.027	96.094	94.514	94.503	95.872	95.883	95.407	95.867	94.271	96.105	94.725	94.952	95.862	96.332
vowel	45.051	48.485	53.030	53.131	58.687	57.273	64.343	62.121	63.030	61.717	65.354	66.162	66.263	64.040	69.192	69.293
waveform	81.020	80.140	81.380	82.180	82.020	81.460	82.200	82.460	82.200	81.920	82.660	83.020	82.360	82.740	82.180	83.140
wine	86.536	85.425	83.758	88.301	91.569	93.758	96.111	98.333	95.556	95.523	96.111	97.190	96.667	96.111	96.111	97.745
wisconsin-breast	94.420	94.275	93.563	94.994	94.849	95.135	95.277	95.422	95.277	94.563	95.280	95.708	94.851	95.280	95.996	95.994
zoo	76.273	76.273	76.273	76.273	77.273	78.273	80.273	86.182	81.273	81.273	87.182	94.091	87.182	86.273	88.273	94.182
Average	72.208	72.384	74.098	75.172	75.943	76.065	77.956	78.752	78.296	77.946	79.198	80.590	79.219	79.246	80.529	80.888

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