Dataset	GNB (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
glass4	0.572 ± 0.129	0.763 ± 0.154	0.785 ± 0.138	0.763 ± 0.154	0.771 ± 0.145	0.524 ± 0.134	0.490 ± 0.137
ecoli-0-2-3-4-vs-5	$0.780 \stackrel{7}{\pm} 0.098$	0.836 ± 0.096	0.897 ± 0.086	0.903 ± 0.077	0.903 ± 0.078	0.816 ± 0.092	0.796 ± 0.098
glass- 0 - 1 - 6 - vs - 2	0.565 ± 0.111	$0.568 \stackrel{1,7}{\pm} 0.113$	0.600 ± 0.145	0.713 ± 0.117	0.717 ± 0.116	$0.602 \stackrel{1,7}{\pm} 0.085$	0.603 ± 0.082
ecoli-0-1- vs -5	0.800 ± 0.143	0.865 ± 0.121	$0.900 \stackrel{1,2}{\pm} 0.084$	0.900 ± 0.075	0.900 ± 0.075	0.898 ± 0.081	0.888 ± 0.082
yeast-1-4-5-8-vs-7	0.544 ± 0.012	$0.546 \stackrel{1}{\pm} 0.015$	0.571 ± 0.062	0.630 ± 0.097	0.629 ± 0.098	0.565 ± 0.051	$0.580 \stackrel{1}{\pm} 0.060$
ecoli4	0.886 ± 0.083	$0.898 \stackrel{1}{\pm} 0.063$	0.932 ± 0.071	0.933 ± 0.081	0.934 ± 0.082	0.859 ± 0.089	0.837 ± 0.101
led 7 digit - 0 - 2 - 4 - 5 - 6 - 7 - 8 - 9 - vs - 1	$0.853 \stackrel{7}{\pm} 0.073$	0.874 ± 0.063	0.880 ± 0.067	0.653 ± 0.089	0.654 ± 0.091	$0.862 \stackrel{7}{\pm} 0.066$	0.848 ± 0.061
glass5	0.948 ± 0.103	0.904 ± 0.152	$0.905 \stackrel{all}{\pm} 0.153$	0.893 ± 0.165	0.898 ± 0.156	0.900 ± 0.155	0.900 ± 0.155
ecoli-0-3-4-6- vs -5	0.755 ± 0.102	0.816 ± 0.103	0.896 ± 0.105	0.897 ± 0.088	0.894 ± 0.087	0.784 ± 0.121	0.763 ± 0.118
y east - 0 - 5 - 6 - 7 - 9 - vs - 4	0.501 ± 0.026	0.501 ± 0.022	0.713 ± 0.135	0.797 ± 0.049	0.804 ± 0.050	0.578 ± 0.108	0.581 ± 0.100
yeast6	0.636 ± 0.023	0.640 ± 0.025	0.769 ± 0.044	0.888 ± 0.056	0.887 ± 0.056	0.694 ± 0.054	$0.709 \overset{1,2}{\pm} 0.064$
ecoli-0-6-7-vs-5	0.813 ± 0.124	0.841 ± 0.105	0.879 ± 0.098	0.869 ± 0.099	0.862 ± 0.099	0.814 ± 0.089	0.803 ± 0.104
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.956 ± 0.109	0.922 ± 0.140	0.923 ± 0.141	0.861 ± 0.151	0.861 ± 0.151	0.860 ± 0.151	0.860 ± 0.151
ecoli - 0 - 1 - 3 - 7 - vs - 2 - 6	0.831 ± 0.193	0.844 ± 0.199	0.845 ± 0.200	0.843 ± 0.202	0.840 ± 0.204	0.836 ± 0.189	0.818 ± 0.194
yeast - 0 - 2 - 5 - 6 - vs - 3 - 7 - 8 - 9	0.675 ± 0.048	0.772 ± 0.049	0.774 ± 0.046	0.718 ± 0.053	0.754 ± 0.056	0.755 ± 0.069	0.785 ± 0.070
ecoli - 0 - 1 - 4 - 7 - vs - 5 - 6	0.742 ± 0.131	0.829 ± 0.136	0.882 ± 0.115	0.863 ± 0.108	0.870 ± 0.104	0.853 ± 0.084	0.865 ± 0.079
yeast5	0.825 ± 0.024	$0.803 \stackrel{1}{\pm} 0.029$	0.846 ± 0.024	0.972 ± 0.024	0.972 ± 0.024	0.922 ± 0.083	0.919 ± 0.095
shuttle- $c2$ - vs - $c4$	0.988 ± 0.022	0.999 ± 0.005	0.999 ± 0.005	0.845 ± 0.222	0.845 ± 0.222	0.838 ± 0.224	0.845 ± 0.217
ecoli - 0 - 1 - 4 - 7 - vs - 2 - 3 - 5 - 6	0.651 ± 0.090	0.667 ± 0.117	0.773 ± 0.136 1.2	0.814 ± 0.106 $1,2,3$	0.855 ± 0.093	0.804 ± 0.103 $1,2,3$	0.849 ± 0.083 $1,2,3,4,6$
yeast - 0 - 3 - 5 - 9 - vs - 7 - 8	0.550 ± 0.018	0.540 ± 0.022	0.698 ± 0.081 $1,2,4,6,7$	0.661 ± 0.070 $1,2,6,7$	$\begin{array}{c} 1,2,3,4,6\\ 0.684 \pm 0.067\\ 1,2,4,6,7 \end{array}$	0.562 ± 0.038	0.574 ± 0.061
yeast-1-vs-7	0.594 ± 0.037 6.7	0.594 ± 0.040 6.7	0.696 ± 0.104 $1,2,6,7$	0.666 ± 0.093 $1,2,6,7$	0.660 ± 0.099 $1,2,6,7$	0.582 ± 0.045	0.585 ± 0.038
yeast-1-2-8-9- vs -7	0.540 ± 0.011	0.541 ± 0.012	0.590 ± 0.048 1.2	0.685 ± 0.087 $1,2,3,6,7$	0.685 ± 0.087 $1,2,3,6,7$	0.583 ± 0.055	0.592 ± 0.059 $1,2$
ecoli-0-1-4-6- vs -5	0.847 ± 0.098	0.890 ± 0.088 $1,6,7$	0.901 ± 0.089 $1,2,6,7$	0.899 ± 0.079 $1,2,6,7$	0.902 ± 0.076 $1,2,6,7$	0.861 ± 0.080	0.840 ± 0.095
$glass\hbox{-}0\hbox{-}1\hbox{-}5\hbox{-}vs\hbox{-}2$	0.555 ± 0.134	0.520 ± 0.115	0.614 ± 0.144 $1,2,6,7$	0.706 ± 0.114 $1,2,3,6,7$	0.704 ± 0.115 $1,2,3,6,7$	0.559 ± 0.065	0.556 ± 0.061
yeast-2-vs-4	0.608 ± 0.128	0.580 ± 0.102	0.849 ± 0.099 $1,2,6,7$	0.856 ± 0.071 $1,2,5,6,7$	0.856 ± 0.070 $1,2,6,7$	0.642 ± 0.131	0.660 ± 0.143
$glass\hbox{-} 0\hbox{-} 6\hbox{-} vs\hbox{-} 5$	$0.945 \pm 0.140 \\ 4,5,6,7$	0.925 ± 0.149 $4,5,6,7$	$0.925 \pm 0.149 \\ 4,5,6,7$	0.840 ± 0.178	0.840 ± 0.178	$0.858 \stackrel{?}{\pm} 0.173$	$0.858 \stackrel{?}{\pm} 0.173$
glass2	0.607 ± 0.098	0.621 ± 0.093	0.638 ± 0.123	0.740 ± 0.109 $1,2,3,6,7$	0.739 ± 0.109 $1,2,3,6,7$	0.655 ± 0.076 1.7	0.650 ± 0.075
yeast-2- vs -8	0.637 ± 0.090	0.703 ± 0.077 $1,6,7$	0.785 ± 0.112	0.776 ± 0.111 $1,2,6,7$	0.776 ± 0.111 $1,2,6,7$	0.636 ± 0.119	0.619 ± 0.100
vowel0	0.915 ± 0.037 $2,4$	0.905 ± 0.025	0.925 ± 0.027 $2,4,7$	0.878 ± 0.060	0.919 ± 0.051 $2,4$	$0.921 \pm 0.029 \\ 2,4,7$	0.915 ± 0.027 $2,4$
glass-0-4-vs-5	0.975 ± 0.083	0.945 ± 0.111	0.950 ± 0.108	0.925 ± 0.134	0.925 ± 0.134	0.934 ± 0.121	0.934 ± 0.121
$glass\hbox{-}0\hbox{-}1\hbox{-}4\hbox{-}6\hbox{-}vs\hbox{-}2$	0.579 ± 0.128	0.590 ± 0.132	0.617 ± 0.150 $1,2$	0.728 ± 0.104 $1,2,3,6,7$	0.727 ± 0.103 $1,2,3,6,7$	0.642 ± 0.073 $1,7$	0.638 ± 0.071
yeast4	0.551 ± 0.039	0.526 ± 0.025	0.585 ± 0.046 $1,2,6$	0.809 ± 0.068 1,2,3,6,7	0.812 ± 0.065	0.564 ± 0.096	0.581 ± 0.120
ecoli-0-4-6-vs-5	0.851 ± 0.114	0.884 ± 0.103 $1.6.7$	0.900 ± 0.095 1.2.6.7	0.902 ± 0.082 $1,2,6,7$	0.901 ± 0.082 $1,2,6,7$	0.860 ± 0.097	0.854 ± 0.101
page-blocks-1-3-vs-4	0.765 ± 0.095	0.772 ± 0.101	0.821 ± 0.127 $1,2,4,6,7$	0.756 ± 0.106 -	0.793 ± 0.108	0.759 ± 0.096	0.770 ± 0.095
yeast-0-2-5-7-9-vs-3-6-8	0.576 ± 0.028	0.543 ± 0.027	0.813 ± 0.112 $1,2,6,7$	0.899 ± 0.033 1,2,3,6,7	$ \begin{array}{c} 1,2,4,6,7\\0.898 \pm 0.033\\1,2,3,6,7 \end{array} $	0.626 ± 0.051 $1,2$	0.725 ± 0.153 $1,2,6$
ecoli-0-1-vs-2-3-5	0.607 ± 0.157	0.625 ± 0.171	0.821 ± 0.135 $1,2$	0.846 ± 0.110 $1,2$	0.846 ± 0.110 $1,2$	0.830 ± 0.103	0.839 ± 0.106 $1,2$
ecoli-0-6-7-vs-3-5	0.587 ± 0.158 $-$	0.630 ± 0.175	0.726 ± 0.148 $1,2$	0.814 ± 0.093 1,2,3,6,7	0.822 ± 0.103 $1,2,3,6,7$	0.775 ± 0.112 $1,2$	0.769 ± 0.115 $1,2$
ecoli-0-3-4-7-vs-5-6	0.778 ± 0.080	0.835 ± 0.079 $1,7$	0.896 ± 0.076 $1,2,6,7$	0.885 ± 0.078 $1,2,6,7$	0.885 ± 0.078 $1,2,6,7$	0.833 ± 0.081 $1,7$	0.781 ± 0.092
ecoli-0-2-6-7-vs-3-5	0.586 ± 0.145 $-$	0.638 ± 0.155	0.710 ± 0.139 $1,2$	0.829 ± 0.098	0.824 ± 0.104 1,2,3,6,7	0.762 ± 0.120 $1,2$	0.758 ± 0.121 $1,2$
shuttle-c0-vs-c4	0.990 ± 0.012 $-$	0.989 ± 0.013	0.989 ± 0.013	0.993 ± 0.009	0.993 ± 0.009	0.993 ± 0.009	0.993 ± 0.009
ecoli-0-3-4-vs-5	0.788 ± 0.105 $-$	0.846 ± 0.111 $_{1,6,7}$	0.897 ± 0.107 $1,2,6,7$	0.906 ± 0.104 $1,2,3,6,7$	0.906 ± 0.104 $1,2,3,6,7$	$0.793 \pm 0.124 \\ 7$	0.766 ± 0.113 -
		1,0,1	1,2,0,1	1,2,3,0,1	1,2,3,0,1		

Table 1: Results for BAC metric

GNB (1) OSB (2) OKNORAU (3) TBAC (4) OTBAC (5) TBAW (6) OTBAW (7)									
$Mean\ rank$	2.415	3.098	5.268	5.098	5.488	3.329	3.305		
	_	1	1,2,6,7	1,2,6,7	1,2,6,7	1	1		

Table 2: Results for mean ranks according to BAC metric

Dataset	GNB (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
glass4	0.190 ± 0.222	0.411 ± 0.207	0.498 ± 0.205	0.473 ± 0.243	0.499 ± 0.242	0.128 ± 0.064	0.111 ± 0.044
ecoli-0-2-3-4-vs-5	0.442 ± 0.170	0.533 ± 0.176	0.738 ± 0.167	0.799 ± 0.117	0.801 ± 0.124	0.509 ± 0.185	0.481 ± 0.194
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 2$	0.184 ± 0.057	$0.185 \stackrel{1}{\pm} 0.062$	0.213 ± 0.103	0.302 ± 0.099	0.304 ± 0.099	0.198 ± 0.042	$0.199 \stackrel{-}{\pm} 0.042$
ecoli-0-1-vs-5	0.667 ± 0.299	0.769 ± 0.220	0.843 ± 0.118	0.865 ± 0.102	0.865 ± 0.102	$0.774 \stackrel{1}{\pm} 0.169$	$0.733 \stackrel{1}{\pm} 0.176$
yeast-1-4-5-8-vs-7	0.090 ± 0.002	0.091 ± 0.002	0.097 ± 0.012	0.144 ± 0.053	0.144 ± 0.053	$0.097 \stackrel{7}{\pm} 0.023$	0.104 ± 0.031
ecoli4	0.454 ± 0.158	0.456 ± 0.127	0.694 ± 0.183	0.838 ± 0.143	0.807 ± 0.156	0.492 ± 0.264	0.452 ± 0.264
$led 7 digit \hbox{-} 0 \hbox{-} 2 \hbox{-} 4 \hbox{-} 5 \hbox{-} 6 \hbox{-} 7 \hbox{-} 8 \hbox{-} 9 \hbox{-} vs \hbox{-} 1$	0.553 ± 0.117	0.534 ± 0.087	0.612 ± 0.130	0.385 ± 0.173	0.385 ± 0.175	0.461 ± 0.084	$0.428 \stackrel{-}{\pm} 0.073$
glass5	0.747 ± 0.183	0.681 ± 0.250	0.703 ± 0.263	0.787 ± 0.299	0.800 ± 0.278	0.761 ± 0.270	0.761 ± 0.270
ecoli-0-3-4-6-vs-5	0.384 ± 0.145	0.476 ± 0.171	0.738 ± 0.194	0.770 ± 0.149	0.765 ± 0.144	0.454 ± 0.199	0.425 ± 0.201
yeast - 0 - 5 - 6 - 7 - 9 - vs - 4	0.176 ± 0.008	0.176 ± 0.007	0.335 ± 0.110	0.497 ± 0.090	0.483 ± 0.092	0.233 ± 0.103	0.226 ± 0.083
yeast6	0.063 ± 0.004	$0.063 \stackrel{1}{\pm} 0.004$	0.109 ± 0.025	0.385 ± 0.053	0.377 ± 0.053	$0.078 \stackrel{1,2}{\pm} 0.038$	$0.089 \overset{1,2}{\pm} 0.072$
ecoli-0-6-7-vs-5	0.610 ± 0.231	0.520 ± 0.152	0.704 ± 0.188	0.763 ± 0.167	0.745 ± 0.163	0.462 ± 0.138	$0.462 \overset{1,2}{\pm} 0.179$
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.807 ± 0.227	0.774 ± 0.256	0.790 ± 0.263	0.747 ± 0.264	0.747 ± 0.264	0.736 ± 0.261	0.736 ± 0.261
ecoli-0-1-3-7-vs-2-6	0.421 ± 0.251	0.599 ± 0.344	0.631 ± 0.361	0.641 ± 0.360	0.605 ± 0.352	0.405 ± 0.235	0.355 ± 0.234
yeast - 0 - 2 - 5 - 6 - vs - 3 - 7 - 8 - 9	0.466 ± 0.094	0.593 ± 0.077	0.600 ± 0.079	0.554 ± 0.096	0.598 ± 0.088	0.571 ± 0.110	0.543 ± 0.104
ecoli-0-1-4-7-vs-5-6	0.590 ± 0.239	0.679 ± 0.229	0.764 ± 0.186	$0.781 \stackrel{1}{\pm} 0.186$	0.776 ± 0.181	0.641 ± 0.159	0.537 ± 0.138
yeast5	0.152 ± 0.019	0.138 ± 0.019	0.170 ± 0.023	0.610 ± 0.068	0.610 ± 0.068	0.468 ± 0.227	0.479 ± 0.227
shuttle- $c2$ - vs - $c4$	0.881 ± 0.211	0.990 ± 0.069	0.990 ± 0.069	0.700 ± 0.443	0.700 ± 0.443	0.635 ± 0.419	0.659 ± 0.415
ecoli-0-1-4-7-vs-2-3-5-6	0.426 ± 0.208	0.440 ± 0.223	0.639 ± 0.238	$0.732 \stackrel{6}{\pm} 0.171$	0.782 ± 0.147	0.661 ± 0.162	0.568 ± 0.128
y east - 0 - 3 - 5 - 9 - vs - 7 - 8	0.196 ± 0.006	0.192 ± 0.007	0.325 ± 0.077	0.392 ± 0.121	0.415 ± 0.109	0.203 ± 0.021	0.214 ± 0.061
yeast-1-vs-7	0.148 ± 0.011	0.148 ± 0.012	0.214 ± 0.062	0.246 ± 0.091	0.224 ± 0.073	0.145 ± 0.017	$0.146 \stackrel{2}{\pm} 0.014$
yeast-1-2-8-9- vs -7	0.066 ± 0.001	$0.067 \stackrel{6}{\pm} 0.001$	0.075 ± 0.007	0.169 ± 0.056	0.169 ± 0.056	$0.087 \stackrel{-}{\pm} 0.042$	$0.091 \stackrel{-}{\pm} 0.045$
ecoli-0-1-4-6-vs-5	0.652 ± 0.214	0.664 ± 0.179	0.757 ± 0.173	0.805 ± 0.110	0.806 ± 0.106	0.547 ± 0.199	0.502 ± 0.210
$glass\hbox{-}0\hbox{-}1\hbox{-}5\hbox{-}vs\hbox{-}2$	0.200 ± 0.081	0.180 ± 0.059	0.244 ± 0.110	0.308 ± 0.095	0.306 ± 0.096	0.198 ± 0.036	0.197 ± 0.035
yeast-2- vs -4	0.301 ± 0.222	0.234 ± 0.115	0.616 ± 0.151	0.758 ± 0.110	0.731 ± 0.106	0.314 ± 0.206	0.323 ± 0.184
$glass\hbox{-} 0\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.867 ± 0.273	0.841 ± 0.279	0.841 ± 0.279	0.740 ± 0.335	0.740 ± 0.335	$0.761 \stackrel{2}{\pm} 0.317$	$0.761 \stackrel{2}{\pm} 0.317$
glass2	0.186 ± 0.050	0.192 ± 0.047	0.211 ± 0.073	0.322 ± 0.103	0.320 ± 0.102	0.206 ± 0.045	0.203 ± 0.044
yeast-2-vs-8	0.193 ± 0.205	0.202 ± 0.172	0.599 ± 0.183	0.665 ± 0.200	0.665 ± 0.200	0.214 ± 0.229	0.114 ± 0.039
vowel0	0.720 ± 0.049	0.595 ± 0.036	0.643 ± 0.037	0.800 ± 0.081	0.801 ± 0.069	0.669 ± 0.042	0.586 ± 0.038
$glass\hbox{-} 0\hbox{-} 4\hbox{-} vs\hbox{-} 5$	0.925 ± 0.170	0.886 ± 0.191	0.893 ± 0.189	0.887 ± 0.227	0.887 ± 0.227	0.899 ± 0.194	0.903 ± 0.194
$glass\hbox{-}0\hbox{-}1\hbox{-}4\hbox{-}6\hbox{-}vs\hbox{-}2$	0.177 ± 0.060	0.182 ± 0.062	0.209 ± 0.089	0.313 ± 0.090	0.310 ± 0.088	0.205 ± 0.030	0.203 ± 0.028
yeast4	0.074 ± 0.006	0.070 ± 0.004	0.080 ± 0.008	0.329 ± 0.060	0.326 ± 0.057	0.102 ± 0.079	0.124 ± 0.105
ecoli- 0 - 4 - 6 - vs - 5	0.670 ± 0.212	0.700 ± 0.195	0.770 ± 0.186	0.790 ± 0.140	0.789 ± 0.141	0.619 ± 0.185	0.598 ± 0.194
page-blocks-1-3-vs-4	0.502 ± 0.143	0.491 ± 0.147	0.550 ± 0.177	0.545 ± 0.178	0.590 ± 0.168	0.519 ± 0.144	0.483 ± 0.145
yeast - 0 - 2 - 5 - 7 - 9 - vs - 3 - 6 - 8	$0.206 \stackrel{2}{\pm} 0.012$	0.194 ± 0.012	0.476 ± 0.150	0.768 ± 0.084	0.732 ± 0.087	0.230 ± 0.028	0.391 ± 0.213
ecoli-0-1-vs-2-3-5	0.267 ± 0.338	0.301 ± 0.356	0.730 ± 0.233	0.781 ± 0.188	0.781 ± 0.188	0.641 ± 0.203	0.644 ± 0.206
ecoli-0-6-7-vs-3-5	0.202 ± 0.307	0.278 ± 0.306	0.504 ± 0.257	0.688 ± 0.162	0.687 ± 0.163	0.507 ± 0.224	0.474 ± 0.213
ecoli-0-3-4-7-vs-5-6	0.414 ± 0.114	$0.509 \stackrel{1}{\pm} 0.136$	0.743 ± 0.106	0.779 ± 0.123	0.779 ± 0.123	0.497 ± 0.158	0.402 ± 0.138
ecoli-0-2-6-7-vs-3-5	0.216 ± 0.296	0.321 ± 0.281	0.484 ± 0.249	0.701 ± 0.172	0.678 ± 0.172	0.501 ± 0.234	0.451 ± 0.196
shuttle-c0-vs-c4	0.978 ± 0.022	$0.978 \stackrel{1}{\pm} 0.021$	0.978 ± 0.021	0.993 ± 0.009	0.993 ± 0.009	0.993 ± 0.010	0.993 ± 0.010
ecoli-0-3-4- vs -5	0.443 ± 0.172	0.555 ± 0.178	0.741 ± 0.179	0.800 ± 0.164	0.800 ± 0.164	0.464 ± 0.189	0.410 ± 0.171
	<u> </u>	1,6,7	1,2,6,7	1,2,3,6,7	1,2,3,6,7	7	_

Table 3: Results for F1 metric

	GNB (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
Mean rank	2.537	2.780	4.756	5.988	5.841	3.354	2.744
	_	_	1,2,6,7	1,2,3,6,7	1,2,3,6,7	1,7	_

Table 4: Results for mean ranks according to F1 metric

Dataset	GNB (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
glass4	0.207 ± 0.281	0.337 ± 0.211	0.460 ± 0.240	0.427 ± 0.254	0.462 ± 0.268	0.074 ± 0.046	0.061 ± 0.025
ecoli-0-2-3-4-vs-5	0.337 ± 0.200	0.420 ± 0.216	0.672 ± 0.204	0.797 ± 0.165	0.801 ± 0.176	0.420 ± 0.257	0.396 ± 0.268
$glass\hbox{-}0\hbox{-}1\hbox{-}6\hbox{-}vs\hbox{-}2$	0.106 ± 0.034	$0.106 \stackrel{1}{\pm} 0.036$	0.130 ± 0.068	0.193 ± 0.068	0.194 ± 0.069	0.111 ± 0.024	0.112 ± 0.025
ecoli-0-1- vs -5	0.785 ± 0.364	0.831 ± 0.237	0.911 ± 0.130	0.960 ± 0.094	0.960 ± 0.094	0.777 ± 0.247	0.712 ± 0.249
yeast-1-4-5-8- vs -7	0.047 ± 0.001	0.048 ± 0.001	0.051 ± 0.006	0.084 ± 0.031	0.084 ± 0.031	0.052 ± 0.014	0.057 ± 0.019
ecoli4	0.315 ± 0.155	$0.308 \stackrel{1}{\pm} 0.122$	0.585 ± 0.225	0.825 ± 0.176	0.763 ± 0.195	0.421 ± 0.321	0.373 ± 0.303
led7 digit - 0 - 2 - 4 - 5 - 6 - 7 - 8 - 9 - vs - 1	0.428 ± 0.117	0.388 ± 0.083	0.506 ± 0.184	$0.489 \stackrel{all}{\pm} 0.238$	0.477 ± 0.232	$0.316 \stackrel{7}{\pm} 0.075$	0.288 ± 0.068
glass 5	0.655 ± 0.213	$0.608 \overset{6,7}{\pm} 0.258$	0.641 ± 0.278	0.837 ± 0.315	0.857 ± 0.292	$0.767 \stackrel{7}{\pm} 0.294$	0.767 ± 0.294
ecoli-0-3-4-6-vs-5	0.274 ± 0.157	0.352 ± 0.180	0.675 ± 0.223	0.739 ± 0.178	0.735 ± 0.173	0.349 ± 0.221	0.326 ± 0.228
yeast - 0 - 5 - 6 - 7 - 9 - vs - 4	0.097 ± 0.005	$0.097 \stackrel{1}{\pm} 0.004$	0.215 ± 0.085	0.395 ± 0.127	0.366 ± 0.116	0.142 ± 0.088	0.134 ± 0.065
yeast6	$0.032 \stackrel{2}{\pm} 0.002$	0.033 ± 0.002	0.058 ± 0.014	0.251 ± 0.041	0.245 ± 0.040	0.041 ± 0.024	0.049 ± 0.049
ecoli-0-6-7-vs-5	0.597 ± 0.279	0.398 ± 0.166	0.656 ± 0.245	$0.801 \stackrel{all}{\pm} 0.189$	0.774 ± 0.183	0.357 ± 0.191	0.373 ± 0.235
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.756 ± 0.272	0.751 ± 0.289	0.778 ± 0.295	0.830 ± 0.289	0.830 ± 0.289	0.807 ± 0.291	0.807 ± 0.291
ecoli- 0 - 1 - 3 - 7 - vs - 2 - 6	0.353 ± 0.279	0.573 ± 0.366	0.630 ± 0.389	0.647 ± 0.389	0.600 ± 0.389	0.318 ± 0.236	0.284 ± 0.258
yeast - 0 - 2 - 5 - 6 - vs - 3 - 7 - 8 - 9	0.643 ± 0.115	0.608 ± 0.088	0.621 ± 0.097	0.723 ± 0.105	0.698 ± 0.094	$0.602 \stackrel{7}{\pm} 0.134$	0.472 ± 0.124
ecoli-0-1-4-7-vs-5-6	0.838 ± 0.239	0.723 ± 0.225	0.773 ± 0.186	0.869 ± 0.186	0.838 ± 0.192	0.598 ± 0.219	0.417 ± 0.153
yeast5	0.082 ± 0.011	0.074 ± 0.011	0.093 ± 0.014	0.446 ± 0.069	0.446 ± 0.069	0.335 ± 0.184	0.344 ± 0.182
shuttle- $c2$ - vs - $c4$	0.840 ± 0.277	0.987 ± 0.093	0.987 ± 0.093	0.720 ± 0.448	0.720 ± 0.448	0.623 ± 0.431	0.653 ± 0.427
ecoli - 0 - 1 - 4 - 7 - vs - 2 - 3 - 5 - 6	0.778 ± 0.304	0.761 ± 0.297	0.827 ± 0.214	0.917 ± 0.137	0.887 ± 0.134	0.767 ± 0.198	0.473 ± 0.157
yeast - 0 - 3 - 5 - 9 - vs - 7 - 8	0.109 ± 0.003	0.107 ± 0.004	0.222 ± 0.068	0.480 ± 0.181	0.437 ± 0.153	0.124 ± 0.078	0.125 ± 0.055
yeast-1- vs -7	0.080 ± 0.006	0.080 ± 0.006	0.125 ± 0.038	0.167 ± 0.083	0.142 ± 0.046	0.078 ± 0.010	0.079 ± 0.009
yeast-1-2-8-9- vs -7	0.034 ± 0.000	0.034 ± 0.000	0.039 ± 0.004	0.101 ± 0.034	0.101 ± 0.034	0.048 ± 0.029	0.051 ± 0.030
ecoli- 0 - 1 - 4 - 6 - vs - 5	0.624 ± 0.271	0.578 ± 0.221	0.724 ± 0.218	0.836 ± 0.159	0.831 ± 0.158	0.452 ± 0.253	0.398 ± 0.234
$glass\hbox{-}0\hbox{-}1\hbox{-}5\hbox{-}vs\hbox{-}2$	0.119 ± 0.052	0.103 ± 0.034	0.156 ± 0.074	0.196 ± 0.066	0.195 ± 0.067	$0.111 \stackrel{7}{\pm} 0.021$	0.110 ± 0.021
yeast-2- vs -4	$0.235 \stackrel{?}{\pm} 0.270$	0.143 ± 0.106	0.514 ± 0.156	0.812 ± 0.139	0.747 ± 0.133	0.226 ± 0.216	0.224 ± 0.176
$glass\hbox{-} 0\hbox{-} 6\hbox{-} vs\hbox{-} 5$	$0.853 \stackrel{2}{\pm} 0.284$	0.850 ± 0.287	0.850 ± 0.287	0.860 ± 0.346	0.860 ± 0.346	$0.860 \stackrel{2}{\pm} 0.327$	$0.860 \stackrel{2}{\pm} 0.327$
glass2	0.106 ± 0.029	0.109 ± 0.027	0.124 ± 0.045	0.210 ± 0.078	0.208 ± 0.078	0.116 ± 0.028	0.114 ± 0.028
yeast-2- vs -8	0.171 ± 0.241	0.163 ± 0.206	$0.707 \pm 0.246 \\ 1,2,6,7$	0.911 ± 0.189	0.911 ± 0.189	0.204 ± 0.296	0.062 ± 0.023
vowel0	0.610 ± 0.063	0.439 ± 0.038	0.487 ± 0.038	0.848 ± 0.082	0.750 ± 0.072	0.526 ± 0.049	0.423 ± 0.035
$glass\hbox{-} 0\hbox{-} 4\hbox{-} vs\hbox{-} 5$	0.913 ± 0.195	0.910 ± 0.200	0.910 ± 0.200	0.960 ± 0.195	0.960 ± 0.195	0.963 ± 0.160	0.970 ± 0.155
$glass\hbox{-}0\hbox{-}1\hbox{-}4\hbox{-}6\hbox{-}vs\hbox{-}2$	0.101 ± 0.034	0.103 ± 0.035	0.125 ± 0.054 1.2	0.202 ± 0.064 $1,2,3,6,7$	0.199 ± 0.062 $1,2,3,6,7$	0.115 ± 0.019 $1,7$	0.114 ± 0.017
yeast4	0.038 ± 0.003	0.036 ± 0.002	0.042 ± 0.004 $1,2$	0.216 ± 0.041	$0.212 \pm 0.039 \\ 1,2,3,6,7$	0.058 ± 0.053	0.073 ± 0.072
ecoli-0-4-6- vs -5	0.621 ± 0.241	0.628 ± 0.236	0.738 ± 0.235 $1,2,6,7$	0.770 ± 0.178 $1,2,6,7$	0.768 ± 0.180 $1,2,6,7$	0.524 ± 0.224	0.501 ± 0.235
page-blocks-1-3-vs-4	0.468 ± 0.156	$0.439 \stackrel{6,7}{\pm} 0.157$	0.475 ± 0.164	0.586 ± 0.197	0.600 ± 0.179	0.522 ± 0.166	0.447 ± 0.170
yeast - 0 - 2 - 5 - 7 - 9 - vs - 3 - 6 - 8	$0.115 \stackrel{?}{\pm} 0.007$	0.107 ± 0.007	0.340 ± 0.135 $1,2,6,7$	0.729 ± 0.142	0.660 ± 0.133 $1,2,3,6,7$ $1,2,3,6,7$	0.131 ± 0.019 1.2	0.278 ± 0.195 $1,2,6$
ecoli- 0 - 1 - vs - 2 - 3 - 5	0.433 ± 0.470	0.446 ± 0.465	0.906 ± 0.194 $1,2,6,7$	$0.933 \pm 0.171 \\ 1,2,6,7$	$0.933 \pm 0.171 \\ 1,2,6,7$	0.649 ± 0.293 $1,2,7$	0.616 ± 0.267
ecoli-0-6-7-vs-3-5	0.219 ± 0.313	0.318 ± 0.325	0.622 ± 0.298	0.763 ± 0.200	0.740 ± 0.191	0.449 ± 0.273 $1,7$	0.389 ± 0.242
ecoli - 0 - 3 - 4 - 7 - vs - 5 - 6	0.326 ± 0.160	0.389 ± 0.163	0.685 ± 0.121 $1.2.6.7$	$1,2,3,6,7$ 0.780 ± 0.144 $1,2,3,6,7$	$1,2,3,6,7$ 0.780 ± 0.143 $1,2,3,6,7$	0.379 ± 0.186	0.278 ± 0.137
ecoli- 0 - 2 - 6 - 7 - vs - 3 - 5	0.266 ± 0.354	0.416 ± 0.349	$0.623 \pm 0.305 \\ 1,2,6,7$	0.743 ± 0.202	$0.710 \pm 0.209 \\ 1,2,6,7$	0.444 ± 0.276 $1,7$	0.363 ± 0.225
shuttle-c0-vs-c4	0.976 ± 0.038	0.977 ± 0.035	0.977 ± 0.035	1.000 ± 0.000 $1,2,3$	1.000 ± 0.000 $1.2.3$	0.999 ± 0.005 $1,2,3$	0.999 ± 0.005 $1,2,3$
ecoli-0-3-4- vs -5	0.335 ± 0.202	0.442 ± 0.196	0.687 ± 0.203	0.793 ± 0.171	0.793 ± 0.171	0.371 ± 0.232	0.319 ± 0.234
	_	1,6,7	1,2,6,7	1,2,3,6,7	1,2,3,6,7	1 /	_

Table 5: Results for Precision metric

	GNB (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
Mean rank	2.561	2.366	4.463	6.561	6.049	3.293	2.707
	_	_	1,2,6,7	all	1,2,3,6,7	1,2,7	_

Table 6: Results for mean ranks according to Precision metric

Dataset	GNB (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
glass4	0.210 ± 0.244	0.627 ± 0.293	0.627 ± 0.278	0.580 ± 0.302	0.593 ± 0.283	0.653 ± 0.242	0.677 ± 0.236
ecoli-0-2-3-4-vs-5	0.830 ± 0.153	0.850 ± 0.150	0.850 ± 0.150	0.835 ± 0.155	0.835 ± 0.155	0.855 ± 0.158	0.845 ± 0.157
glass-0-1-6-vs-2	0.737 ± 0.215	0.765 ± 0.240	0.638 ± 0.258	0.730 ± 0.225	0.740 ± 0.225	0.910 ± 0.162	0.920 ± 0.151
ecoli-0-1-vs-5	$0.620 \stackrel{3}{\pm} 0.279$	$0.745 \stackrel{3}{\pm} 0.237$	0.810 ± 0.170	$0.805 \stackrel{3}{\pm} 0.152$	$0.805 \stackrel{3}{\pm} 0.152$	0.835 ± 0.155	0.830 ± 0.153
yeast-1-4-5-8-vs-7	1.000 ± 0.000	$1.000 \stackrel{1}{\pm} 0.000$	0.910 ± 0.130	0.513 ± 0.193	0.513 ± 0.193	$0.900 \stackrel{1}{\pm} 0.210$	0.863 ± 0.237
ecoli4	$3,4,5,6,7 \\ 0.940 \pm 0.106$	0.950 ± 0.099	0.920 ± 0.116	0.880 ± 0.160	0.890 ± 0.159	0.930 ± 0.150	0.930 ± 0.150
led7digit - 0 - 2 - 4 - 5 - 6 - 7 - 8 - 9 - vs - 1	0.816 ± 0.137	0.883 ± 0.121	0.856 ± 0.137	0.342 ± 0.177	0.345 ± 0.179	$0.920 \stackrel{4}{\pm} 0.144$	0.920 ± 0.144
glass5	$0.920 \overset{4,5}{\pm} 0.208$	0.830 ± 0.310	0.830 ± 0.310	0.790 ± 0.333	0.800 ± 0.316	0.810 ± 0.314	0.810 ± 0.314
ecoli-0-3-4-6- vs -5	0.840 ± 0.171	0.860 ± 0.159	0.850 ± 0.173	0.830 ± 0.169	0.825 ± 0.167	0.855 ± 0.166	0.860 ± 0.159
yeast - 0 - 5 - 6 - 7 - 9 - vs - 4	0.969 ± 0.045	0.977 ± 0.041	0.886 ± 0.108	0.738 ± 0.112	0.771 ± 0.111	0.937 ± 0.108	0.948 ± 0.095
yeast6	0.986 ± 0.042	0.991 ± 0.033	0.931 ± 0.086	0.837 ± 0.117	0.837 ± 0.117	1.000 ± 0.000	$3,4,5$ 1.000 ± 0.000
ecoli-0-6-7-vs-5	0.720 ± 0.210	0.840 ± 0.178	0.820 ± 0.173	0.760 ± 0.193	0.750 ± 0.193	0.835 ± 0.184	0.825 ± 0.195
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.930 ± 0.223	0.860 ± 0.283	0.860 ± 0.283	0.730 ± 0.303	0.730 ± 0.303	0.730 ± 0.303	0.730 ± 0.303
ecoli-0-1-3-7-vs-2-6	0.700 ± 0.400	0.700 ± 0.400	0.700 ± 0.400	0.700 ± 0.400	$0.700 \stackrel{-}{\pm} 0.400$	0.720 ± 0.389	0.700 ± 0.400
yeast - 0 - 2 - 5 - 6 - vs - 3 - 7 - 8 - 9	0.372 ± 0.096	0.588 ± 0.099	0.588 ± 0.091	0.456 ± 0.106	0.534 ± 0.116	0.582 ± 0.131	0.691 ± 0.111
ecoli-0-1-4-7-vs-5-6	0.492 ± 0.259	0.680 ± 0.274	0.784 ± 0.229	$0.736 \stackrel{1}{\pm} 0.217$	0.752 ± 0.209	0.768 ± 0.171	0.856 ± 0.155
yeast5	0.996 ± 0.031	$0.996 \stackrel{1}{\pm} 0.031$	0.996 ± 0.031	$0.982 \stackrel{1}{\pm} 0.046$	$0.982 \stackrel{1}{\pm} 0.046$	0.984 ± 0.044	0.984 ± 0.044
shuttle- $c2$ - vs - $c4$	1.000 ± 0.000	1.000 ± 0.000	1.000 ± 0.000	0.690 ± 0.445	0.690 ± 0.445	0.690 ± 0.445	0.700 ± 0.435
ecoli-0-1-4-7-vs-2-3-5-6	0.308 ± 0.178	0.343 ± 0.237	0.554 ± 0.271	0.633 ± 0.211	0.719 ± 0.184	0.636 ± 0.214	0.809 ± 0.178
yeast-0-3-5-9-vs-7-8	0.992 ± 0.033	0.984 ± 0.041	0.710 ± 0.197	0.386 ± 0.184	0.448 ± 0.172	0.924 ± 0.130	0.926 ± 0.142
yeast-1-vs-7	$3,4,5,6,7 \\ 0.973 \pm 0.077$	0.970 ± 0.086	0.797 ± 0.214	0.547 ± 0.202	0.557 ± 0.209	0.953 ± 0.094	0.957 ± 0.109
yeast-1-2-8-9-vs-7	1.000 ± 0.000	1.000 ± 0.000	0.940 ± 0.098	0.523 ± 0.173	0.523 ± 0.173	0.853 ± 0.259	0.837 ± 0.269
ecoli- 0 - 1 - 4 - 6 - vs - 5	0.750 ± 0.173	0.845 ± 0.157	0.835 ± 0.170	0.815 ± 0.164	0.820 ± 0.158	0.850 ± 0.150	$0.855 \overset{4.5}{\pm} 0.142$
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 5\hbox{-} vs\hbox{-} 2$	0.675 ± 0.253	$0.710 \stackrel{1}{\pm} 0.246$	$0.605 \stackrel{1}{\pm} 0.263$	$0.745 \stackrel{1}{\pm} 0.238$	$0.745 \stackrel{1}{\pm} 0.238$	$0.920 \stackrel{1}{\pm} 0.156$	$0.925 \stackrel{1}{\pm} 0.154$
yeast-2- vs -4	0.921 ± 0.100	$0.944 \stackrel{3}{\pm} 0.075$	0.832 ± 0.118	0.733 ± 0.142	0.743 ± 0.142	0.893 ± 0.111	0.918 ± 0.092
$glass\hbox{-} 0\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.900 ± 0.282	0.860 ± 0.300	0.860 ± 0.300	0.680 ± 0.357	0.680 ± 0.357	0.720 ± 0.348	0.720 ± 0.348
glass2	0.773 ± 0.200	0.830 ± 0.187	0.732 ± 0.234	0.732 ± 0.198	0.732 ± 0.198	0.940 ± 0.121	0.940 ± 0.121
yeast-2-vs-8	0.890 ± 0.218	0.865 ± 0.213	0.585 ± 0.232	0.555 ± 0.219	0.555 ± 0.219	0.835 ± 0.209	0.875 ± 0.175
vowel0	0.889 ± 0.081	0.930 ± 0.053	0.952 ± 0.057	0.770 ± 0.123	0.867 ± 0.103	0.927 ± 0.063	0.962 ± 0.056
glass-0-4-vs-5	$0.960 \stackrel{4}{\pm} 0.168$	0.900 ± 0.223	0.910 ± 0.216	0.850 ± 0.269	$0.850 \stackrel{4}{\pm} 0.269$	0.870 ± 0.241	0.870 ± 0.241
$glass\hbox{-}0\hbox{-}1\hbox{-}4\hbox{-}6\hbox{-}vs\hbox{-}2$	0.745 ± 0.267	0.777 ± 0.276	0.667 ± 0.274	0.730 ± 0.195	0.730 ± 0.195	0.938 ± 0.110	0.938 ± 0.110
yeast4	0.961 ± 0.057	0.971 ± 0.048	0.942 ± 0.069	0.711 ± 0.141	0.720 ± 0.134	0.937 ± 0.124	0.919 ± 0.139
ecoli-0-4-6- vs -5	0.780 ± 0.184	0.845 ± 0.165	0.845 ± 0.165	0.835 ± 0.155	0.835 ± 0.155	0.840 ± 0.156	0.850 ± 0.150
page-blocks-1-3-vs-4	0.576 ± 0.190	$0.597 \stackrel{1}{\pm} 0.202$	0.693 ± 0.253	$0.537 \stackrel{1}{\pm} 0.208$	0.613 ± 0.214	$0.555 \stackrel{1}{\pm} 0.202$	$0.605 \stackrel{1}{\pm} 0.217$
yeast - 0 - 2 - 5 - 7 - 9 - vs - 3 - 6 - 8	0.986 ± 0.031	0.987 ± 0.026	$0.917 \stackrel{all}{\pm} 0.071$	0.840 ± 0.080	0.853 ± 0.079	0.976 ± 0.035	0.938 ± 0.049
ecoli- 0 - 1 - vs - 2 - 3 - 5	0.218 ± 0.314	0.256 ± 0.342	0.647 ± 0.268	0.696 ± 0.220	0.696 ± 0.220	0.754 ± 0.183	0.785 ± 0.170
ecoli-0-6-7-vs-3-5	0.199 ± 0.320	0.289 ± 0.364	0.479 ± 0.306	0.655 ± 0.182	0.673 ± 0.201	0.734 ± 0.168	0.764 ± 0.141
ecoli-0-3-4-7-vs-5-6	0.792 ± 0.236	$0.848 \stackrel{1}{\pm} 0.172$	0.836 ± 0.153	0.796 ± 0.152	0.796 ± 0.152	0.888 ± 0.150	0.900 ± 0.139
ecoli-0-2-6-7-vs-3-5	0.199 ± 0.290	0.309 ± 0.319	$0.449 \stackrel{4}{\pm} 0.283$	0.687 ± 0.189	0.682 ± 0.203	0.722 ± 0.147	0.771 ± 0.133
shuttle-c0-vs-c4	0.982 ± 0.025	$0.980 \stackrel{1}{\pm} 0.027$	$0.980 \stackrel{1,2}{\pm} 0.027$	0.986 ± 0.019	0.987 ± 0.019	0.986 ± 0.019	0.987 ± 0.019
ecoli- 0 - 3 - 4 - vs - 5	0.845 ± 0.186	0.850 ± 0.193	$0.845 \stackrel{-}{\pm} 0.205$	0.840 ± 0.204	0.840 ± 0.204	0.855 ± 0.200	0.860 ± 0.194
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Table 7: Results for Recall metric

	GNB (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
Mean rank	3.805	4.915	4.012	2.171	2.732	4.890	5.476
	4,5	1,3,4,5	4,5	_	4	1,3,4,5	1,3,4,5,6

Table 8: Results for mean ranks according to Recall metric

Dataset	GNB (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
glass4	0.572 ± 0.129	0.763 ± 0.154	0.785 ± 0.138	0.763 ± 0.154	0.771 ± 0.145	0.524 ± 0.134	0.490 ± 0.137
ecoli-0-2-3-4- vs -5	0.780 ± 0.098	0.836 ± 0.096	0.897 ± 0.086	0.903 ± 0.077	0.903 ± 0.078	0.816 ± 0.092	0.796 ± 0.098
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 2$	0.565 ± 0.111	0.568 ± 0.113	0.600 ± 0.145	0.713 ± 0.117	0.717 ± 0.116	0.602 ± 0.085	0.603 ± 0.082
ecoli-0-1-vs-5	0.800 ± 0.143	0.865 ± 0.121	$0.900 \stackrel{1,2}{\pm} 0.084$	0.900 ± 0.075	0.900 ± 0.075	$0.898 \stackrel{1,2}{\pm} 0.081$	0.888 ± 0.082
yeast-1-4-5-8-vs-7	0.544 ± 0.012	$0.546 \stackrel{1}{\pm} 0.015$	0.571 ± 0.062	0.630 ± 0.097	0.629 ± 0.098	0.565 ± 0.051	0.580 ± 0.060
ecoli4	0.886 ± 0.083	$0.898 \stackrel{1}{\pm} 0.063$	0.932 ± 0.071	0.933 ± 0.081	0.934 ± 0.082	0.859 ± 0.089	0.837 ± 0.101
led7 digit - 0 - 2 - 4 - 5 - 6 - 7 - 8 - 9 - vs - 1	0.853 ± 0.073	0.874 ± 0.063	0.880 ± 0.067	0.653 ± 0.089	0.654 ± 0.091	0.862 ± 0.066	0.848 ± 0.061
glass5	0.948 ± 0.103	0.904 ± 0.152	0.905 ± 0.153	0.893 ± 0.165	0.898 ± 0.156	0.900 ± 0.155	0.900 ± 0.155
ecoli-0-3-4-6-vs-5	0.755 ± 0.102	0.816 ± 0.103	0.896 ± 0.105	0.897 ± 0.088	0.894 ± 0.087	0.784 ± 0.121	0.763 ± 0.118
yeast - 0 - 5 - 6 - 7 - 9 - vs - 4	0.501 ± 0.026	0.501 ± 0.022	0.713 ± 0.135	0.797 ± 0.049	0.804 ± 0.050	0.578 ± 0.108	0.581 ± 0.100
yeast6	0.636 ± 0.023	0.640 ± 0.025	0.769 ± 0.044	0.888 ± 0.056	0.887 ± 0.056	0.694 ± 0.054	$0.709 \overset{1,2}{\pm} 0.064$
ecoli-0-6-7-vs-5	0.813 ± 0.124	0.841 ± 0.105	0.879 ± 0.098	0.869 ± 0.099	0.862 ± 0.099	0.814 ± 0.089	$0.803 \stackrel{1,2}{\pm} 0.104$
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.956 ± 0.109	0.922 ± 0.140	0.923 ± 0.141	0.861 ± 0.151	0.861 ± 0.151	$0.860 \stackrel{7}{\pm} 0.151$	0.860 ± 0.151
ecoli-0-1-3-7-vs-2-6	0.831 ± 0.193	0.844 ± 0.199	0.845 ± 0.200	0.843 ± 0.202	0.840 ± 0.204	0.836 ± 0.189	0.818 ± 0.194
yeast - 0 - 2 - 5 - 6 - vs - 3 - 7 - 8 - 9	$0.675 \stackrel{7}{\pm} 0.048$	0.772 ± 0.049	0.774 ± 0.046	0.718 ± 0.053	0.754 ± 0.056	$0.755 \stackrel{7}{\pm} 0.069$	0.785 ± 0.070
ecoli-0-1-4-7-vs-5-6	0.742 ± 0.131	0.829 ± 0.136	0.882 ± 0.115	$0.863 \stackrel{1}{\pm} 0.108$	0.870 ± 0.104	0.853 ± 0.084	0.865 ± 0.079
yeast5	0.825 ± 0.024	$0.803 \stackrel{1}{\pm} 0.029$	0.846 ± 0.024	$0.972 \stackrel{1}{\pm} 0.024$	0.972 ± 0.024	$0.922 \stackrel{1}{\pm} 0.083$	0.919 ± 0.095
shuttle- $c2$ - vs - $c4$	0.988 ± 0.022	0.999 ± 0.005	0.999 ± 0.005	0.845 ± 0.222	0.845 ± 0.222	0.838 ± 0.224	0.845 ± 0.217
ecoli-0-1-4-7-vs-2-3-5-6	0.651 ± 0.090	0.667 ± 0.117	0.773 ± 0.136	0.814 ± 0.106	0.855 ± 0.093	0.804 ± 0.103	0.849 ± 0.083
yeast-0-3-5-9-vs-7-8	0.550 ± 0.018	0.540 ± 0.022	0.698 ± 0.081	0.661 ± 0.070	0.684 ± 0.067	0.562 ± 0.038	0.574 ± 0.061
yeast-1-vs-7	0.594 ± 0.037	0.594 ± 0.040	0.696 ± 0.104	0.666 ± 0.093	0.660 ± 0.099	0.582 ± 0.045	0.585 ± 0.038
yeast-1-2-8-9- vs -7	0.540 ± 0.011	0.541 ± 0.012	0.590 ± 0.048	0.685 ± 0.087	0.685 ± 0.087	0.583 ± 0.055	0.592 ± 0.059
ecoli-0-1-4-6- vs -5	0.847 ± 0.098	0.890 ± 0.088	0.901 ± 0.089	0.899 ± 0.079	0.902 ± 0.076	0.861 ± 0.080	$0.840\overset{1,2}{\pm}0.095$
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 5\hbox{-} vs\hbox{-} 2$	0.555 ± 0.134	0.520 ± 0.115	0.614 ± 0.144	0.706 ± 0.114	0.704 ± 0.115	0.559 ± 0.065	0.556 ± 0.061
yeast-2-vs-4	0.608 ± 0.128	0.580 ± 0.102	0.849 ± 0.099	0.856 ± 0.071	0.856 ± 0.070	0.642 ± 0.131	0.660 ± 0.143
glass-0-6-vs-5	0.945 ± 0.140	0.925 ± 0.149	0.925 ± 0.149	0.840 ± 0.178	0.840 ± 0.178	$0.858 \stackrel{2}{\pm} 0.173$	$0.858 \stackrel{2}{\pm} 0.173$
glass2	0.607 ± 0.098	0.621 ± 0.093	0.638 ± 0.123	0.740 ± 0.109	0.739 ± 0.109	0.655 ± 0.076	0.650 ± 0.075
yeast-2-vs-8	0.637 ± 0.090	0.703 ± 0.077	0.785 ± 0.112	0.776 ± 0.111	0.776 ± 0.111	0.636 ± 0.119	0.619 ± 0.100
vowel0	0.915 ± 0.037	0.905 ± 0.025	0.925 ± 0.027	0.878 ± 0.060	0.919 ± 0.051	0.921 ± 0.029	0.915 ± 0.027
$glass\hbox{-} 0\hbox{-} 4\hbox{-} vs\hbox{-} 5$	0.975 ± 0.083	$0.945 \stackrel{4}{\pm} 0.111$	0.950 ± 0.108	0.925 ± 0.134	0.925 ± 0.134	0.934 ± 0.121	0.934 ± 0.121
$glass\hbox{-}0\hbox{-}1\hbox{-}4\hbox{-}6\hbox{-}vs\hbox{-}2$	0.579 ± 0.128	0.590 ± 0.132	0.617 ± 0.150	0.728 ± 0.104	0.727 ± 0.103	0.642 ± 0.073	0.638 ± 0.071
yeast4	0.551 ± 0.039	0.526 ± 0.025	0.585 ± 0.046	0.809 ± 0.068	0.812 ± 0.065	0.564 ± 0.096	0.581 ± 0.120
ecoli-0-4- 6 - vs - 5	0.851 ± 0.114	0.884 ± 0.103	0.900 ± 0.095	0.902 ± 0.082	0.901 ± 0.082	0.860 ± 0.097	0.854 ± 0.101
page-blocks-1-3-vs-4	0.765 ± 0.095	0.772 ± 0.101	0.821 ± 0.127	0.756 ± 0.106	0.793 ± 0.108	0.759 ± 0.096	0.770 ± 0.095
yeast - 0 - 2 - 5 - 7 - 9 - vs - 3 - 6 - 8	0.576 ± 0.028	0.543 ± 0.027	0.813 ± 0.112	0.899 ± 0.033	0.898 ± 0.033	0.626 ± 0.051	0.725 ± 0.153
ecoli-0-1- vs -2-3-5	0.607 ± 0.157	0.625 ± 0.171	0.821 ± 0.135	0.846 ± 0.110	0.846 ± 0.110	0.830 ± 0.103	0.839 ± 0.106
ecoli-0-6-7-vs-3-5	0.587 ± 0.158	0.630 ± 0.175	0.726 ± 0.148	0.814 ± 0.093	0.822 ± 0.103	0.775 ± 0.112	0.768 ± 0.115
ecoli-0-3-4-7-vs-5-6	0.778 ± 0.080	$0.835 \stackrel{1}{\pm} 0.079$	$0.896\overset{1,2}{\pm}0.076$	0.885 ± 0.078	0.885 ± 0.078	0.833 ± 0.081	0.781 ± 0.092
ecoli-0-2-6-7-vs-3-5	0.586 ± 0.145	0.638 ± 0.155	0.710 ± 0.139	0.829 ± 0.098	0.824 ± 0.104	0.762 ± 0.120	0.758 ± 0.121
shuttle-c0-vs-c4	0.990 ± 0.012	$0.989 \stackrel{1}{\pm} 0.013$	0.989 ± 0.013	0.993 ± 0.009	0.993 ± 0.009	0.993 ± 0.009	0.993 ± 0.009
ecoli-0-3-4- vs -5	0.788 ± 0.105	0.846 ± 0.111	$0.897 \stackrel{-}{\pm} 0.107$	0.906 ± 0.104	0.906 ± 0.104	0.793 ± 0.124	0.766 ± 0.113
	<u> </u>	1,6,7	1,2,6,7	1,2,3,6,7	1,2,3,6,7	7	_

Table 9: Results for AUC metric

	GNB (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
Mean rank	2.415	3.098	5.268	5.085	5.500	3.329	3.305
	_	1	1,2,6,7	1,2,6,7	1,2,6,7	1	1

Table 10: Results for mean ranks according to AUC metric

Dataset	GNB (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
glass4	0.304 ± 0.325	0.708 ± 0.252	0.738 ± 0.212	0.685 ± 0.284	0.703 ± 0.265	0.487 ± 0.126	0.438 ± 0.132
ecoli-0-2-3-4- vs -5	0.768 ± 0.100	0.831 ± 0.097	0.893 ± 0.092	0.896 ± 0.085	0.896 ± 0.086	0.802 ± 0.103	0.780 ± 0.110
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 2$	0.524 ± 0.114	0.511 ± 0.128	0.572 ± 0.187	0.702 ± 0.122	0.705 ± 0.122	0.511 ± 0.076	0.506 ± 0.077
ecoli-0-1-vs-5	0.725 ± 0.286	0.838 ± 0.180	0.891 ± 0.096	0.891 ± 0.086	0.891 ± 0.086	$0.891 \stackrel{7}{\pm} 0.088$	0.882 ± 0.089
yeast-1-4-5-8-vs-7	0.293 ± 0.044	$0.299 \stackrel{1}{\pm} 0.050$	0.451 ± 0.069	0.602 ± 0.142	0.602 ± 0.142	0.392 ± 0.121	0.430 ± 0.139
ecoli4	0.883 ± 0.085	0.895 ± 0.063	0.930 ± 0.073	0.927 ± 0.091	0.929 ± 0.091	0.841 ± 0.107	0.813 ± 0.125
led7digit-0-2-4-5-6-7-8-9-vs-1	0.849 ± 0.077	0.872 ± 0.065	0.876 ± 0.071	0.546 ± 0.177	0.548 ± 0.178	0.854 ± 0.077	0.839 ± 0.072
glass5	0.933 ± 0.163	0.856 ± 0.275	0.858 ± 0.275	0.834 ± 0.302	0.848 ± 0.278	0.851 ± 0.277	0.851 ± 0.277
ecoli-0-3-4-6- vs -5	0.735 ± 0.109	0.807 ± 0.106	0.890 ± 0.112	0.890 ± 0.098	0.887 ± 0.097	0.764 ± 0.138	0.737 ± 0.138
yeast - 0 - 5 - 6 - 7 - 9 - vs - 4	0.164 ± 0.068	0.141 ± 0.061	0.639 ± 0.237	0.791 ± 0.053	0.800 ± 0.052	0.364 ± 0.218	0.368 ± 0.214
yeast6	0.529 ± 0.045	0.531 ± 0.051	0.746 ± 0.056	0.884 ± 0.062	0.883 ± 0.062	0.617 ± 0.079	0.640 ± 0.090
ecoli-0-6-7-vs-5	0.796 ± 0.145	0.835 ± 0.109	0.872 ± 0.106	0.854 ± 0.121	0.847 ± 0.120	0.803 ± 0.094	0.789 ± 0.115
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.933 ± 0.202	0.885 ± 0.247	0.886 ± 0.247	0.814 ± 0.249	0.814 ± 0.249	0.813 ± 0.248	0.813 ± 0.248
ecoli-0-1-3-7-vs-2-6	0.725 ± 0.377	0.737 ± 0.385	0.738 ± 0.385	0.737 ± 0.385	0.736 ± 0.384	0.741 ± 0.363	0.715 ± 0.371
yeast - 0 - 2 - 5 - 6 - vs - 3 - 7 - 8 - 9	0.598 ± 0.077	0.747 ± 0.063	0.749 ± 0.059	0.664 ± 0.077	0.717 ± 0.077	0.718 ± 0.106	0.762 ± 0.123
ecoli-0-1-4-7-vs-5-6	0.669 ± 0.203	0.789 ± 0.207	0.864 ± 0.150	$0.837 \stackrel{1}{\pm} 0.170$	0.845 ± 0.166	0.842 ± 0.097	$0.859 \stackrel{all}{\pm} 0.087$
yeast5	0.807 ± 0.028	$0.779 \stackrel{1}{\pm} 0.037$	0.832 ± 0.027	$0.971 \stackrel{1}{\pm} 0.024$	0.971 ± 0.024	$0.916 \stackrel{1}{\pm} 0.092$	0.911 ± 0.109
shuttle-c2-vs-c4	0.988 ± 0.023	0.999 ± 0.005	0.999 ± 0.005	0.702 ± 0.443	0.702 ± 0.443	0.698 ± 0.440	0.713 ± 0.429
ecoli-0-1-4-7-vs-2-3-5-6	0.517 ± 0.198	0.537 ± 0.223	0.712 ± 0.205	$0.782 \stackrel{6}{\pm} 0.136$	$0.836 \stackrel{6}{\pm} 0.117$	0.773 ± 0.133	0.839 ± 0.099
yeast - 0 - 3 - 5 - 9 - vs - 7 - 8	0.324 ± 0.051	0.297 ± 0.067	0.673 ± 0.109	0.577 ± 0.139	0.622 ± 0.128	0.406 ± 0.072	0.416 ± 0.114
yeast-1-vs-7	$0.452 \stackrel{2}{\pm} 0.051$	0.453 ± 0.058	0.670 ± 0.134	0.641 ± 0.112	0.638 ± 0.119	0.438 ± 0.069	0.434 ± 0.080
y east - 1 - 2 - 8 - 9 - vs - 7	0.281 ± 0.039	$0.283 \stackrel{7}{\pm} 0.041$	0.469 ± 0.059	0.655 ± 0.117	0.655 ± 0.117	0.426 ± 0.119	0.446 ± 0.123
ecoli- 0 - 1 - 4 - 6 - vs - 5	0.835 ± 0.108	0.885 ± 0.094	0.894 ± 0.099	0.890 ± 0.090	0.893 ± 0.087	0.855 ± 0.084	0.832 ± 0.099
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 5\hbox{-} vs\hbox{-} 2$	0.518 ± 0.148	0.462 ± 0.118	0.588 ± 0.180	0.687 ± 0.145	0.684 ± 0.145	0.416 ± 0.060	0.404 ± 0.060
yeast-2-vs-4	0.445 ± 0.216	0.399 ± 0.186	0.837 ± 0.127	0.842 ± 0.084	0.844 ± 0.083	0.537 ± 0.204	0.547 ± 0.227
$glass\hbox{-} 0\hbox{-} 6\hbox{-} vs\hbox{-} 5$	$0.903 \stackrel{2}{\pm} 0.272$	0.880 ± 0.276	0.880 ± 0.276	0.755 ± 0.332	0.755 ± 0.332	0.785 ± 0.318	0.785 ± 0.318
glass2	0.570 ± 0.109	0.577 ± 0.078	0.614 ± 0.137	0.732 ± 0.113	0.731 ± 0.113	0.585 ± 0.079	0.576 ± 0.080
yeast-2-vs-8	0.518 ± 0.136	0.650 ± 0.094	0.737 ± 0.176	0.728 ± 0.153	0.728 ± 0.153	0.541 ± 0.165	0.529 ± 0.146
vowel0	0.913 ± 0.040	0.904 ± 0.024	0.924 ± 0.027	0.868 ± 0.070	0.915 ± 0.056	0.920 ± 0.029	0.913 ± 0.027
$glass\hbox{-} 0\hbox{-} 4\hbox{-} vs\hbox{-} 5$	0.963 ± 0.149	0.928 ± 0.170	0.934 ± 0.167	0.896 ± 0.219	0.896 ± 0.219	0.915 ± 0.178	0.915 ± 0.178
$glass\hbox{-}0\hbox{-}1\hbox{-}4\hbox{-}6\hbox{-}vs\hbox{-}2$	0.528 ± 0.145	0.533 ± 0.148	0.590 ± 0.178	0.720 ± 0.109	0.718 ± 0.107	0.564 ± 0.088	0.557 ± 0.086
yeast4	0.361 ± 0.067	0.275 ± 0.049	0.460 ± 0.061	0.798 ± 0.082	0.803 ± 0.077	0.314 ± 0.220	0.335 ± 0.259
ecoli- 0 - 4 - 6 - vs - 5	0.842 ± 0.122	0.879 ± 0.108	0.894 ± 0.102	0.895 ± 0.090	0.895 ± 0.090	0.855 ± 0.101	0.848 ± 0.105
page-blocks-1-3-vs-4	0.730 ± 0.130	0.739 ± 0.136	0.794 ± 0.164	0.709 ± 0.145	0.759 ± 0.144	0.717 ± 0.135	0.736 ± 0.130
yeast - 0 - 2 - 5 - 7 - 9 - vs - 3 - 6 - 8	0.398 ± 0.065	0.303 ± 0.073	0.784 ± 0.161	0.896 ± 0.036	0.895 ± 0.036	0.507 ± 0.100	0.644 ± 0.235
ecoli-0-1-vs-2-3-5	$0.305 \stackrel{2}{\pm} 0.352$	0.339 ± 0.373	0.776 ± 0.202	0.815 ± 0.170	0.815 ± 0.170	0.817 ± 0.114	0.829 ± 0.114
ecoli-0- 6 - 7 - vs - 3 - 5	0.258 ± 0.355	0.367 ± 0.375	0.619 ± 0.282	0.790 ± 0.118	0.799 ± 0.126	0.764 ± 0.122	0.759 ± 0.121
ecoli-0-3-4-7-vs-5-6	0.756 ± 0.105	$0.827 \stackrel{1}{\pm} 0.085$	$0.889 \overset{1,2}{\pm} 0.083$	0.876 ± 0.086	0.876 ± 0.086	0.821 ± 0.090	0.757 ± 0.111
ecoli-0-2-6-7-vs-3-5	0.278 ± 0.340	0.433 ± 0.328	0.605 ± 0.261	0.808 ± 0.124	0.801 ± 0.130	0.752 ± 0.126	0.747 ± 0.129
shuttle- $c0$ - vs - $c4$	0.990 ± 0.013	$0.989 \stackrel{1}{\pm} 0.013$	0.989 ± 0.013	0.993 ± 0.009	0.993 ± 0.009	0.993 ± 0.009	0.993 ± 0.009
ecoli-0-3-4-vs-5	0.772 ± 0.112	0.837 ± 0.120	$0.887 \stackrel{-}{\pm} 0.126$	0.896 ± 0.125	0.896 ± 0.125	0.770 ± 0.146	0.738 ± 0.136
	<u> </u>	1,6,7	1,2,6,7	1,2,3,6,7	1,2,3,6,7	7	_

Table 11: Results for GMEAN metric

	GNB (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
Mean rank	2.488	3.195	5.463	4.915	5.305	3.451	3.183
	_	1	1,2,6,7	1,2,6,7	1,2,6,7	1	_

Table 12: Results for mean ranks according to GMEAN metric