Dataset	CART (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
glass4	0.846 ± 0.136	0.863 ± 0.106	0.866 ± 0.108	0.779 ± 0.141	0.790 ± 0.146	0.826 ± 0.126	0.892 ± 0.107
ecoli- 0 - 2 - 3 - 4 - vs - 5	0.850 ± 0.087	0.862 ± 0.093	0.862 ± 0.093	0.903 ± 0.084	0.912 ± 0.078	$0.874 \stackrel{-}{\pm} 0.079$	0.886 ± 0.070
$glass\hbox{-}0\hbox{-}1\hbox{-}6\hbox{-}vs\hbox{-}2$	0.582 ± 0.128	$0.573 \stackrel{1}{\pm} 0.114$	$0.574 \stackrel{1}{\pm} 0.114$	0.724 ± 0.110	0.745 ± 0.106	$0.648 \stackrel{-}{\pm} 0.101$	$0.729 \stackrel{1}{\pm} 0.073$
ecoli- 0 - 1 - vs - 5	0.814 ± 0.099	0.851 ± 0.099	0.856 ± 0.104	0.900 ± 0.079	0.904 ± 0.078	0.895 ± 0.075	0.904 ± 0.064
yeast-1-4-5-8- vs -7	0.546 ± 0.078	$0.501 \stackrel{1}{\pm} 0.011$	0.501 ± 0.011	0.620 ± 0.090	0.618 ± 0.090	0.629 ± 0.086	0.621 ± 0.099
ecoli4	0.868 ± 0.091	0.872 ± 0.101	0.879 ± 0.102	0.922 ± 0.082	0.922 ± 0.097	0.913 ± 0.066	0.911 ± 0.068
$led 7 digit \hbox{-} 0\hbox{-} 2\hbox{-} 4\hbox{-} 5\hbox{-} 6\hbox{-} 7\hbox{-} 8\hbox{-} 9\hbox{-} vs\hbox{-} 1$	$0.881 \stackrel{-}{\pm} 0.072$	0.880 ± 0.072	$0.881 \stackrel{1}{\pm} 0.072$	0.647 ± 0.093	0.650 ± 0.091	0.864 ± 0.070	0.859 ± 0.071
glass5	0.831 ± 0.189	0.837 ± 0.191	0.847 ± 0.185	0.910 ± 0.142	0.913 ± 0.143	0.936 ± 0.091	0.945 ± 0.100
ecoli-0-3-4-6-vs-5	0.821 ± 0.111	0.844 ± 0.122	0.851 ± 0.119	0.899 ± 0.096	$0.905 \stackrel{4}{\pm} 0.088$	0.880 ± 0.081	0.882 ± 0.071
$yeast\hbox{-}0\hbox{-}5\hbox{-}6\hbox{-}7\hbox{-}9\hbox{-}vs\hbox{-}4$	0.670 ± 0.077	0.658 ± 0.075	0.660 ± 0.078	0.792 ± 0.048	0.793 ± 0.046	0.753 ± 0.049	0.750 ± 0.048
yeast6	0.729 ± 0.089	0.727 ± 0.084	0.731 ± 0.082	0.835 ± 0.088	0.828 ± 0.087	0.824 ± 0.071	0.828 ± 0.081
ecoli-0- 6 - 7 - vs - 5	0.842 ± 0.121	0.870 ± 0.116	0.870 ± 0.116	0.869 ± 0.106	0.869 ± 0.103	0.838 ± 0.100	0.842 ± 0.098
$glass\hbox{-}0\hbox{-}1\hbox{-}6\hbox{-}vs\hbox{-}5$	0.822 ± 0.182	0.859 ± 0.155	0.873 ± 0.148	0.880 ± 0.150	0.885 ± 0.160	0.909 ± 0.113	0.931 ± 0.095
ecoli - 0 - 1 - 3 - 7 - vs - 2 - 6	0.820 ± 0.209	0.653 ± 0.206	0.657 ± 0.205	0.839 ± 0.199	0.834 ± 0.200	0.837 ± 0.194	0.824 ± 0.181
yeast - 0 - 2 - 5 - 6 - vs - 3 - 7 - 8 - 9	0.725 ± 0.050	0.731 ± 0.044	0.735 ± 0.045	0.769 ± 0.056	0.774 ± 0.054	0.708 ± 0.033	0.708 ± 0.027
ecoli - 0 - 1 - 4 - 7 - vs - 5 - 6	0.809 ± 0.095	0.823 ± 0.085	0.837 ± 0.095	0.888 ± 0.090	0.894 ± 0.080	0.834 ± 0.079	0.866 ± 0.059 $1,2,6$
yeast5	0.819 ± 0.085	0.815 ± 0.076	0.819 ± 0.068	0.941 ± 0.049	0.933 ± 0.056	0.942 ± 0.040 $1,2,3$	0.948 ± 0.045
$shuttle\hbox{-} c2\hbox{-} vs\hbox{-} c4$	1.000 ± 0.000	1.000 ± 0.000	1.000 ± 0.000	0.995 ± 0.034	0.995 ± 0.034	0.995 ± 0.034	0.995 ± 0.034
ecoli - 0 - 1 - 4 - 7 - vs - 2 - 3 - 5 - 6	0.796 ± 0.092	0.807 ± 0.092	0.813 ± 0.092	0.857 ± 0.083 $1,2,3,6,7$	0.857 ± 0.081 $1,2,3,6,7$	0.771 ± 0.069	0.809 ± 0.061
$yeast\hbox{-}0\hbox{-}3\hbox{-}5\hbox{-}9\hbox{-}vs\hbox{-}7\hbox{-}8$	0.656 ± 0.070 $2,3$	0.595 ± 0.056	0.600 ± 0.055	0.655 ± 0.069	0.669 ± 0.071 2.3	0.685 ± 0.061 $1,2,3,4,7$	0.668 ± 0.041 $2,3$
yeast-1- vs -7	0.669 ± 0.095	0.546 ± 0.050	0.553 ± 0.057	0.680 ± 0.106 $2.3.5$	0.659 ± 0.105 2.3	0.702 ± 0.068 $1,2,3,5$	0.707 ± 0.079 $1,2,3,5$
yeast-1-2-8-9- vs -7	0.622 ± 0.082	0.552 ± 0.059	0.566 ± 0.057	0.668 ± 0.082 $1,2,3$	0.669 ± 0.068 $1,2,3$	0.682 ± 0.084 $1,2,3$	0.693 ± 0.089 $1,2,3$
ecoli- 0 - 1 - 4 - 6 - vs - 5	0.792 ± 0.090	0.839 ± 0.090	0.846 ± 0.088	0.891 ± 0.077 $1,2,3,6$	0.898 ± 0.080 $1,2,3,6$	0.867 ± 0.080 $1,2$	0.883 ± 0.078 $1,2,3$
glass-0-1-5-vs-2	0.592 ± 0.127	0.568 ± 0.109	0.579 ± 0.109	0.713 ± 0.127 $1,2,3,6$	0.741 ± 0.126 $1,2,3,6,7$	0.651 ± 0.084 $1,2,3$	0.715 ± 0.107 $1,2,3,6$
yeast-2- vs -4	0.844 ± 0.064	0.835 ± 0.068	0.838 ± 0.062	0.851 ± 0.067	0.851 ± 0.066	0.929 ± 0.034 $1,2,3,4,5$	0.923 ± 0.034 $1,2,3,4,5$
glass-0-6-vs-5	0.899 ± 0.171 $4,5,6,7$	0.907 ± 0.159 $4,5,6,7$	0.907 ± 0.160 $4,5,6,7$	0.804 ± 0.189	0.803 ± 0.188	0.806 ± 0.145	0.837 ± 0.161
glass2	0.561 ± 0.118	0.552 ± 0.077	0.564 ± 0.079	0.720 ± 0.130 $1.2.3.6$	0.757 ± 0.118 $1,2,3,4,6$	0.659 ± 0.103 $1,2,3$	0.755 ± 0.096 $1,2,3,6$
yeast-2- vs -8	0.704 ± 0.113	0.754 ± 0.119	0.764 ± 0.113	0.776 ± 0.110	0.776 ± 0.110	0.757 ± 0.107	0.764 ± 0.098
vowel0	0.963 ± 0.028 $4,5$	0.958 ± 0.029 4.5	0.959 ± 0.029 $4,5$	0.842 ± 0.057	0.830 ± 0.065	0.962 ± 0.021 $4,5$	0.961 ± 0.022 $4,5$
glass-0-4-vs-5	0.992 ± 0.016 $6,7$	0.992 ± 0.016 6.7	0.992 ± 0.016 6.7	0.913 ± 0.140 ₆	0.925 ± 0.134 $6,7$	0.902 ± 0.145	0.915 ± 0.139 -
glass-0-1-4-6-vs-2	0.573 ± 0.117	0.571 ± 0.110 $-$	0.575 ± 0.112	0.714 ± 0.124 $1,2,3,6$	$0.735 \pm 0.126 \\ 1,2,3,6$	0.649 ± 0.112 $1,2,3$	0.732 ± 0.124 $1,2,3,6$
yeast4	0.668 ± 0.071 2.3	0.597 ± 0.056	0.603 ± 0.061	0.772 ± 0.074 $1,2,3$	0.768 ± 0.078	0.830 ± 0.060 1,2,3,4,5	0.837 ± 0.055 $1,2,3,4,5$
ecoli-0-4-6-vs-5	0.814 ± 0.102	0.848 ± 0.104	0.852 ± 0.104 ₁	0.897 ± 0.085 $1,2,3,6$	0.907 ± 0.083 $1,2,3,6,7$	0.871 ± 0.083	0.882 ± 0.079 $1,2,3$
page-blocks-1-3-vs-4	0.956 ± 0.064 $4,5,6$	0.978 ± 0.053 1,4,5,6,7	$0.981 \pm 0.051 \\ 1,4,5,6,7$	0.730 ± 0.096 $-$	0.831 ± 0.107 ₄	0.934 ± 0.058 $4,5$	0.942 ± 0.076 4.5
yeast-0-2-5-7-9-vs-3-6-8	0.844 ± 0.051	0.874 ± 0.045 $1,6,7$	0.877 ± 0.045 $1,6,7$	0.900 ± 0.038 1,2,3,6,7	0.901 ± 0.036 1,2,3,6,7	0.842 ± 0.031 $-$	0.854 ± 0.030 ₆
ecoli-0-1-vs-2-3-5	0.786 ± 0.114	0.811 ± 0.105	0.813 ± 0.106	0.859 ± 0.086 $1,2,3,7$	0.861 ± 0.088 $1,2,3,6,7$	0.849 ± 0.087 1,2,3,7 0.794 ± 0.090	0.833 ± 0.082
ecoli-0-6-7-vs-3-5	$0.821 \pm 0.123 $	0.836 ± 0.113 1,4,5,6,7 0.862 ± 0.088	0.844 ± 0.109 $1,4,5,6,7$ 0.867 ± 0.081	0.827 ± 0.104 6.7 0.880 ± 0.084	0.831 ± 0.104 6.7	7	0.784 ± 0.088
ecoli-0-3-4-7-vs-5-6	_	1,6	1,6,7	1,6,7	0.884 ± 0.076 $1,6,7$	0.833 ± 0.068 -	0.835 ± 0.065
ecoli-0-2-6-7-vs-3-5	0.813 ± 0.129 $6,7$	0.832 ± 0.118 $1,6,7$	0.832 ± 0.118 $1,6,7$	0.836 ± 0.110 $1,6,7$	0.842 ± 0.100 $1,6,7$	0.797 ± 0.092	0.794 ± 0.078
shuttle-c0-vs-c4	1.000 ± 0.000	1.000 ± 0.000 -	1.000 ± 0.000	0.998 ± 0.006	0.998 ± 0.006 -	0.998 ± 0.006	0.998 ± 0.006
ecoli-0-3-4-vs-5	0.828 ± 0.116	0.869 ± 0.115 ₁	0.868 ± 0.115 1	$0.903 \pm 0.109 \\ 1,2,3,6,7$	$\begin{array}{c c} 0.911 \pm 0.112 \\ 1,2,3,6,7 \end{array}$	0.872 ± 0.091 ₁	0.881 ± 0.088 ₁
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Table 1: Results for BAC metric

	CART (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
Mean rank	2.854	2.854	3.732	4.695	5.256	3.951	4.659
	_	_	1,2	1,2	1,2,3,4,6	1	1,2,6

Table 2: Results for mean ranks according to BAC metric

Dataset	CART (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
glass4	0.680 ± 0.227	0.749 ± 0.168	0.749 ± 0.174	0.515 ± 0.229	0.538 ± 0.243	0.422 ± 0.151	0.572 ± 0.182
ecoli-0-2-3-4-vs-5	0.730 ± 0.140	0.794 ± 0.150	0.794 ± 0.150	0.822 ± 0.122	0.832 ± 0.117	0.620 ± 0.128	0.621 ± 0.122
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 2$	0.225 ± 0.219	0.207 ± 0.280	0.213 ± 0.278	0.322 ± 0.102	0.341 ± 0.101	0.224 ± 0.058	0.281 ± 0.051
ecoli-0-1-vs-5	0.666 ± 0.143	0.778 ± 0.144	0.780 ± 0.150	0.862 ± 0.106	0.860 ± 0.109	0.617 ± 0.117	$0.622 \stackrel{6}{\pm} 0.097$
yeast-1-4-5-8-vs-7	0.119 ± 0.133	0.006 ± 0.040	0.006 ± 0.040	0.162 ± 0.068	0.161 ± 0.071	0.123 ± 0.029	0.122 ± 0.036
ecoli4	0.732 ± 0.138	0.779 ± 0.155	0.784 ± 0.155	0.866 ± 0.116	0.843 ± 0.155	0.625 ± 0.131	0.609 ± 0.125
led7 digit - 0 - 2 - 4 - 5 - 6 - 7 - 8 - 9 - vs - 1	0.778 ± 0.109	0.711 ± 0.109	0.721 ± 0.112	0.392 ± 0.211	0.394 ± 0.196	0.556 ± 0.098	0.529 ± 0.091
glass5	0.657 ± 0.346	0.680 ± 0.353	0.693 ± 0.339	0.701 ± 0.241	0.747 ± 0.250	0.535 ± 0.171	$0.644 \overset{4,5}{\pm} 0.206$
ecoli-0-3-4-6-vs-5	0.665 ± 0.186	$0.757 \stackrel{6}{\pm} 0.198$	0.765 ± 0.191	0.811 ± 0.149	0.806 ± 0.141	0.622 ± 0.124	0.614 ± 0.111
yeast - 0 - 5 - 6 - 7 - 9 - vs - 4	0.391 ± 0.122	0.423 ± 0.150	0.422 ± 0.152	0.539 ± 0.083	0.540 ± 0.084	0.327 ± 0.038	0.325 ± 0.035
yeast6	0.422 ± 0.135	$0.540 \overset{6,7}{\pm} 0.160$	0.540 ± 0.152	0.483 ± 0.115	0.505 ± 0.104	0.215 ± 0.039	0.273 ± 0.061
ecoli-0-6-7-vs-5	0.726 ± 0.208	0.796 ± 0.181	0.795 ± 0.183	0.776 ± 0.169	0.778 ± 0.168	0.549 ± 0.135	0.554 ± 0.132
glass-0-1-6-vs-5	0.631 ± 0.314	0.699 ± 0.254	0.722 ± 0.242	0.665 ± 0.257	$0.709 \overset{6,7}{\pm} 0.288$	0.502 ± 0.189	0.638 ± 0.207
ecoli-0-1-3-7-vs-2-6	$0.513 \stackrel{6}{\pm} 0.327$	$0.327 \stackrel{6}{\pm} 0.417$	0.333 ± 0.410	$0.536 \stackrel{6}{\pm} 0.318$	0.483 ± 0.299	$0.391 \stackrel{-}{\pm} 0.234$	$0.258 \stackrel{6}{\pm} 0.170$
yeast - 0 - 2 - 5 - 6 - vs - 3 - 7 - 8 - 9	0.491 ± 0.084	0.583 ± 0.085	0.589 ± 0.085	0.618 ± 0.093	0.622 ± 0.090	$0.294 \stackrel{7}{\pm} 0.023$	0.293 ± 0.019
ecoli-0-1-4-7-vs-5-6	0.612 ± 0.134	0.733 ± 0.135	0.746 ± 0.140	0.823 ± 0.128	0.818 ± 0.122	0.461 ± 0.106	0.482 ± 0.076
yeast5	0.658 ± 0.137	0.686 ± 0.120	0.691 ± 0.105	0.712 ± 0.081	0.730 ± 0.086	0.457 ± 0.058	0.656 ± 0.065
shuttle- $c2$ - vs - $c4$	$1.000 \stackrel{6}{\pm} 0.000$	$1.000 \stackrel{6}{\pm} 0.000$	1.000 ± 0.000	0.993 ± 0.046	0.993 ± 0.046	0.993 ± 0.046	0.993 ± 0.046
ecoli-0-1-4-7-vs-2-3-5-6	0.611 ± 0.148	0.708 ± 0.154	0.713 ± 0.151	0.776 ± 0.126	0.777 ± 0.129	0.372 ± 0.079	0.398 ± 0.071
yeast-0-3-5-9-vs-7-8	0.366 ± 0.116	0.292 ± 0.152	0.307 ± 0.144	0.389 ± 0.128	0.397 ± 0.124	0.272 ± 0.037	$0.259 \stackrel{6}{\pm} 0.023$
yeast-1-vs-7	0.353 ± 0.151	0.154 ± 0.156	0.176 ± 0.169	0.281 ± 0.109	0.245 ± 0.101	0.214 ± 0.034	0.216 ± 0.039
yeast-1-2-8-9- vs -7	0.233 ± 0.137	0.166 ± 0.176	0.206 ± 0.169	0.218 ± 0.087	0.207 ± 0.064	0.125 ± 0.031	0.126 ± 0.031
ecoli-0-1-4-6- vs -5	0.606 ± 0.149	0.761 ± 0.150	0.768 ± 0.149	0.808 ± 0.117	0.808 ± 0.114	0.512 ± 0.105	0.536 ± 0.109
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 5\hbox{-} vs\hbox{-} 2$	0.249 ± 0.210	0.188 ± 0.254	0.216 ± 0.252	0.331 ± 0.120	0.349 ± 0.119	0.245 ± 0.048	0.290 ± 0.080
yeast-2-vs-4	0.707 ± 0.087	0.730 ± 0.102	0.733 ± 0.094	0.769 ± 0.093	0.772 ± 0.094	0.667 ± 0.062	0.647 ± 0.063
$glass\hbox{-} 0\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.793 ± 0.302	0.817 ± 0.281	0.815 ± 0.284	0.634 ± 0.349	0.657 ± 0.355	$0.440 \stackrel{7}{\pm} 0.178$	0.579 ± 0.266
glass2	0.167 ± 0.204	0.164 ± 0.212	0.193 ± 0.215	0.325 ± 0.140	0.359 ± 0.127	0.214 ± 0.059	$0.287 \stackrel{6}{\pm} 0.066$
yeast-2-vs-8	0.408 ± 0.199	0.622 ± 0.228	0.644 ± 0.209	0.666 ± 0.196	0.660 ± 0.191	0.226 ± 0.066	0.222 ± 0.060
vowel0	0.921 ± 0.045	0.915 ± 0.042	0.916 ± 0.043	0.774 ± 0.079	0.761 ± 0.087	0.801 ± 0.053	0.819 ± 0.059
$glass\hbox{-} 0\hbox{-} 4\hbox{-} vs\hbox{-} 5$	0.942 ± 0.109	0.942 ± 0.109	0.942 ± 0.109	0.866 ± 0.233	0.887 ± 0.227	$0.803 \stackrel{5}{\pm} 0.257$	0.831 ± 0.256
$glass\hbox{-}0\hbox{-}1\hbox{-}4\hbox{-}6\hbox{-}vs\hbox{-}2$	0.220 ± 0.210	0.201 ± 0.271	0.210 ± 0.273	$0.316 \stackrel{6}{\pm} 0.116$	0.329 ± 0.126	0.214 ± 0.061	0.276 ± 0.089
yeast4	0.336 ± 0.122	0.281 ± 0.135	0.292 ± 0.143	0.394 ± 0.087	0.401 ± 0.105	0.245 ± 0.030	0.261 ± 0.034
ecoli-0-4-6- vs -5	0.667 ± 0.159	0.765 ± 0.163	0.760 ± 0.156	0.812 ± 0.135	0.816 ± 0.144	0.616 ± 0.141	0.622 ± 0.130
page-blocks-1-3-vs-4	0.903 ± 0.084	0.945 ± 0.080	0.949 ± 0.078	0.550 ± 0.182	0.761 ± 0.174	0.685 ± 0.130	0.873 ± 0.120
yeast - 0 - 2 - 5 - 7 - 9 - vs - 3 - 6 - 8	0.711 ± 0.076	0.802 ± 0.068	0.805 ± 0.068	0.821 ± 0.056	0.821 ± 0.056	0.460 ± 0.047	0.480 ± 0.047
ecoli- 0 - 1 - vs - 2 - 3 - 5	0.599 ± 0.183	0.700 ± 0.175	0.699 ± 0.175	0.808 ± 0.123	0.807 ± 0.128	0.556 ± 0.112	$0.510 \stackrel{6}{\pm} 0.111$
ecoli-0-6-7-vs-3-5	0.676 ± 0.209	0.748 ± 0.197	0.760 ± 0.189	0.717 ± 0.172	0.714 ± 0.179	0.504 ± 0.136	0.469 ± 0.122
ecoli-0-3-4-7-vs-5-6	0.686 ± 0.108	0.798 ± 0.125	0.805 ± 0.115	0.790 ± 0.128	0.787 ± 0.117	$0.508 \stackrel{7}{\pm} 0.102$	0.475 ± 0.087
ecoli-0-2-6-7-vs-3-5	0.664 ± 0.218	0.736 ± 0.211	0.736 ± 0.211	0.727 ± 0.189	0.738 ± 0.171	0.508 ± 0.146	0.476 ± 0.114
shuttle-c0-vs-c4	1.000 ± 0.000	1.000 ± 0.000	1.000 ± 0.000	0.998 ± 0.006	0.998 ± 0.006	0.998 ± 0.006	0.998 ± 0.006
ecoli-0-3-4- vs -5	0.683 ± 0.176	0.791 ± 0.179	$0.789 \stackrel{-}{\pm} 0.181$	0.815 ± 0.162	0.827 ± 0.187	0.626 ± 0.141	0.629 ± 0.129
	6	1,6,7	1,6,7	1,6,7	1,6,7	_	<u> </u>

Table 3: Results for F1 metric

	CART (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
Mean rank	3.951	4.232	4.793	5.244	5.537	1.927	2.317
	6,7	6,7	1,2,6,7	1,6,7	1,2,6,7	_	6

Table 4: Results for mean ranks according to F1 metric

Dataset	CART (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
glass4	0.730 ± 0.276	0.808 ± 0.221	0.798 ± 0.223	0.494 ± 0.277	0.509 ± 0.274	0.299 ± 0.127	0.445 ± 0.187
ecoli - 0 - 2 - 3 - 4 - vs - 5	0.769 ± 0.174	0.898 ± 0.154	0.898 ± 0.154	0.845 ± 0.146	0.847 ± 0.153	0.506 ± 0.151	0.496 ± 0.147
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 2$	0.237 ± 0.249	0.338 ± 0.447	0.348 ± 0.445	0.212 ± 0.074	0.225 ± 0.075	0.130 ± 0.035	0.169 ± 0.037
ecoli-0-1-vs-5	0.731 ± 0.181	0.920 ± 0.127	0.911 ± 0.136	0.956 ± 0.097	0.936 ± 0.110	0.493 ± 0.142	$0.493 \stackrel{6}{\pm} 0.123$
yeast - 1 - 4 - 5 - 8 - vs - 7	0.112 ± 0.127	0.020 ± 0.139	0.020 ± 0.139	0.102 ± 0.043	0.101 ± 0.046	0.068 ± 0.016	0.068 ± 0.020
ecoli4	0.743 ± 0.176	0.848 ± 0.169	0.843 ± 0.168	0.911 ± 0.127	0.863 ± 0.162	0.510 ± 0.184	0.492 ± 0.177
$led 7 digit \hbox{-} 0 \hbox{-} 2 \hbox{-} 4 \hbox{-} 5 \hbox{-} 6 \hbox{-} 7 \hbox{-} 8 \hbox{-} 9 \hbox{-} vs \hbox{-} 1$	0.797 ± 0.142	0.655 ± 0.133	0.672 ± 0.139	0.584 ± 0.301	0.575 ± 0.274	0.431 ± 0.107	0.402 ± 0.109
glass5	0.707 ± 0.382	0.737 ± 0.383	0.747 ± 0.370	0.651 ± 0.278	0.730 ± 0.290	$0.388 \stackrel{7}{\pm} 0.168$	0.515 ± 0.234
ecoli-0-3-4-6-vs-5	0.692 ± 0.204	0.878 ± 0.180	0.872 ± 0.181	0.826 ± 0.166	0.798 ± 0.158	0.509 ± 0.155	$0.492 \stackrel{6}{\pm} 0.148$
yeast-0-5-6-7-9-vs-4	0.395 ± 0.139	0.655 ± 0.191	0.636 ± 0.198	0.465 ± 0.116	0.466 ± 0.119	0.202 ± 0.027	0.200 ± 0.023
yeast6	$0.419 \stackrel{6,7}{\pm} 0.182$	0.731 ± 0.231	0.710 ± 0.215	0.380 ± 0.107	0.413 ± 0.098	0.126 ± 0.024	0.169 ± 0.042
ecoli-0-6-7-vs-5	0.794 ± 0.232	0.893 ± 0.158	0.890 ± 0.164	0.834 ± 0.172	0.840 ± 0.179	0.445 ± 0.149	0.451 ± 0.152
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.680 ± 0.364	0.765 ± 0.309	0.775 ± 0.292	0.635 ± 0.299	0.692 ± 0.318	0.364 ± 0.190	0.534 ± 0.257
ecoli-0-1-3-7-vs-2-6	0.465 ± 0.340	0.377 ± 0.474	0.380 ± 0.465	0.499 ± 0.355	0.432 ± 0.336	0.303 ± 0.231	0.168 ± 0.129
yeast - 0 - 2 - 5 - 6 - vs - 3 - 7 - 8 - 9	0.479 ± 0.096	0.762 ± 0.116	0.762 ± 0.117	0.697 ± 0.104	0.689 ± 0.102	$0.178 \stackrel{7}{\pm} 0.016$	0.178 ± 0.013
ecoli-0-1-4-7-vs-5-6	0.611 ± 0.150	0.872 ± 0.139	0.871 ± 0.135	0.904 ± 0.126	0.863 ± 0.152	0.340 ± 0.125	0.338 ± 0.077
yeast5	0.703 ± 0.162	0.769 ± 0.136	0.767 ± 0.133	0.595 ± 0.095	0.631 ± 0.106	0.303 ± 0.048	0.514 ± 0.075
shuttle- $c2$ - vs - $c4$	1.000 ± 0.000	$1.4,5,6,7$ 1.000 ± 0.000	$1,4,5,6,7$ 1.000 ± 0.000	1.000 ± 0.000	1.000 ± 0.000	1.000 ± 0.000	$1.000 \stackrel{6}{\pm} 0.000$
ecoli-0-1-4-7-vs-2-3-5-6	0.611 ± 0.157	0.871 ± 0.141	0.857 ± 0.140	0.865 ± 0.140	0.871 ± 0.153	0.252 ± 0.075	0.264 ± 0.064
yeast - 0 - 3 - 5 - 9 - vs - 7 - 8	0.363 ± 0.130	0.585 ± 0.298	0.589 ± 0.289	0.476 ± 0.168	0.424 ± 0.157	0.162 ± 0.024	0.152 ± 0.014
yeast-1-vs-7	0.333 ± 0.141	0.437 ± 0.455	0.450 ± 0.441	0.201 ± 0.084	0.167 ± 0.071	0.124 ± 0.020	0.125 ± 0.023
yeast-1-2-8-9-vs-7	0.212 ± 0.140	0.440 ± 0.462	0.542 ± 0.444	0.151 ± 0.071	0.138 ± 0.044	0.070 ± 0.017	0.070 ± 0.017
ecoli-0-1-4-6-vs-5	0.655 ± 0.218	0.903 ± 0.157	0.890 ± 0.170	0.849 ± 0.147	0.836 ± 0.145	0.378 ± 0.106	0.395 ± 0.107
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 5\hbox{-} vs\hbox{-} 2$	0.302 ± 0.304	0.295 ± 0.407	0.322 ± 0.391	0.221 ± 0.084	0.230 ± 0.085	0.143 ± 0.029	0.174 ± 0.052
yeast-2-vs-4	0.709 ± 0.097	0.795 ± 0.097	0.789 ± 0.099	0.850 ± 0.097	0.856 ± 0.099	0.515 ± 0.069	0.492 ± 0.068
$glass\hbox{-} 0\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.808 ± 0.318	0.840 ± 0.290	0.837 ± 0.295	0.697 ± 0.391	0.750 ± 0.391	0.338 ± 0.199	0.535 ± 0.304
glass2	0.172 ± 0.228	0.308 ± 0.422	0.338 ± 0.413	0.223 ± 0.107	0.243 ± 0.096	0.124 ± 0.036	$0.172 \stackrel{6}{\pm} 0.042$
yeast-2-vs-8	0.442 ± 0.271	0.888 ± 0.236	0.908 ± 0.200	0.913 ± 0.179	0.901 ± 0.184	0.137 ± 0.043	0.132 ± 0.038
vowel0	0.911 ± 0.067	0.909 ± 0.063	0.909 ± 0.065	0.895 ± 0.079	0.912 ± 0.074	0.686 ± 0.076	0.720 ± 0.092
glass-0-4-vs-5	0.908 ± 0.169	0.908 ± 0.169	0.908 ± 0.169	0.943 ± 0.209	0.960 ± 0.195	0.825 ± 0.280	0.852 ± 0.273
$glass\hbox{-}0\hbox{-}1\hbox{-}4\hbox{-}6\hbox{-}vs\hbox{-}2$	0.258 ± 0.269	0.314 ± 0.422	0.314 ± 0.411	0.212 ± 0.082	0.218 ± 0.089	0.123 ± 0.036	0.166 ± 0.058
yeast4	0.330 ± 0.134	0.579 ± 0.253	0.564 ± 0.256	0.302 ± 0.080	0.313 ± 0.095	0.144 ± 0.017	0.155 ± 0.021
ecoli- 0 - 4 - 6 - vs - 5	0.744 ± 0.193	0.881 ± 0.165	0.860 ± 0.162	0.832 ± 0.165	0.813 ± 0.178	0.503 ± 0.166	0.497 ± 0.142
page-blocks-1-3-vs-4	0.908 ± 0.102	0.939 ± 0.084	0.940 ± 0.083	0.739 ± 0.228	0.956 ± 0.105	0.565 ± 0.162	0.870 ± 0.132
$yeast \hbox{-} 0 \hbox{-} 2 \hbox{-} 5 \hbox{-} 7 \hbox{-} 9 \hbox{-} vs \hbox{-} 3 \hbox{-} 6 \hbox{-} 8$	0.709 ± 0.082	0.854 ± 0.083	0.854 ± 0.083	0.829 ± 0.073	0.827 ± 0.074	0.311 ± 0.048	0.328 ± 0.050
ecoli- 0 - 1 - vs - 2 - 3 - 5	0.627 ± 0.198	0.816 ± 0.168	0.809 ± 0.168	0.955 ± 0.092	0.944 ± 0.102	0.429 ± 0.108	$0.385 \stackrel{6}{\pm} 0.121$
ecoli-0-6-7-vs-3-5	0.735 ± 0.236	0.880 ± 0.195	0.875 ± 0.195	0.817 ± 0.187	0.780 ± 0.201	0.411 ± 0.152	0.367 ± 0.131
ecoli-0-3-4-7-vs-5-6	0.692 ± 0.154	0.911 ± 0.113	0.908 ± 0.117	0.825 ± 0.146	0.803 ± 0.137	$0.381 \stackrel{7}{\pm} 0.116$	0.334 ± 0.081
ecoli - 0 - 2 - 6 - 7 - vs - 3 - 5	0.722 ± 0.252	0.855 ± 0.230	0.855 ± 0.230	0.797 ± 0.198	0.802 ± 0.193	0.421 ± 0.178	0.378 ± 0.159
shuttle-c0-vs-c4	1.000 ± 0.000	1.000 ± 0.000	1.000 ± 0.000	1.000 ± 0.000	1.000 ± 0.000	$1.000 \stackrel{7}{\pm} 0.000$	1.000 ± 0.000
ecoli- 0 - 3 - 4 - vs - 5	0.738 ± 0.200	0.887 ± 0.165	0.885 ± 0.169	0.847 ± 0.156	0.845 ± 0.193	0.528 ± 0.172	0.513 ± 0.144
	6,7	1,6,7	1,6,7	1,6,7	1,6,7	_	<u> </u>

Table 5: Results for Precision metric

	CART (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
Mean rank	3.976	5.805	5.659	4.512	4.659	1.634	1.756
	6,7	1,4,5,6,7	1,4,5,6,7	6,7	1,6,7	_	_

Table 6: Results for mean ranks according to Precision metric

Dataset	CART (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
glass4	0.717 ± 0.277	0.740 ± 0.211	0.747 ± 0.214	0.610 ± 0.276	0.627 ± 0.285	0.783 ± 0.240	0.867 ± 0.202
ecoli - 0 - 2 - 3 - 4 - vs - 5	$0.730 \stackrel{4}{\pm} 0.179$	0.735 ± 0.183	0.735 ± 0.183	0.825 ± 0.167	0.845 ± 0.157	0.855 ± 0.158	0.885 ± 0.143
glass-0-1-6-vs-2	0.243 ± 0.247	0.158 ± 0.225	0.163 ± 0.224	0.715 ± 0.220	0.745 ± 0.220	0.838 ± 0.227	0.895 ± 0.161
ecoli-0-1- vs -5	0.655 ± 0.205	0.710 ± 0.202	0.720 ± 0.210	0.805 ± 0.160	0.815 ± 0.156	0.885 ± 0.159	0.905 ± 0.140
yeast-1-4-5-8-vs-7	0.140 ± 0.157	$0.003 \stackrel{1}{\pm} 0.023$	0.003 ± 0.023	0.407 ± 0.173	0.403 ± 0.173	0.683 ± 0.180	0.653 ± 0.191
ecoli4	0.755 ± 0.183	0.755 ± 0.203	0.770 ± 0.205	0.850 ± 0.165	0.855 ± 0.194	0.895 ± 0.142	0.895 ± 0.150
led7digit-0-2-4-5-6-7-8-9-vs-1	0.782 ± 0.143	$0.801 \stackrel{-}{\pm} 0.144$	0.801 ± 0.144	0.312 ± 0.185	0.323 ± 0.181	0.840 ± 0.150	0.846 ± 0.160
glass5	$0.670 \overset{4,5}{\pm} 0.382$	$0.680 \overset{4,5}{\pm} 0.384$	$0.700 \overset{4,5}{\pm} 0.374$	0.840 ± 0.290	0.840 ± 0.290	0.950 ± 0.180	0.940 ± 0.190
ecoli-0-3-4-6- vs -5	0.680 ± 0.218	0.700 ± 0.239	0.715 ± 0.234	0.820 ± 0.187	0.835 ± 0.170	0.865 ± 0.159	0.875 ± 0.143
yeast - 0 - 5 - 6 - 7 - 9 - vs - 4	0.412 ± 0.159	0.337 ± 0.155	0.343 ± 0.160	0.677 ± 0.103	0.681 ± 0.102	0.886 ± 0.108	0.883 ± 0.099
yeast6	0.477 ± 0.182	0.460 ± 0.169	0.469 ± 0.166	0.700 ± 0.178	0.680 ± 0.177	0.783 ± 0.154	0.749 ± 0.170
ecoli-0-6-7-vs-5	0.705 ± 0.243	0.750 ± 0.229	0.750 ± 0.229	0.755 ± 0.209	0.755 ± 0.203	0.790 ± 0.214	0.795 ± 0.210
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.660 ± 0.366	$0.730 \stackrel{1}{\pm} 0.319$	0.760 ± 0.303	0.790 ± 0.301	0.790 ± 0.317	$0.920 \stackrel{1}{\pm} 0.208$	0.920 ± 0.183
ecoli - 0 - 1 - 3 - 7 - vs - 2 - 6	0.660 ± 0.417	0.310 ± 0.410	0.320 ± 0.409	0.700 ± 0.400	0.700 ± 0.400	0.720 ± 0.401	0.750 ± 0.390
yeast - 0 - 2 - 5 - 6 - vs - 3 - 7 - 8 - 9	0.512 ± 0.097	$0.479 \stackrel{-}{\pm} 0.087$	0.487 ± 0.088	0.566 ± 0.114	0.577 ± 0.110	0.846 ± 0.078	0.849 ± 0.067
ecoli-0-1-4-7-vs-5-6	0.656 ± 0.200	0.656 ± 0.169	0.684 ± 0.192	0.784 ± 0.182	0.800 ± 0.160	0.820 ± 0.175	0.884 ± 0.133
yeast5	0.648 ± 0.170	0.636 ± 0.152	0.645 ± 0.137	0.901 ± 0.098	0.883 ± 0.113	0.953 ± 0.083	0.924 ± 0.092
shuttle- $c2$ - vs - $c4$	1.000 ± 0.000	1.000 ± 0.000	1.000 ± 0.000	0.990 ± 0.069	0.990 ± 0.069	$0.990 \stackrel{all}{\pm} 0.069$	0.990 ± 0.069
ecoli - 0 - 1 - 4 - 7 - vs - 2 - 3 - 5 - 6	0.632 ± 0.180	0.625 ± 0.185	0.638 ± 0.185	0.727 ± 0.166	0.727 ± 0.163	0.782 ± 0.151	0.861 ± 0.138
yeast - 0 - 3 - 5 - 9 - vs - 7 - 8	0.394 ± 0.146 2.3	0.204 ± 0.114	0.218 ± 0.110	0.358 ± 0.151	0.406 ± 0.150 $2.3.4$	0.870 ± 0.122 $1,2,3,4,5$ $1,2,3,4,5$	$0.870 \pm 0.090 \\ 1,2,3,4,5$
yeast-1- vs -7	0.393 ± 0.190 2.3	0.097 ± 0.100	0.113 ± 0.112	$0.510 \pm 0.217 \\ 1,2,3$	0.490 ± 0.219 $1,2,3$	0.803 ± 0.162 $1,2,3,4,5$ $1,2,3,4,5$	$0.817 \pm 0.170 \\ 1,2,3,4,5$
yeast-1-2-8-9- vs -7	0.280 ± 0.168	0.107 ± 0.119	0.133 ± 0.115	0.417 ± 0.164 $1,2,3$	0.427 ± 0.138 $1,2,3$	0.643 ± 0.188 $1,2,3,4,5$	0.683 ± 0.189 $1,2,3,4,5$
ecoli- 0 - 1 - 4 - 6 - vs - 5	0.615 ± 0.188	0.685 ± 0.178	0.700 ± 0.173	0.795 ± 0.155 $1,2,3$	0.810 ± 0.162 $1,2,3$	0.855 ± 0.166 $1,2,3,4$	0.880 ± 0.160 $1,2,3,4,5$
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 5\hbox{-} vs\hbox{-} 2$	0.262 ± 0.252 $2,3$	0.152 ± 0.223	0.177 ± 0.222	0.695 ± 0.247 $1,2,3$	0.763 ± 0.249 $1,2,3,4$	0.870 ± 0.174 $1,2,3,4,5$	0.900 ± 0.216 $1,2,3,4,5$
yeast-2-vs-4	0.722 ± 0.132	0.691 ± 0.138	0.699 ± 0.126	0.717 ± 0.135	0.717 ± 0.134	0.961 ± 0.068 $1,2,3,4,5$	0.959 ± 0.065 $1,2,3,4,5$
$glass\hbox{-} 0\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.820 ± 0.328	0.830 ± 0.310 4.5	0.830 ± 0.310 4.5	0.630 ± 0.371	0.620 ± 0.368	0.780 ± 0.285	0.740 ± 0.335
glass2	0.187 ± 0.238	0.117 ± 0.153	0.143 ± 0.159	0.642 ± 0.258 $1,2,3$	0.720 ± 0.215 $1,2,3,4$	0.825 ± 0.218 $1,2,3,4,5$	0.885 ± 0.177 $1,2,3,4,5$
yeast-2-vs-8	0.435 ± 0.233	0.510 ± 0.239	0.530 ± 0.227	0.555 ± 0.219	0.555 ± 0.219	0.720 ± 0.243 $1,2,3,4,5$	0.750 ± 0.223 $1,2,3,4,5$
vowel0	0.936 ± 0.055	0.927 ± 0.059 4.5	0.928 ± 0.060 $4,5$	0.693 ± 0.116	0.668 ± 0.134	0.970 ± 0.041 $1,2,3,4,5$	0.962 ± 0.048 $1,2,3,4,5$
glass-0-4-vs-5	$1.000 \pm 0.000 4,5,6,7$	1.000 ± 0.000 $4.5,6,7$	1.000 ± 0.000 $4,5,6,7$	0.830 ± 0.275	0.850 ± 0.269	0.830 ± 0.275	0.850 ± 0.269
glass-0-1-4-6-vs-2	0.213 ± 0.216	0.157 ± 0.218	0.167 ± 0.222	0.660 ± 0.249 $1,2,3$	0.707 ± 0.252 $1,2,3$	0.838 ± 0.237 $1,2,3,4,5$	0.875 ± 0.232 $1,2,3,4,5$
yeast4	0.364 ± 0.141	0.201 ± 0.114	0.212 ± 0.122	0.597 ± 0.154	0.585 ± 0.158	0.837 ± 0.131 $1,2,3,4,5$	0.838 ± 0.115 $1,2,3,4,5$
ecoli-0-4-6- vs -5	0.660 ± 0.210	0.710 ± 0.208	0.720 ± 0.210	0.815 ± 0.164 $1,2,3$ $1,2,3$	$0.840 \pm 0.156 \\ 1,2,3$	0.850 ± 0.158 $1,2,3$	0.875 ± 0.143 $1,2,3,4$
page-blocks-1-3-vs-4	0.918 ± 0.131 4.5	0.959 ± 0.106 $4.5.7$	0.967 ± 0.102	0.472 ± 0.194	0.664 ± 0.214	0.920 ± 0.116 $4,5$	0.895 ± 0.151 $4,5$
yeast - 0 - 2 - 5 - 7 - 9 - vs - 3 - 6 - 8	0.721 ± 0.102	0.763 ± 0.091	$4,5,6,7$ 0.769 ± 0.090	0.820 ± 0.076	0.821 ± 0.072 $1,2,3$	0.914 ± 0.079 $1,2,3,4,5$	0.921 ± 0.077 $1,2,3,4,5$
ecoli- 0 - 1 - vs - 2 - 3 - 5	0.615 ± 0.230	0.638 ± 0.209	0.642 ± 0.210	$0.723 \pm 0.173 \\ 1,2,3$	0.727 ± 0.177 $1,2,3$	0.825 ± 0.174 $1,2,3,4,5$	0.829 ± 0.171 $1,2,3,4,5$
ecoli-0-6-7-vs-3-5	0.671 ± 0.250	0.682 ± 0.226	0.699 ± 0.217	0.673 ± 0.205	0.686 ± 0.201	0.726 ± 0.181 $4,5$	0.730 ± 0.187 4.5
ecoli-0-3-4-7-vs-5-6	0.728 ± 0.182	0.732 ± 0.177	0.744 ± 0.165	0.780 ± 0.166 1.2	0.792 ± 0.149 $1,2,3$	0.832 ± 0.156 $1,2,3,4$	0.876 ± 0.137
ecoli - 0 - 2 - 6 - 7 - vs - 3 - 5	0.659 ± 0.255	0.679 ± 0.233	0.679 ± 0.233	0.693 ± 0.215	0.704 ± 0.193	0.732 ± 0.189	$0.751 \pm 0.179 \\ 1,2,3,4,5$
shuttle-c0-vs-c4	1.000 ± 0.000	1.000 ± 0.000	1.000 ± 0.000	0.996 ± 0.012	0.996 ± 0.012	0.996 ± 0.012	0.996 ± 0.012
ecoli-0-3-4-vs-5	0.690 ± 0.237	0.750 ± 0.229	0.750 ± 0.229	0.825 ± 0.219 $1,2,3$	0.840 ± 0.222 $1,2,3$	0.845 ± 0.192 $1,2,3$	0.865 ± 0.181 $1,2,3$
	_		_	1,2,3	1,2,3	1,2,3	1,2,3

Table 7: Results for Recall metric

	CART (1) OSB (2) OKNORAU (3) TBAC (4) OTBAC (5) TBAW (6) OTBAW (7)									
Mean rank	2.573	2.317	3.134	3.659	4.171	5.854	6.293			
	_	_	1,2	1,2	1,2,3,4	1,2,3,4,5	all			

Table 8: Results for mean ranks according to Recall metric

Dataset	CART (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
glass4	0.846 ± 0.136	0.863 ± 0.106	0.866 ± 0.108	0.779 ± 0.141	0.790 ± 0.146	0.826 ± 0.126	0.892 ± 0.107
ecoli-0-2-3-4-vs-5	0.850 ± 0.087	0.862 ± 0.093	0.862 ± 0.093	0.903 ± 0.084	0.912 ± 0.078	0.874 ± 0.079	0.886 ± 0.070
glass-0-1-6-vs-2	0.582 ± 0.128	0.573 ± 0.114	0.574 ± 0.114	0.724 ± 0.110	0.745 ± 0.106	0.648 ± 0.101	0.729 ± 0.073
ecoli-0-1- vs -5	0.814 ± 0.099	0.851 ± 0.099	0.856 ± 0.104	0.900 ± 0.079	0.904 ± 0.078	0.895 ± 0.075	0.904 ± 0.064
yeast-1-4-5-8-vs-7	0.546 ± 0.078	$0.501 \stackrel{1}{\pm} 0.011$	0.501 ± 0.011	0.620 ± 0.090	0.618 ± 0.090	0.629 ± 0.086	0.621 ± 0.099
ecoli4	0.868 ± 0.091	0.872 ± 0.101	$0.879 \stackrel{-}{\pm} 0.102$	0.922 ± 0.082	0.922 ± 0.097	0.913 ± 0.066	0.911 ± 0.068
led7 digit - 0 - 2 - 4 - 5 - 6 - 7 - 8 - 9 - vs - 1	$0.881 \stackrel{-}{\pm} 0.072$	0.880 ± 0.072	$0.881 \stackrel{1}{\pm} 0.072$	0.647 ± 0.093	0.650 ± 0.091	0.864 ± 0.070	0.859 ± 0.071
glass5	0.831 ± 0.189	0.837 ± 0.191	$0.847 \stackrel{all}{\pm} 0.185$	0.910 ± 0.142	0.913 ± 0.143	0.936 ± 0.091	0.945 ± 0.100
ecoli-0-3-4-6-vs-5	0.821 ± 0.111	0.844 ± 0.122	0.851 ± 0.119	0.899 ± 0.096	$0.905 \stackrel{4}{\pm} 0.088$	0.880 ± 0.081	0.882 ± 0.071
yeast - 0 - 5 - 6 - 7 - 9 - vs - 4	0.670 ± 0.077	$0.658 \stackrel{1}{\pm} 0.075$	$0.660 \stackrel{1}{\pm} 0.078$	0.792 ± 0.048	0.793 ± 0.046	0.753 ± 0.049	0.750 ± 0.048
yeast6	0.729 ± 0.089	0.727 ± 0.084	$0.731 \stackrel{-}{\pm} 0.082$	0.835 ± 0.088	0.828 ± 0.087	0.824 ± 0.071	0.828 ± 0.081
ecoli-0- 6 - 7 - vs - 5	0.842 ± 0.121	0.870 ± 0.116	0.870 ± 0.116	0.869 ± 0.106	0.869 ± 0.103	0.838 ± 0.100	0.842 ± 0.098
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.822 ± 0.182	0.859 ± 0.155	0.873 ± 0.148	0.880 ± 0.150	0.885 ± 0.160	0.909 ± 0.113	0.931 ± 0.095
ecoli-0-1-3-7-vs-2-6	0.820 ± 0.209	$0.653 \stackrel{1}{\pm} 0.206$	0.657 ± 0.205	0.839 ± 0.199	$0.834 \stackrel{4}{\pm} 0.200$	$0.837 \stackrel{1}{\pm} 0.194$	0.824 ± 0.181
yeast - 0 - 2 - 5 - 6 - vs - 3 - 7 - 8 - 9	$0.725 \overset{2,3}{\pm} 0.050$	0.731 ± 0.044	0.735 ± 0.045	0.769 ± 0.056	0.774 ± 0.054	0.708 ± 0.033	0.708 ± 0.027
ecoli-0-1-4-7-vs-5-6	0.809 ± 0.095	0.823 ± 0.085	0.837 ± 0.095	0.888 ± 0.090	0.894 ± 0.080	0.834 ± 0.079	0.866 ± 0.059
yeast5	0.819 ± 0.085	0.815 ± 0.076	0.819 ± 0.068	0.941 ± 0.049	0.933 ± 0.056	0.942 ± 0.040	0.948 ± 0.045
shuttle- $c2$ - vs - $c4$	1.000 ± 0.000	1.000 ± 0.000	1.000 ± 0.000	0.995 ± 0.034	0.995 ± 0.034	0.995 ± 0.034	0.995 ± 0.034
ecoli - 0 - 1 - 4 - 7 - vs - 2 - 3 - 5 - 6	0.796 ± 0.092	0.807 ± 0.092	0.813 ± 0.092	0.857 ± 0.083	0.857 ± 0.081	0.771 ± 0.069	0.809 ± 0.061
$yeast\hbox{-}0\hbox{-}3\hbox{-}5\hbox{-}9\hbox{-}vs\hbox{-}7\hbox{-}8$	0.656 ± 0.070	0.595 ± 0.056	0.600 ± 0.055	0.655 ± 0.069	0.669 ± 0.071	0.685 ± 0.061	0.668 ± 0.041
yeast-1-vs-7	0.669 ± 0.095	0.546 ± 0.050	0.553 ± 0.057	0.680 ± 0.106	0.659 ± 0.105	0.702 ± 0.068	0.707 ± 0.079
$yeast\hbox{-} 1\hbox{-} 2\hbox{-} 8\hbox{-} 9\hbox{-} vs\hbox{-} 7$	0.622 ± 0.082	0.552 ± 0.059	0.566 ± 0.057	0.668 ± 0.082	0.669 ± 0.068	0.682 ± 0.084	0.693 ± 0.089
ecoli-0-1-4-6- vs -5	0.792 ± 0.090	0.839 ± 0.090	0.846 ± 0.088	0.891 ± 0.077	0.898 ± 0.080	0.867 ± 0.080	0.883 ± 0.078
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 5\hbox{-} vs\hbox{-} 2$	0.592 ± 0.127	0.568 ± 0.109	0.579 ± 0.109	0.713 ± 0.127	0.741 ± 0.126	0.651 ± 0.084	0.715 ± 0.107
yeast-2-vs-4	0.844 ± 0.064	0.835 ± 0.068	0.838 ± 0.062	0.851 ± 0.067	0.851 ± 0.066	0.929 ± 0.034	0.923 ± 0.034
$glass\hbox{-} 0\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.899 ± 0.171	0.907 ± 0.159	0.907 ± 0.160	0.804 ± 0.189	0.803 ± 0.188	0.806 ± 0.145	0.837 ± 0.161
glass2	0.561 ± 0.118	0.552 ± 0.077	0.564 ± 0.079	0.720 ± 0.130	0.757 ± 0.118	0.659 ± 0.103	0.755 ± 0.096
yeast-2- vs -8	0.704 ± 0.113	0.754 ± 0.119	0.764 ± 0.113	0.776 ± 0.110	0.776 ± 0.110	0.757 ± 0.107	0.764 ± 0.098
vowel0	0.963 ± 0.028	0.958 ± 0.029	0.959 ± 0.029	0.842 ± 0.057	$0.830 \stackrel{1}{\pm} 0.065$	0.962 ± 0.021	0.961 ± 0.022
$glass\hbox{-} 0\hbox{-} 4\hbox{-} vs\hbox{-} 5$	0.992 ± 0.016	0.992 ± 0.016	0.992 ± 0.016	0.913 ± 0.140	0.925 ± 0.134	0.902 ± 0.145	0.915 ± 0.139
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 4\hbox{-} 6\hbox{-} vs\hbox{-} 2$	0.573 ± 0.117	0.571 ± 0.110	0.575 ± 0.112	0.714 ± 0.124	0.735 ± 0.126	0.649 ± 0.112	0.732 ± 0.124
yeast4	0.668 ± 0.071	0.597 ± 0.056	0.603 ± 0.061	0.772 ± 0.074	0.768 ± 0.078	0.830 ± 0.060	0.837 ± 0.055
ecoli-0-4-6- vs -5	0.814 ± 0.102	0.848 ± 0.104	0.852 ± 0.104	0.897 ± 0.085	0.907 ± 0.083	0.871 ± 0.083	0.882 ± 0.079
page-blocks-1-3-vs-4	0.956 ± 0.064	0.978 ± 0.053	0.981 ± 0.051	0.730 ± 0.096	0.831 ± 0.107	0.934 ± 0.058	0.942 ± 0.076
yeast - 0 - 2 - 5 - 7 - 9 - vs - 3 - 6 - 8	0.844 ± 0.051	0.874 ± 0.045	0.877 ± 0.045	0.900 ± 0.038	0.901 ± 0.036	0.842 ± 0.031	0.854 ± 0.030
ecoli- 0 - 1 - vs - 2 - 3 - 5	0.786 ± 0.114	0.811 ± 0.105	0.813 ± 0.106	0.859 ± 0.086	0.861 ± 0.088	0.849 ± 0.087	0.833 ± 0.082
ecoli-0-6-7- vs -3-5	0.821 ± 0.123	0.836 ± 0.113	0.844 ± 0.109	0.827 ± 0.104	0.831 ± 0.104	0.794 ± 0.090	0.784 ± 0.088
ecoli - 0 - 3 - 4 - 7 - vs - 5 - 6	0.843 ± 0.085	0.862 ± 0.088	0.867 ± 0.081	0.880 ± 0.084	0.884 ± 0.076	0.833 ± 0.068	0.835 ± 0.065
ecoli - 0 - 2 - 6 - 7 - vs - 3 - 5	0.813 ± 0.129	0.832 ± 0.118	0.832 ± 0.118	0.836 ± 0.110	0.842 ± 0.100	0.797 ± 0.092	0.794 ± 0.078
shuttle-c0-vs-c4	1.000 ± 0.000	1.000 ± 0.000	1.000 ± 0.000	0.998 ± 0.006	0.998 ± 0.006	0.998 ± 0.006	0.998 ± 0.006
ecoli-0-3-4- vs -5	0.828 ± 0.116	0.869 ± 0.115	0.868 ± 0.115	0.903 ± 0.109	0.911 ± 0.112	0.872 ± 0.091	0.881 ± 0.088
	<u> </u>	1	1	1,2,3,6,7	1,2,3,6,7	1	1

Table 9: Results for AUC metric

	CART (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
Mean rank	2.854	2.854	3.732	4.695	5.256	3.951	4.659
	_	_	1,2	1,2	1,2,3,4,6	1	1,2,6

Table 10: Results for mean ranks according to AUC metric

Dataset	CART (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
glass4	0.813 ± 0.193	0.845 ± 0.124	0.848 ± 0.126	0.720 ± 0.247	0.732 ± 0.253	0.814 ± 0.140	0.884 ± 0.118
ecoli - 0 - 2 - 3 - 4 - vs - 5	0.834 ± 0.109	0.845 ± 0.115	0.845 ± 0.115	0.894 ± 0.094	0.905 ± 0.087	0.869 ± 0.085	0.881 ± 0.074
glass-0-1-6-vs-2	0.358 ± 0.310	$0.240 \stackrel{1}{\pm} 0.315$	0.250 ± 0.315	0.712 ± 0.119	0.733 ± 0.116	0.604 ± 0.090	0.701 ± 0.071
ecoli-0-1- vs -5	0.788 ± 0.125	0.830 ± 0.124	0.835 ± 0.128	0.890 ± 0.091	0.895 ± 0.088	0.889 ± 0.082	0.900 ± 0.069
yeast-1-4-5-8-vs-7	0.261 ± 0.254	$0.008 \stackrel{1}{\pm} 0.057$	0.008 ± 0.057	0.565 ± 0.144	0.562 ± 0.146	0.619 ± 0.082	0.613 ± 0.095
ecoli4	0.854 ± 0.106	0.855 ± 0.124	0.863 ± 0.125	0.914 ± 0.093	0.913 ± 0.116	0.909 ± 0.071	0.906 ± 0.075
led7digit-0-2-4-5-6-7-8-9-vs-1	0.871 ± 0.081	0.872 ± 0.080	0.873 ± 0.081	0.510 ± 0.216	0.527 ± 0.194	0.859 ± 0.081	0.853 ± 0.084
glass5	0.729 ± 0.364	0.735 ± 0.366	0.755 ± 0.352	0.871 ± 0.248	0.874 ± 0.248	0.923 ± 0.149	0.933 ± 0.157
ecoli-0-3-4-6-vs-5	0.796 ± 0.143	0.818 ± 0.154	0.827 ± 0.149	0.890 ± 0.109	$0.897 \stackrel{4}{\pm} 0.098$	0.874 ± 0.086	0.878 ± 0.074
yeast-0-5-6-7-9-vs-4	0.605 ± 0.121	$0.557 \stackrel{1}{\pm} 0.136$	0.560 ± 0.140	0.780 ± 0.057	0.782 ± 0.054	0.737 ± 0.045	0.736 ± 0.045
yeast6	$0.670 \stackrel{2}{\pm} 0.136$	0.663 ± 0.131	0.670 ± 0.129	0.817 ± 0.109	0.807 ± 0.110	0.818 ± 0.078	0.818 ± 0.098
ecoli-0-6-7-vs-5	0.811 ± 0.182	0.850 ± 0.143	0.850 ± 0.143	0.852 ± 0.129	0.853 ± 0.126	0.826 ± 0.118	0.829 ± 0.116
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.729 ± 0.343	0.803 ± 0.271	0.828 ± 0.248	0.839 ± 0.248	0.836 ± 0.277	0.896 ± 0.161	0.925 ± 0.107
ecoli - 0 - 1 - 3 - 7 - vs - 2 - 6	0.695 ± 0.405	0.347 ± 0.434	0.361 ± 0.434	0.733 ± 0.383	0.729 ± 0.380	0.733 ± 0.379	0.732 ± 0.354
yeast - 0 - 2 - 5 - 6 - vs - 3 - 7 - 8 - 9	0.690 ± 0.067	0.683 ± 0.063	0.689 ± 0.063	0.737 ± 0.076	0.745 ± 0.074	0.692 ± 0.030	0.693 ± 0.025
ecoli-0-1-4-7-vs-5-6	0.784 ± 0.121	0.799 ± 0.109	0.814 ± 0.120	$1,2,3,6,7 \\ 0.875 \pm 0.107$	0.884 ± 0.090	0.826 ± 0.087	0.862 ± 0.061
yeast5	0.793 ± 0.113	0.789 ± 0.097	0.796 ± 0.084	0.938 ± 0.053	0.930 ± 0.061	0.941 ± 0.042	0.947 ± 0.048
shuttle- $c2$ - vs - $c4$	1.000 ± 0.000	1.000 ± 0.000	1.000 ± 0.000	0.994 ± 0.041	0.994 ± 0.041	0.994 ± 0.041	0.994 ± 0.041
ecoli - 0 - 1 - 4 - 7 - vs - 2 - 3 - 5 - 6	0.770 ± 0.117	0.776 ± 0.128	0.784 ± 0.125	0.841 ± 0.101	0.841 ± 0.099 $1.2.3.6.7$	0.764 ± 0.073	0.802 ± 0.061
yeast - 0 - 3 - 5 - 9 - vs - 7 - 8	0.588 ± 0.119 2.3	0.411 ± 0.177	0.431 ± 0.168	0.565 ± 0.142	0.598 ± 0.135 $2.3.4$	0.654 ± 0.060	0.634 ± 0.040 $2,3,4$
yeast-1- vs -7	0.582 ± 0.181 2.3	0.222 ± 0.216	0.248 ± 0.226	0.641 ± 0.140 $1,2,3,5$	0.614 ± 0.160 $2,3$	$0.688 \pm 0.064 \\ 1,2,3,4,5$	$0.691 \pm 0.073 \\ 1,2,3,4,5$
yeast-1-2-8-9- vs -7	0.475 ± 0.209	0.228 ± 0.233	0.288 ± 0.223	0.606 ± 0.127 $1,2,3$	0.614 ± 0.105 $1,2,3$	0.670 ± 0.104 $1,2,3,4,5$	0.684 ± 0.091 $1,2,3,4,5$
ecoli- 0 - 1 - 4 - 6 - vs - 5	0.756 ± 0.151	0.817 ± 0.114	0.826 ± 0.107	0.881 ± 0.088 $1,2,3$	0.888 ± 0.091 $1,2,3$	0.861 ± 0.086 $1,2,3$	0.879 ± 0.083 $1,2,3$
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 5\hbox{-} vs\hbox{-} 2$	0.389 ± 0.300	0.233 ± 0.306	0.276 ± 0.309	0.693 ± 0.163 $1,2,3,6$	$0.721 \pm 0.161 \\ 1,2,3,6,7$	0.605 ± 0.074 $1,2,3$	0.673 ± 0.137 $1,2,3,6$
yeast-2-vs-4	0.831 ± 0.076	0.818 ± 0.086	0.823 ± 0.077	0.836 ± 0.078	0.837 ± 0.078	0.927 ± 0.034 $1,2,3,4,5$	0.922 ± 0.034 $1,2,3,4,5$
$glass\hbox{-} 0\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.846 ± 0.301 $4,5,6,7$	0.862 ± 0.277 $4,5,6,7$	0.862 ± 0.277 $4,5,6,7$	0.702 ± 0.354	0.700 ± 0.354	0.778 ± 0.205	0.776 ± 0.288
glass2	0.276 ± 0.311	0.208 ± 0.267	0.253 ± 0.276	0.684 ± 0.208 $1,2,3,6$	0.742 ± 0.156 $1,2,3,4,6$	0.621 ± 0.119 $1,2,3$	0.737 ± 0.094 $1,2,3,6$
yeast-2-vs-8	0.598 ± 0.252	0.683 ± 0.207	0.704 ± 0.181	0.728 ± 0.153	0.728 ± 0.153	0.739 ± 0.126	0.749 ± 0.115
vowel0	0.962 ± 0.029	0.957 ± 0.030 4.5	0.958 ± 0.031 $4,5$	0.826 ± 0.069	0.810 ± 0.080	0.962 ± 0.021 4.5	0.961 ± 0.023 4.5
glass-0-4-vs-5	0.991 ± 0.017 $6,7$	0.991 ± 0.017 $6,7$	0.991 ± 0.017 $6,7$	0.883 ± 0.221	0.896 ± 0.219 $6,7$	0.873 ± 0.220	0.887 ± 0.219
glass-0-1-4-6-vs-2	0.336 ± 0.298	0.244 ± 0.308	0.257 ± 0.313	0.691 ± 0.161 $1,2,3,6$	0.708 ± 0.186 $1,2,3,6$	0.602 ± 0.125 $1,2,3$	0.702 ± 0.147 $1,2,3,6$
yeast4	0.581 ± 0.126	0.424 ± 0.140	0.435 ± 0.146	0.745 ± 0.097 $1,2,3$	0.738 ± 0.106	0.826 ± 0.063	0.835 ± 0.056 $1,2,3,4,5$
ecoli-0-4-6- vs -5	0.787 ± 0.136	0.827 ± 0.131	0.831 ± 0.130	0.888 ± 0.095 $1,2,3,6$	0.901 ± 0.091 $1,2,3,6,7$	0.865 ± 0.088 $1,2$	0.878 ± 0.082 $1,2,3$
page-blocks-1-3-vs-4	0.952 ± 0.072 $4,5,6$	0.976 ± 0.059 $1,4,5,6,7$	0.979 ± 0.057 $1,4,5,6,7$	0.662 ± 0.166	0.802 ± 0.141	0.931 ± 0.062 4.5	0.937 ± 0.086 4.5
yeast - 0 - 2 - 5 - 7 - 9 - vs - 3 - 6 - 8	0.832 ± 0.061	0.865 ± 0.052 $1,6,7$	0.869 ± 0.051 $1,6,7$	0.896 ± 0.041 $1,2,3,6,7$	0.896 ± 0.040 $1,2,3,6,7$	0.837 ± 0.031	0.849 ± 0.030
ecoli- 0 - 1 - vs - 2 - 3 - 5	0.746 ± 0.175	0.780 ± 0.139	0.782 ± 0.140	0.842 ± 0.105 $1,2,3$	0.843 ± 0.108 $1,2,3$	0.842 ± 0.098 $1,2,3,7$	0.826 ± 0.092 $1,2,3$
ecoli-0-6-7-vs-3-5	0.780 ± 0.206	0.803 ± 0.174 $1,4,6,7$	0.814 ± 0.168 $1,4,5,6,7$	0.802 ± 0.130 $6,7$	0.809 ± 0.128 $2,6,7$	0.783 ± 0.102	0.772 ± 0.103
ecoli-0-3-4-7-vs-5-6	0.828 ± 0.102	0.845 ± 0.105 1.6	0.853 ± 0.096	0.869 ± 0.096 $1,6,7$	0.875 ± 0.086 $1,6,7$	0.826 ± 0.071	0.828 ± 0.067
ecoli - 0 - 2 - 6 - 7 - vs - 3 - 5	0.771 ± 0.207	0.799 ± 0.178 $1,6,7$	0.799 ± 0.178 $1,6,7$	0.812 ± 0.140 $1,6,7$	0.822 ± 0.123 $1,6,7$	0.784 ± 0.105	0.783 ± 0.089
shuttle-c0-vs-c4	1.000 ± 0.000	1.000 ± 0.000	1.000 ± 0.000	0.998 ± 0.006	0.998 ± 0.006	0.998 ± 0.006	0.998 ± 0.006
ecoli-0-3-4-vs-5	0.802 ± 0.148	0.849 ± 0.142	0.849 ± 0.142	0.889 ± 0.132 $1,2,3,6,7$	0.892 ± 0.169 $1,2,3,6,7$	0.863 ± 0.105	0.874 ± 0.101
	_	1	1	1,2,3,0,7	1,2,3,0,7	1	1 1

Table 11: Results for GMEAN metric

	CART (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
$Mean\ rank$	2.659	2.720	3.476	4.659	5.195	4.390	4.902
	_	_	1,2	1,2,3	1,2,3,4,6	1,2	1,2,3,6

Table 12: Results for mean ranks according to GMEAN metric