Dataset	CART (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
glass-0-1-6-vs-2	0.582 ± 0.128	0.571 ± 0.113	0.569 ± 0.112	0.735 ± 0.108	0.751 ± 0.105	0.685 ± 0.091	0.739 ± 0.077
ecoli-0-3-4-7-vs-5-6	0.843 ± 0.085	$0.860 \stackrel{-}{\pm} 0.083$	0.869 ± 0.084	0.881 ± 0.086	0.886 ± 0.073	0.890 ± 0.084	0.895 ± 0.079
shuttle- $c2$ - vs - $c4$	1.000 ± 0.000	$1.000 \stackrel{1}{\pm} 0.000$	$1.000 \stackrel{1}{\pm} 0.000$	$0.990 \stackrel{1}{\pm} 0.048$	$0.990 \stackrel{1}{\pm} 0.048$	$0.990 \stackrel{1}{\pm} 0.048$	$0.990 \stackrel{1,2}{\pm} 0.048$
$glass\hbox{-}0\hbox{-}1\hbox{-}4\hbox{-}6\hbox{-}vs\hbox{-}2$	0.573 ± 0.117	0.563 ± 0.102	0.568 ± 0.108	0.728 ± 0.121	0.739 ± 0.125	0.681 ± 0.099	0.737 ± 0.106
yeast-1-2-8-9- vs -7	0.622 ± 0.082	0.539 ± 0.055	0.552 ± 0.059	0.677 ± 0.085	0.670 ± 0.073	0.696 ± 0.087	0.700 ± 0.085
ecoli-0-1-4-6-vs-5	0.792 ± 0.090	0.843 ± 0.085	0.848 ± 0.087	0.895 ± 0.078	0.899 ± 0.080	0.893 ± 0.074	0.901 ± 0.078
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.822 ± 0.182	$0.849 \stackrel{1}{\pm} 0.163$	$0.859 \stackrel{1}{\pm} 0.156$	0.873 ± 0.161	0.895 ± 0.150	0.867 ± 0.141	0.900 ± 0.137
yeast-2-vs-4	0.844 ± 0.064	0.830 ± 0.071	$0.832 \stackrel{1}{\pm} 0.070$	$0.851 \stackrel{6}{\pm} 0.069$	0.852 ± 0.067	$0.871 \stackrel{-}{\pm} 0.074$	$0.876 \overset{5,6}{\pm} 0.072$
glass-0-6-vs-5	0.899 ± 0.171	0.901 ± 0.163	0.901 ± 0.164	0.784 ± 0.187	0.787 ± 0.190	0.784 ± 0.183	0.791 ± 0.188
ecoli-0-3-4-6-vs-5	0.821 ± 0.111	0.847 ± 0.123	0.849 ± 0.122	$0.901 \stackrel{6}{\pm} 0.093$	0.904 ± 0.087	$0.906 \stackrel{-}{\pm} 0.095$	0.907 ± 0.090
$yeast\hbox{-}0\hbox{-}3\hbox{-}5\hbox{-}9\hbox{-}vs\hbox{-}7\hbox{-}8$	0.656 ± 0.070	$0.597 \stackrel{1}{\pm} 0.049$	$0.602 \stackrel{1}{\pm} 0.051$	0.661 ± 0.071	0.672 ± 0.073	0.689 ± 0.070	0.706 ± 0.061
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 5\hbox{-} vs\hbox{-} 2$	0.592 ± 0.127	0.555 ± 0.106	0.562 ± 0.108	0.715 ± 0.125	0.734 ± 0.119	0.671 ± 0.091	0.713 ± 0.096
ecoli-0-6-7- vs -5	0.842 ± 0.121	0.869 ± 0.119	0.868 ± 0.119	0.870 ± 0.101	0.871 ± 0.099	0.873 ± 0.106	0.876 ± 0.102
ecoli-0-2-3-4- vs -5	0.850 ± 0.087	0.857 ± 0.092	0.862 ± 0.093	0.905 ± 0.080	0.911 ± 0.078	0.903 ± 0.082	$0.908 \stackrel{2}{\pm} 0.080$
ecoli4	0.868 ± 0.091	0.875 ± 0.099	0.875 ± 0.099	0.919 ± 0.085	0.929 ± 0.091	0.930 ± 0.082	0.934 ± 0.089
yeast5	0.819 ± 0.085	0.815 ± 0.071	0.820 ± 0.076	0.941 ± 0.052	0.934 ± 0.053	0.952 ± 0.049	0.936 ± 0.053
ecoli-0-4-6- vs -5	0.814 ± 0.102	0.846 ± 0.102	0.851 ± 0.099	0.898 ± 0.082	0.905 ± 0.083	0.896 ± 0.081	0.907 ± 0.084
$led 7 digit \hbox{-} 0\hbox{-} 2\hbox{-} 4\hbox{-} 5\hbox{-} 6\hbox{-} 7\hbox{-} 8\hbox{-} 9\hbox{-} vs\hbox{-} 1$	0.881 ± 0.072 $2.3.4.5$	0.879 ± 0.071	0.879 ± 0.072	0.651 ± 0.090	0.651 ± 0.093	0.903 ± 0.069	0.900 ± 0.078
ecoli-0-1- vs -5	0.814 ± 0.099	0.856 ± 0.100	0.861 ± 0.104	0.900 ± 0.079 $1,2,3$	0.907 ± 0.079 $1,2,3$	0.905 ± 0.080 $1,2,3$	0.909 ± 0.077 $1,2,3$
ecoli - 0 - 2 - 6 - 7 - vs - 3 - 5	0.813 ± 0.129	0.838 ± 0.115 $1,6,7$	0.843 ± 0.108 $1,6,7$	0.836 ± 0.110 $1,6,7$	0.840 ± 0.101 $6,7$	0.834 ± 0.104	0.828 ± 0.107
ecoli - 0 - 1 - 4 - 7 - vs - 2 - 3 - 5 - 6	0.796 ± 0.092	0.801 ± 0.092	0.808 ± 0.094	0.858 ± 0.084 $1,2,3,6,7$	0.859 ± 0.079 $1,2,3,6,7$	0.844 ± 0.090 $1,2,3$	0.846 ± 0.079 $1,2,3$
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-0-6-7- vs -3-5	0.821 ± 0.123	0.841 ± 0.114 $1,4,5,6,7$	0.843 ± 0.111 $1,4,5,6,7$	0.829 ± 0.104	0.831 ± 0.104	0.841 ± 0.101 7	0.831 ± 0.104
vowel0	0.963 ± 0.028 $4,5,6,7$	0.958 ± 0.029 $4,5,6,7$	0.958 ± 0.028 $4,5,6,7$	0.818 ± 0.061	0.809 ± 0.067	0.873 ± 0.071 4.5	0.865 ± 0.072 4.5
glass4	0.846 ± 0.136 $4,5,6$	0.854 ± 0.125 $4,5,6$	0.857 ± 0.127 $4,5,6$	0.787 ± 0.150	0.805 ± 0.152	0.798 ± 0.123	0.862 ± 0.110 4.6
$yeast\hbox{-} 0\hbox{-} 5\hbox{-} 6\hbox{-} 7\hbox{-} 9\hbox{-} vs\hbox{-} 4$	0.670 ± 0.077	0.665 ± 0.073	0.663 ± 0.073	0.790 ± 0.047 $1,2,3$	0.793 ± 0.046 $1,2,3$	0.800 ± 0.055 $1,2,3$	0.793 ± 0.056 $1,2,3$
yeast - 0 - 2 - 5 - 6 - vs - 3 - 7 - 8 - 9	0.725 ± 0.050	0.731 ± 0.040	0.733 ± 0.042	0.773 ± 0.057 $1,2,3$	0.776 ± 0.054 $1,2,3$	0.770 ± 0.055 $1,2,3$	0.775 ± 0.055 $1,2,3$
ecoli- 0 - 1 - vs - 2 - 3 - 5	0.786 ± 0.114	0.804 ± 0.108	0.807 ± 0.109	0.859 ± 0.088 $1,2,3,6,7$	0.859 ± 0.089 $1,2,3,6,7$	0.850 ± 0.092 $1,2,3$	0.859 ± 0.091 $1,2,3,6$
ecoli-0-3-4- vs -5	0.828 ± 0.116	0.866 ± 0.119	0.866 ± 0.119	0.907 ± 0.107 $1,2,3$	0.910 ± 0.112 $1,2,3$	0.910 ± 0.098 $1,2,3$	0.914 ± 0.100 $1,2,3$
glass5	0.831 ± 0.189	0.817 ± 0.199	0.822 ± 0.200	0.903 ± 0.143	0.912 ± 0.142 4.6	0.904 ± 0.126	0.915 ± 0.127 $4,5,6$
yeast4	0.668 ± 0.071 2.3	0.596 ± 0.059	0.601 ± 0.062	0.779 ± 0.074 $1,2,3$	0.769 ± 0.078 $1,2,3$	0.834 ± 0.063 $1,2,3,4,5$	0.829 ± 0.059 $1,2,3,4,5$
glass-0-4-vs-5	0.992 ± 0.016 $4,6,7$	0.992 ± 0.016 $4,6,7$	0.992 ± 0.016 $4,6,7$	0.903 ± 0.142	0.915 ± 0.137	0.895 ± 0.144	0.908 ± 0.141
yeast6	0.729 ± 0.089	0.730 ± 0.084	0.732 ± 0.085	0.838 ± 0.087 $1,2,3$	0.833 ± 0.084 $1,2,3$	0.848 ± 0.072 $1,2,3$	0.841 ± 0.082 $1,2,3$
page-blocks-1-3-vs-4	0.956 ± 0.064 $4,5,6,7$	0.981 ± 0.051 $1,4,5,6,7$	0.981 ± 0.051 $1,4,5,6,7$	0.716 ± 0.105	0.810 ± 0.110	0.823 ± 0.114	0.883 ± 0.087 $4,5,6$
yeast-1-vs-7	0.669 ± 0.095 $2,3$	0.550 ± 0.052	0.565 ± 0.062	0.679 ± 0.105 $2,3,5$	0.665 ± 0.103 2.3	0.724 ± 0.082 all	0.699 ± 0.092 $1,2,3,5$
ecoli - 0 - 1 - 3 - 7 - vs - 2 - 6	0.820 ± 0.209	0.659 ± 0.205	0.694 ± 0.214	0.838 ± 0.199 2,3,5,6,7	0.832 ± 0.199 $1,2,3,7$	0.834 ± 0.197 $2.3.7$	0.831 ± 0.189 $1.2.3$
yeast-1-4-5-8- vs -7	$0.546 \stackrel{?}{\pm} 0.078$ $2,3$	0.501 ± 0.011	0.501 ± 0.011	0.625 ± 0.091	0.620 ± 0.091	0.642 ± 0.079	0.642 ± 0.089
ecoli - 0 - 1 - 4 - 7 - vs - 5 - 6	0.809 ± 0.095 -	0.822 ± 0.097	0.828 ± 0.100	0.895 ± 0.086 $1,2,3,6$	$0.900 \pm 0.079 \\ 1,2,3,6$	0.888 ± 0.093 $1,2,3$ $1,2,3$	$0.901 \pm 0.077 \\ 1,2,3,5$
yeast-2-vs-8	0.704 ± 0.113	0.749 ± 0.122 ₁	0.754 ± 0.124	0.776 ± 0.110 $1,2,7$	0.773 ± 0.115	0.780 ± 0.111 $1,2,7$	0.771 ± 0.111
yeast - 0 - 2 - 5 - 7 - 9 - vs - 3 - 6 - 8	0.844 ± 0.051	0.872 ± 0.044	0.874 ± 0.043	0.900 ± 0.038	0.901 ± 0.036	0.897 ± 0.038	0.901 ± 0.037 $1.2.3$
glass2	0.561 ± 0.118	0.553 ± 0.079	0.560 ± 0.079	0.738 ± 0.119 $1,2,3,6$	0.758 ± 0.121 $1,2,3,6$	0.696 ± 0.094 $1,2,3$ $1,2,3$	0.749 ± 0.094 $1,2,3,6$
	_			1,2,3,0	1,2,3,0	1,2,3	1,2,3,0

Table 1: Results for BAC metric

	CART (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
$Mean\ rank$	2.561	2.671	3.280	4.244	4.854	4.756	5.634
	_	_	1,2	1,2	1,2,3,4	1,2,3	all

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)
glass-0-1-6-vs-2	0.225 ± 0.219	0.207 ± 0.279	0.201 ± 0.272	0.324 ± 0.098	0.335 ± 0.091	0.246 ± 0.053	0.286 ± 0.053
ecoli-0-3-4-7-vs-5-6	0.686 ± 0.108	0.797 ± 0.118	0.803 ± 0.122	0.788 ± 0.133	0.790 ± 0.116	0.778 ± 0.132	0.772 ± 0.130
shuttle- $c2$ - vs - $c4$	1.000 ± 0.000	$1.000 \stackrel{1}{\pm} 0.000$	$1.000 \stackrel{1}{\pm} 0.000$	$0.987 \stackrel{1}{\pm} 0.065$	$0.987 \stackrel{1}{\pm} 0.065$	$0.987 \stackrel{1}{\pm} 0.065$	$0.987 \stackrel{1}{\pm} 0.065$
$glass\hbox{-}0\hbox{-}1\hbox{-}4\hbox{-}6\hbox{-}vs\hbox{-}2$	0.220 ± 0.210	$0.174 \stackrel{-}{\pm} 0.242$	0.188 ± 0.254	0.318 ± 0.115	0.328 ± 0.120	0.232 ± 0.063	0.275 ± 0.073
yeast-1-2-8-9- vs -7	0.233 ± 0.137	0.125 ± 0.170	0.164 ± 0.176	0.210 ± 0.084	0.195 ± 0.060	$0.133 \stackrel{2}{\pm} 0.034$	0.127 ± 0.031
ecoli-0-1-4-6-vs-5	0.606 ± 0.149	0.766 ± 0.144	0.768 ± 0.150	0.800 ± 0.108	0.804 ± 0.113	0.767 ± 0.108	0.776 ± 0.115
$glass\hbox{-}0\hbox{-}1\hbox{-}6\hbox{-}vs\hbox{-}5$	0.631 ± 0.314	$0.682 \stackrel{1}{\pm} 0.275$	0.701 ± 0.257	0.650 ± 0.279	0.722 ± 0.274	$0.505 \stackrel{1}{\pm} 0.197$	0.651 ± 0.250
yeast-2- vs -4	$0.707 \stackrel{6}{\pm} 0.087$	$0.724 \stackrel{6}{\pm} 0.107$	0.725 ± 0.106	$0.769 \stackrel{6}{\pm} 0.097$	0.771 ± 0.093	0.762 ± 0.099	$0.747 \stackrel{6}{\pm} 0.094$
glass-0-6-vs-5	0.793 ± 0.302	0.811 ± 0.285	0.809 ± 0.287	0.605 ± 0.353	0.631 ± 0.358	0.479 ± 0.268	$0.570 \stackrel{1}{\pm} 0.327$
ecoli-0-3-4-6-vs-5	0.665 ± 0.186	0.762 ± 0.197	0.759 ± 0.194	0.804 ± 0.144	0.800 ± 0.138	0.799 ± 0.152	0.795 ± 0.147
yeast - 0 - 3 - 5 - 9 - vs - 7 - 8	0.366 ± 0.116	$0.302 \stackrel{1}{\pm} 0.128$	$0.312 \stackrel{1}{\pm} 0.131$	$0.397 \stackrel{1}{\pm} 0.127$	$0.401 \stackrel{1}{\pm} 0.128$	$0.376 \stackrel{1}{\pm} 0.102$	$0.338 \stackrel{1}{\pm} 0.078$
$glass\hbox{-}0\hbox{-}1\hbox{-}5\hbox{-}vs\hbox{-}2$	$0.249 \overset{2,3}{\pm} 0.210$	0.157 ± 0.240	0.177 ± 0.250	0.322 ± 0.109	0.335 ± 0.106	0.260 ± 0.057	0.290 ± 0.075
ecoli-0-6-7-vs-5	$0.726 \stackrel{2}{\pm} 0.208$	0.788 ± 0.190	0.785 ± 0.194	0.774 ± 0.159	0.778 ± 0.161	$0.740 \overset{2,3}{\pm} 0.181$	0.756 ± 0.167
ecoli-0-2-3-4-vs-5	0.730 ± 0.140	0.791 ± 0.149	0.795 ± 0.151	0.822 ± 0.116	0.821 ± 0.115	0.801 ± 0.126	0.807 ± 0.128
ecoli4	0.732 ± 0.138	$0.784 \stackrel{1}{\pm} 0.153$	$0.782 \stackrel{1}{\pm} 0.150$	0.862 ± 0.119	$0.850 \stackrel{1}{\pm} 0.150$	$0.839 \stackrel{1}{\pm} 0.136$	$0.800 \stackrel{1}{\pm} 0.156$
yeast5	0.658 ± 0.137	$0.685 \stackrel{1}{\pm} 0.114$	$0.691 \stackrel{1}{\pm} 0.120$	0.700 ± 0.087	0.723 ± 0.077	0.631 ± 0.071	0.683 ± 0.085
ecoli-0-4-6-vs-5	0.667 ± 0.159	0.766 ± 0.160	0.769 ± 0.152	0.807 ± 0.134	0.800 ± 0.145	0.791 ± 0.136	$0.800 \stackrel{6}{\pm} 0.147$
led7 digit - 0 - 2 - 4 - 5 - 6 - 7 - 8 - 9 - vs - 1	0.778 ± 0.109	$0.708 \stackrel{1}{\pm} 0.106$	$0.708 \stackrel{1}{\pm} 0.109$	0.401 ± 0.199	0.393 ± 0.197	$0.742 \stackrel{1}{\pm} 0.099$	0.724 ± 0.105
ecoli-0-1- vs -5	0.666 ± 0.143	0.786 ± 0.144	0.792 ± 0.147	0.859 ± 0.107	0.861 ± 0.115	0.835 ± 0.123	0.843 ± 0.120
ecoli - 0 - 2 - 6 - 7 - vs - 3 - 5	0.664 ± 0.218	$0.754 \stackrel{1}{\pm} 0.207$	0.762 ± 0.183	0.728 ± 0.188	0.732 ± 0.177	0.686 ± 0.190	0.641 ± 0.187
ecoli-0-1-4-7-vs-2-3-5-6	0.611 ± 0.148	0.703 ± 0.158	0.708 ± 0.158	0.776 ± 0.130	0.778 ± 0.129	0.668 ± 0.165	0.669 ± 0.143
shuttle-c0-vs-c4	1.000 ± 0.000	$1.000 \stackrel{1}{\pm} 0.000$	1.000 ± 0.000	0.998 ± 0.006	0.998 ± 0.006	$0.998 \stackrel{1}{\pm} 0.006$	$0.998 \stackrel{1}{\pm} 0.006$
ecoli-0-6-7- vs -3-5	0.676 ± 0.209	0.761 ± 0.201	0.764 ± 0.195	0.721 ± 0.171	0.713 ± 0.178	0.701 ± 0.181	0.667 ± 0.194
vowel0	0.921 ± 0.045	0.913 ± 0.040	0.916 ± 0.038	0.736 ± 0.090	0.728 ± 0.096	$0.815 \stackrel{7}{\pm} 0.093$	0.808 ± 0.089
glass4	0.680 ± 0.227	0.739 ± 0.205	0.738 ± 0.211	0.521 ± 0.238	0.555 ± 0.250	0.473 ± 0.190	0.589 ± 0.181
yeast-0-5-6-7-9-vs-4	0.391 ± 0.122	0.438 ± 0.137	0.433 ± 0.137	0.531 ± 0.083	0.535 ± 0.090	0.444 ± 0.099	0.427 ± 0.087
yeast-0-2-5-6-vs-3-7-8-9	0.491 ± 0.084	$0.582 \stackrel{1}{\pm} 0.075$	0.587 ± 0.079	0.622 ± 0.093	0.622 ± 0.087	0.574 ± 0.101	0.540 ± 0.112
ecoli- 0 - 1 - vs - 2 - 3 - 5	0.599 ± 0.183	0.694 ± 0.178	0.698 ± 0.182	0.808 ± 0.126	0.806 ± 0.128	0.710 ± 0.158	0.736 ± 0.145
ecoli-0-3-4-vs-5	0.683 ± 0.176	0.784 ± 0.182	0.784 ± 0.182	0.817 ± 0.161	0.821 ± 0.187	0.810 ± 0.144	0.826 ± 0.155
glass5	0.657 ± 0.346	0.640 ± 0.371	0.647 ± 0.374	0.680 ± 0.237	0.737 ± 0.245	0.518 ± 0.189	0.584 ± 0.189
yeast4	0.336 ± 0.122	0.277 ± 0.146	0.287 ± 0.153	0.396 ± 0.090	0.392 ± 0.105	0.295 ± 0.051	0.279 ± 0.048
$glass\hbox{-} 0\hbox{-} 4\hbox{-} vs\hbox{-} 5$	0.942 ± 0.109	0.942 ± 0.109	0.942 ± 0.109	0.853 ± 0.234	0.873 ± 0.229	0.809 ± 0.249	0.836 ± 0.243
yeast6	0.422 ± 0.135	0.545 ± 0.151	6.7 0.543 ± 0.150	0.474 ± 0.115	0.498 ± 0.102	0.325 ± 0.089	0.357 ± 0.099
page-blocks-1-3-vs-4	0.903 ± 0.084	0.949 ± 0.078	$1,4,5,6,7$ 0.949 ± 0.078	0.513 ± 0.201	0.723 ± 0.206	0.670 ± 0.172	0.826 ± 0.140
yeast-1-vs-7	0.353 ± 0.151	0.165 ± 0.163	0.207 ± 0.182	0.272 ± 0.102	0.244 ± 0.095	$0.247 \stackrel{4}{\pm} 0.062$	0.220 ± 0.048
ecoli- 0 - 1 - 3 - 7 - vs - 2 - 6	0.513 ± 0.327	0.350 ± 0.427	0.420 ± 0.440	0.524 ± 0.314	0.462 ± 0.287	0.462 ± 0.279	0.365 ± 0.245
yeast-1-4-5-8- vs -7	0.119 ± 0.133	0.006 ± 0.040	0.006 ± 0.040	0.159 ± 0.063	0.154 ± 0.063	0.129 ± 0.028	0.130 ± 0.033
ecoli - 0 - 1 - 4 - 7 - vs - 5 - 6	0.612 ± 0.134	0.731 ± 0.155	0.738 ± 0.159	0.828 ± 0.125	0.828 ± 0.122	0.775 ± 0.160	0.781 ± 0.128
yeast-2-vs-8	0.408 ± 0.199	0.610 ± 0.240	0.617 ± 0.244	0.666 ± 0.197	0.653 ± 0.203	0.643 ± 0.197	0.489 ± 0.160
yeast - 0 - 2 - 5 - 7 - 9 - vs - 3 - 6 - 8	0.711 ± 0.076	0.799 ± 0.067	0.802 ± 0.067	0.820 ± 0.058	0.821 ± 0.055	0.810 ± 0.065	0.811 ± 0.062
glass2	0.167 ± 0.204	0.165 ± 0.214	0.185 ± 0.216	0.330 ± 0.124	0.350 ± 0.124	0.233 ± 0.058	0.281 ± 0.068
	1 -	_	<u> </u>	1,2,3,6,7	1,2,3,6,7	1,2	1,2,3,6

Table 3: Results for F1 metric

	CART (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
Mean rank	3.000	3.451	4.061	5.220	5.415	3.366	3.488
	_	_	1,2	1,2,3,6,7	1,2,3,6,7	_	_

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)
glass-0-1-6-vs-2	0.237 ± 0.249	0.333 ± 0.444	0.308 ± 0.418	0.209 ± 0.070	0.216 ± 0.064	0.144 ± 0.033	0.171 ± 0.035
ecoli-0-3-4-7-vs-5-6	0.692 ± 0.154	0.914 ± 0.113	0.898 ± 0.130	0.815 ± 0.151	0.800 ± 0.140	0.768 ± 0.143	0.743 ± 0.153
shuttle-c2-vs-c4	1.000 ± 0.000	$1.45,67$ 1.000 ± 0.000	$1,4,5,6,7$ 1.000 ± 0.000	1.000 ± 0.000	1.000 ± 0.000	$1.000 \stackrel{1}{\pm} 0.000$	1.000 ± 0.000
glass-0-1-4-6-vs-2	0.258 ± 0.269	0.255 ± 0.364	0.275 ± 0.377	0.207 ± 0.081	0.215 ± 0.084	0.135 ± 0.039	0.163 ± 0.046
yeast - 1 - 2 - 8 - 9 - vs - 7	0.212 ± 0.140	0.328 ± 0.444	0.422 ± 0.454	0.143 ± 0.075	0.127 ± 0.042	0.074 ± 0.019	$0.070 \stackrel{6}{\pm} 0.017$
ecoli-0-1-4-6-vs-5	0.655 ± 0.218	0.891 ± 0.163	0.881 ± 0.172	0.828 ± 0.148	0.828 ± 0.153	0.764 ± 0.165	0.767 ± 0.165
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.680 ± 0.364	0.733 ± 0.323	0.757 ± 0.305	0.617 ± 0.315	0.697 ± 0.302	$0.396 \stackrel{1}{\pm} 0.202$	0.572 ± 0.280
yeast-2-vs-4	$0.709 \overset{6,7}{\pm} 0.097$	0.799 ± 0.106	0.794 ± 0.105	$0.850 \stackrel{6}{\pm} 0.097$	0.852 ± 0.096	0.786 ± 0.136	$0.739 \stackrel{6}{\pm} 0.133$
glass-0-6-vs-5	0.808 ± 0.318	0.837 ± 0.293	0.833 ± 0.298	0.685 ± 0.403	0.737 ± 0.405	0.433 ± 0.321	0.582 ± 0.378
ecoli-0-3-4-6-vs-5	0.692 ± 0.204	0.888 ± 0.177	0.874 ± 0.178	0.808 ± 0.160	0.787 ± 0.154	0.785 ± 0.171	0.768 ± 0.168
yeast - 0 - 3 - 5 - 9 - vs - 7 - 8	0.363 ± 0.130	0.615 ± 0.255	0.621 ± 0.248	$0.477 \stackrel{1}{\pm} 0.179$	$0.422 \stackrel{1}{\pm} 0.172$	$0.330 \stackrel{1}{\pm} 0.130$	$0.234 \stackrel{1}{\pm} 0.083$
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 5\hbox{-} vs\hbox{-} 2$	0.302 ± 0.304	0.253 ± 0.397	0.286 ± 0.411	0.209 ± 0.077	0.217 ± 0.074	0.153 ± 0.037	0.174 ± 0.051
ecoli-0-6-7-vs-5	0.794 ± 0.232	0.875 ± 0.174	0.869 ± 0.184	0.819 ± 0.173	0.827 ± 0.180	0.738 ± 0.217	0.763 ± 0.190
ecoli-0-2-3-4-vs-5	0.769 ± 0.174	0.906 ± 0.161	0.901 ± 0.162	0.839 ± 0.146	0.827 ± 0.158	0.798 ± 0.170	0.801 ± 0.176
ecoli4	0.743 ± 0.176	0.854 ± 0.169	0.850 ± 0.167	0.911 ± 0.127	$0.861 \stackrel{1}{\pm} 0.164$	0.851 ± 0.188	0.765 ± 0.192
yeast5	0.703 ± 0.162	0.769 ± 0.140	0.765 ± 0.137	$0.578 \stackrel{all}{\pm} 0.097$	0.618 ± 0.092	0.483 ± 0.080	0.559 ± 0.095
ecoli-0-4-6-vs-5	0.744 ± 0.193	0.890 ± 0.161	0.884 ± 0.158	0.819 ± 0.172	0.785 ± 0.186	0.791 ± 0.178	0.782 ± 0.194
$led 7 digit \hbox{-} 0 \hbox{-} 2 \hbox{-} 4 \hbox{-} 5 \hbox{-} 6 \hbox{-} 7 \hbox{-} 8 \hbox{-} 9 \hbox{-} vs \hbox{-} 1$	0.797 ± 0.142	0.653 ± 0.136	0.654 ± 0.141	0.589 ± 0.286	0.559 ± 0.278	0.673 ± 0.108	0.650 ± 0.105
ecoli-0-1- vs -5	0.731 ± 0.181	0.926 ± 0.123	0.927 ± 0.121	0.951 ± 0.101	0.929 ± 0.116	$0.879 \stackrel{5}{\pm} 0.164$	$0.885 \stackrel{5}{\pm} 0.153$
ecoli - 0 - 2 - 6 - 7 - vs - 3 - 5	0.722 ± 0.252	$0.880 \stackrel{1}{\pm} 0.227$	$0.893 \stackrel{1}{\pm} 0.193$	0.798 ± 0.196	0.791 ± 0.207	$0.705 \stackrel{1}{\pm} 0.232$	0.620 ± 0.241
ecoli-0-1-4-7-vs-2-3-5-6	0.611 ± 0.157	0.870 ± 0.150	0.861 ± 0.148	0.862 ± 0.150	0.859 ± 0.154	0.638 ± 0.207	0.642 ± 0.193
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 ± 0.000	1.000 ± 0.000
ecoli-0-6-7-vs-3-5	0.735 ± 0.236	0.893 ± 0.189	0.886 ± 0.191	0.814 ± 0.181	0.779 ± 0.199	0.724 ± 0.225	0.665 ± 0.243
vowel0	0.911 ± 0.067	0.906 ± 0.062	0.909 ± 0.058	0.879 ± 0.079	0.903 ± 0.081	$0.908 \stackrel{7}{\pm} 0.076$	0.925 ± 0.071
glass4	$0.730 \stackrel{4}{\pm} 0.276$	0.814 ± 0.242	0.802 ± 0.246	0.493 ± 0.276	0.523 ± 0.286	0.389 ± 0.203	0.500 ± 0.206
yeast - 0 - 5 - 6 - 7 - 9 - vs - 4	0.395 ± 0.139	0.654 ± 0.180	0.632 ± 0.176	0.453 ± 0.117	0.457 ± 0.124	0.319 ± 0.109	$0.300 \stackrel{6}{\pm} 0.087$
yeast - 0 - 2 - 5 - 6 - vs - 3 - 7 - 8 - 9	0.479 ± 0.096	0.758 ± 0.108	0.759 ± 0.109	0.694 ± 0.102	0.681 ± 0.102	0.599 ± 0.170	0.506 ± 0.168
ecoli- 0 - 1 - vs - 2 - 3 - 5	0.627 ± 0.198	0.837 ± 0.174	0.836 ± 0.181	0.955 ± 0.092	0.948 ± 0.100	0.718 ± 0.207	0.757 ± 0.179
ecoli- 0 - 3 - 4 - vs - 5	0.738 ± 0.200	0.882 ± 0.165	0.882 ± 0.165	0.840 ± 0.156	0.834 ± 0.194	0.817 ± 0.160	0.835 ± 0.156
glass5	0.707 ± 0.382	0.697 ± 0.405	0.697 ± 0.405	0.633 ± 0.280	0.713 ± 0.286	0.383 ± 0.175	0.451 ± 0.172
yeast4	0.330 ± 0.134	0.559 ± 0.274	0.543 ± 0.260	0.301 ± 0.082	0.302 ± 0.097	0.183 ± 0.038	$0.171 \stackrel{6}{\pm} 0.034$
$glass\hbox{-} 0\hbox{-} 4\hbox{-} vs\hbox{-} 5$	0.908 ± 0.169	0.908 ± 0.169	0.908 ± 0.169	0.943 ± 0.209	0.960 ± 0.195	0.863 ± 0.266	0.887 ± 0.250
yeast6	0.419 ± 0.182	$0.728 \stackrel{-}{\pm} 0.203$	0.716 ± 0.204	0.365 ± 0.104	0.399 ± 0.094	0.212 ± 0.073	0.242 ± 0.086
page-blocks-1-3-vs-4	0.908 ± 0.102	0.940 ± 0.083	0.940 ± 0.083	0.688 ± 0.260	0.911 ± 0.215	0.763 ± 0.224	$0.913 \stackrel{6}{\pm} 0.145$
yeast-1- vs -7	0.333 ± 0.141	0.450 ± 0.450	0.525 ± 0.447	0.189 ± 0.077	0.163 ± 0.067	0.149 ± 0.043	0.129 ± 0.028
ecoli-0-1-3-7-vs-2-6	0.465 ± 0.340	0.410 ± 0.486	0.480 ± 0.489	0.485 ± 0.350	0.407 ± 0.326	0.403 ± 0.311	0.277 ± 0.242
$yeast\hbox{-} 1\hbox{-} 4\hbox{-} 5\hbox{-} 8\hbox{-} vs\hbox{-} 7$	0.112 ± 0.127	0.020 ± 0.139	$0.020 \stackrel{7}{\pm} 0.139$	0.098 ± 0.039	0.094 ± 0.039	0.071 ± 0.016	0.072 ± 0.019
ecoli-0-1-4-7-vs-5-6	0.611 ± 0.150	0.882 ± 0.137	0.883 ± 0.136	0.894 ± 0.136	0.869 ± 0.151	$0.803 \stackrel{2,3}{\pm} 0.205$	0.769 ± 0.179
yeast-2-vs-8	0.442 ± 0.271	0.868 ± 0.266	$0.868 \stackrel{1.7}{\pm} 0.266$	0.912 ± 0.183	0.891 ± 0.204	$0.823 \stackrel{1}{\pm} 0.228$	0.534 ± 0.268
yeast - 0 - 2 - 5 - 7 - 9 - vs - 3 - 6 - 8	0.709 ± 0.082	0.853 ± 0.085	0.853 ± 0.085	0.827 ± 0.075	0.826 ± 0.074	0.811 ± 0.091	0.803 ± 0.090
glass2	0.172 ± 0.228	0.290 ± 0.401	0.327 ± 0.415	0.220 ± 0.094	0.233 ± 0.092	$0.134 \stackrel{1}{\pm} 0.035$	0.168 ± 0.043
	<u> </u>	_	<u> </u>	1,6,7	1,6,7	_	6

Table 5: Results for Precision metric

	CART (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
Mean rank	3.317	5.720	5.622	4.439	4.293	2.244	2.366
	6,7	1,4,5,6,7	1,4,5,6,7	1,6,7	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)
glass-0-1-6-vs-2	0.243 ± 0.247	0.157 ± 0.219	0.157 ± 0.219	0.757 ± 0.210	0.785 ± 0.215	0.888 ± 0.189	0.922 ± 0.152
ecoli-0-3-4-7-vs-5-6	0.728 ± 0.182	$0.728 \stackrel{-}{\pm} 0.168$	0.748 ± 0.168	0.784 ± 0.168	0.796 ± 0.141	0.808 ± 0.164	0.824 ± 0.153
shuttle- $c2$ - vs - $c4$	$1.000 \stackrel{-}{\pm} 0.000$	1.000 ± 0.000	1.000 ± 0.000	0.980 ± 0.097	0.980 ± 0.097	0.980 ± 0.097	0.980 ± 0.097
glass-0-1-4-6-vs-2	0.213 ± 0.216	0.143 ± 0.206	0.155 ± 0.217	0.713 ± 0.232	$0.728 \stackrel{-}{\pm} 0.247$	0.893 ± 0.196	0.897 ± 0.205
yeast-1-2-8-9-vs-7	0.280 ± 0.168	0.080 ± 0.111	0.107 ± 0.119	0.450 ± 0.170	0.443 ± 0.151	0.667 ± 0.188	0.710 ± 0.178
ecoli-0-1-4-6-vs-5	0.615 ± 0.188	0.695 ± 0.168	$0.705 \stackrel{-}{\pm} 0.170$	0.805 ± 0.160	0.815 ± 0.164	0.810 ± 0.154	0.825 ± 0.160
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.660 ± 0.366	$0.710 \stackrel{1}{\pm} 0.333$	0.730 ± 0.319	0.780 ± 0.318	0.810 ± 0.298	0.810 ± 0.280	0.840 ± 0.272
yeast-2-vs-4	0.722 ± 0.132	0.681 ± 0.145	0.685 ± 0.144	0.717 ± 0.140	$0.719 \stackrel{1}{\pm} 0.136$	$0.769 \stackrel{1}{\pm} 0.154$	0.788 ± 0.153
glass-0-6-vs-5	0.820 ± 0.328	0.820 ± 0.312	0.820 ± 0.312	0.590 ± 0.370	$0.590 \stackrel{2}{\pm} 0.370$	0.690 ± 0.344	0.640 ± 0.361
ecoli-0-3-4-6- vs -5	0.680 ± 0.218	0.705 ± 0.243	0.710 ± 0.241	0.825 ± 0.182	0.835 ± 0.170	0.840 ± 0.185	0.845 ± 0.172
yeast - 0 - 3 - 5 - 9 - vs - 7 - 8	0.394 ± 0.146	0.210 ± 0.100	0.220 ± 0.103	0.374 ± 0.154	0.416 ± 0.154	0.510 ± 0.184	0.686 ± 0.152
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 5\hbox{-} vs\hbox{-} 2$	0.262 ± 0.252	0.128 ± 0.216	0.142 ± 0.218	0.737 ± 0.249	0.773 ± 0.243	0.887 ± 0.165	0.913 ± 0.177
ecoli-0-6-7-vs-5	0.705 ± 0.243	0.750 ± 0.234	0.750 ± 0.234	0.760 ± 0.199	0.760 ± 0.193	0.780 ± 0.203	0.780 ± 0.197
ecoli-0-2-3-4- vs -5	0.730 ± 0.179	$0.725 \stackrel{1}{\pm} 0.182$	0.735 ± 0.183	0.830 ± 0.161	0.845 ± 0.157	0.835 ± 0.162	0.845 ± 0.157
ecoli4	0.755 ± 0.183	0.760 ± 0.199	0.760 ± 0.199	0.845 ± 0.172	0.870 ± 0.181	0.875 ± 0.167	0.890 ± 0.181
yeast5	0.648 ± 0.170	0.636 ± 0.143	0.647 ± 0.153	0.903 ± 0.105	0.886 ± 0.107	0.935 ± 0.102	0.895 ± 0.107
ecoli-0-4-6-vs-5	0.660 ± 0.210	0.705 ± 0.204	0.715 ± 0.200	0.820 ± 0.158	0.840 ± 0.156	0.820 ± 0.158	0.845 ± 0.157
$led 7 digit \hbox{-} 0 \hbox{-} 2 \hbox{-} 4 \hbox{-} 5 \hbox{-} 6 \hbox{-} 7 \hbox{-} 8 \hbox{-} 9 \hbox{-} vs \hbox{-} 1$	0.782 ± 0.143	0.801 ± 0.144	0.801 ± 0.144	0.323 ± 0.177	0.326 ± 0.184	0.845 ± 0.140	0.843 ± 0.161
ecoli-0-1- vs -5	0.655 ± 0.205	$0.720 \overset{4.5}{\pm} 0.203$	0.730 ± 0.211	0.805 ± 0.160	0.820 ± 0.158	0.825 ± 0.160	0.830 ± 0.153
ecoli-0-2-6-7-vs-3-5	0.659 ± 0.255	$0.688 \stackrel{1}{\pm} 0.226$	0.698 ± 0.212	0.693 ± 0.215	0.704 ± 0.193	0.712 ± 0.199	0.722 ± 0.195
ecoli-0-1-4-7-vs-2-3-5-6	0.632 ± 0.180	0.611 ± 0.184	0.627 ± 0.189	0.730 ± 0.167	0.731 ± 0.157	0.737 ± 0.164	0.741 ± 0.158
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-0-6-7-vs-3-5	0.671 ± 0.250	0.691 ± 0.228	0.695 ± 0.221	0.678 ± 0.204	0.686 ± 0.201	0.722 ± 0.192	0.717 ± 0.195
vowel0	0.936 ± 0.055	0.926 ± 0.061	0.927 ± 0.059	0.646 ± 0.124	0.626 ± 0.137	$0.754 \stackrel{4}{\pm} 0.144$	0.737 ± 0.149
glass4	0.717 ± 0.277	0.720 ± 0.250	0.727 ± 0.253	0.627 ± 0.293	0.657 ± 0.295	0.680 ± 0.242	0.783 ± 0.219
yeast-0-5-6-7-9-vs-4	0.412 ± 0.159	0.353 ± 0.150	$0.351 \stackrel{4}{\pm} 0.150$	0.678 ± 0.103	0.685 ± 0.098	0.824 ± 0.117	0.820 ± 0.133
yeast - 0 - 2 - 5 - 6 - vs - 3 - 7 - 8 - 9	0.512 ± 0.097	0.479 ± 0.080	$0.484 \stackrel{-}{\pm} 0.084$	0.574 ± 0.114	0.584 ± 0.111	0.598 ± 0.126	0.639 ± 0.124
ecoli- 0 - 1 - vs - 2 - 3 - 5	0.615 ± 0.230	0.621 ± 0.215	0.629 ± 0.218	0.723 ± 0.178	0.723 ± 0.178	0.740 ± 0.177	0.749 ± 0.180
ecoli-0-3-4- vs -5	0.690 ± 0.237	0.745 ± 0.237	0.745 ± 0.237	0.835 ± 0.215	0.840 ± 0.222	0.845 ± 0.199	0.850 ± 0.200
glass5	0.670 ± 0.382	0.640 ± 0.400	0.650 ± 0.403	0.830 ± 0.293	0.840 ± 0.290	0.880 ± 0.256	0.880 ± 0.256
yeast4	0.364 ± 0.141	0.198 ± 0.119	0.208 ± 0.125	0.613 ± 0.152	0.591 ± 0.158	0.799 ± 0.141	0.801 ± 0.129
$glass\hbox{-} 0\hbox{-} 4\hbox{-} vs\hbox{-} 5$	$1.000 \stackrel{2,3}{\pm} 0.000$	1.000 ± 0.000	1.000 ± 0.000	0.810 ± 0.280	0.830 ± 0.275	0.810 ± 0.280	0.830 ± 0.275
yeast6	0.477 ± 0.182	0.466 ± 0.170	0.469 ± 0.171	0.709 ± 0.178	0.691 ± 0.172	0.774 ± 0.154	0.746 ± 0.174
page-blocks-1-3-vs-4	0.918 ± 0.131	0.967 ± 0.102	0.967 ± 0.102	0.446 ± 0.213	0.622 ± 0.219	0.664 ± 0.234	0.771 ± 0.171
yeast-1-vs-7	0.393 ± 0.190	0.103 ± 0.104	0.133 ± 0.124	0.527 ± 0.211	$0.520 \stackrel{4}{\pm} 0.215$	$0.770 \stackrel{4}{\pm} 0.176$	0.757 ± 0.206
ecoli-0-1-3-7-vs-2-6	0.660 ± 0.417	0.320 ± 0.409	0.390 ± 0.427	0.700 ± 0.400	0.700 ± 0.400	0.700 ± 0.400	0.720 ± 0.389
yeast-1-4-5-8- vs -7	0.140 ± 0.157	0.003 ± 0.023	0.003 ± 0.023	0.437 ± 0.176	0.430 ± 0.179	0.700 ± 0.169	0.697 ± 0.172
ecoli-0-1-4-7-vs-5-6	0.656 ± 0.200	0.652 ± 0.195	0.664 ± 0.201	0.800 ± 0.174	0.812 ± 0.157	0.800 ± 0.187	0.828 ± 0.154
yeast-2-vs-8	0.435 ± 0.233	$0.500 \stackrel{-}{\pm} 0.244$	0.510 ± 0.249	0.555 ± 0.219	0.550 ± 0.229	0.570 ± 0.218	0.580 ± 0.236
yeast-0-2-5-7-9-vs-3-6-8	0.721 ± 0.102	$0.759 \stackrel{1}{\pm} 0.087$	0.764 ± 0.086	$0.820 \overset{1,2}{\pm} 0.077$	0.822 ± 0.072	0.817 ± 0.075	0.826 ± 0.075
glass2	0.187 ± 0.238	$0.120 \stackrel{1}{\pm} 0.157$	0.137 ± 0.158	0.700 ± 0.234	0.738 ± 0.219	0.893 ± 0.195	0.883 ± 0.184
	<u> </u>	_	_	1,2,3	1,2,3	1,2,3,4,5	1,2,3,4,5

Table 7: Results for Recall metric

	CART (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
Mean rank	2.829	2.354	3.134	3.707	4.317	5.488	6.171
	2	_	2	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)
glass-0-1-6-vs-2	0.582 ± 0.128	0.571 ± 0.113	0.569 ± 0.112	0.735 ± 0.108	0.751 ± 0.105	0.685 ± 0.091	0.739 ± 0.077
ecoli-0-3-4-7-vs-5-6	0.843 ± 0.085	0.860 ± 0.083	0.869 ± 0.084	0.881 ± 0.086	0.886 ± 0.073	0.890 ± 0.084	0.895 ± 0.079
shuttle- $c2$ - vs - $c4$	1.000 ± 0.000	$1.000 \stackrel{1}{\pm} 0.000$	1.000 ± 0.000	$0.990 \stackrel{1}{\pm} 0.048$	$0.990 \stackrel{1}{\pm} 0.048$	$0.990 \stackrel{1}{\pm} 0.048$	0.990 ± 0.048
$glass\hbox{-}0\hbox{-}1\hbox{-}4\hbox{-}6\hbox{-}vs\hbox{-}2$	0.573 ± 0.117	0.563 ± 0.102	0.568 ± 0.108	0.728 ± 0.121	0.739 ± 0.125	$0.681 \stackrel{-}{\pm} 0.099$	0.737 ± 0.106
yeast-1-2-8-9-vs-7	0.622 ± 0.082	0.539 ± 0.055	0.552 ± 0.059	0.677 ± 0.085	0.670 ± 0.073	0.696 ± 0.087	0.700 ± 0.085
ecoli-0-1-4-6-vs-5	0.792 ± 0.090	0.843 ± 0.085	0.848 ± 0.087	0.895 ± 0.078	0.899 ± 0.080	0.893 ± 0.074	0.901 ± 0.078
glass-0-1-6-vs-5	0.822 ± 0.182	0.849 ± 0.163	0.859 ± 0.156	0.873 ± 0.161	0.895 ± 0.150	0.867 ± 0.141	0.900 ± 0.137
yeast-2-vs-4	0.844 ± 0.064	0.830 ± 0.071	$0.832 \stackrel{1}{\pm} 0.070$	$0.851 \stackrel{6}{\pm} 0.069$	0.852 ± 0.067	0.871 ± 0.074	0.876 ± 0.072
glass-0-6-vs-5	0.899 ± 0.171	0.901 ± 0.163	0.901 ± 0.164	0.784 ± 0.187	0.787 ± 0.190	0.784 ± 0.183	0.791 ± 0.188
ecoli-0-3-4-6-vs-5	0.821 ± 0.111	0.847 ± 0.123	0.849 ± 0.122	$0.901 \stackrel{6}{\pm} 0.093$	0.904 ± 0.087	0.906 ± 0.095	0.907 ± 0.090
yeast-0-3-5-9-vs-7-8	0.656 ± 0.070	$0.597 \stackrel{1}{\pm} 0.049$	$0.602 \stackrel{1}{\pm} 0.051$	0.661 ± 0.071	0.672 ± 0.073	0.689 ± 0.070	0.706 ± 0.061
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 5\hbox{-} vs\hbox{-} 2$	0.592 ± 0.127	0.555 ± 0.106	0.562 ± 0.108	$0.715 \overset{2,3}{\pm} 0.125$	0.734 ± 0.119	0.671 ± 0.091	0.713 ± 0.096
ecoli-0-6-7-vs-5	0.842 ± 0.121	0.869 ± 0.119	0.868 ± 0.119	0.870 ± 0.101	0.871 ± 0.099	0.873 ± 0.106	0.876 ± 0.102
ecoli - 0 - 2 - 3 - 4 - vs - 5	0.850 ± 0.087	$0.857 \stackrel{1}{\pm} 0.092$	0.862 ± 0.093	0.905 ± 0.080	0.911 ± 0.078	0.903 ± 0.082	$0.908 \stackrel{2}{\pm} 0.080$
ecoli4	0.868 ± 0.091	$0.875 \stackrel{1}{\pm} 0.099$	$0.875 \stackrel{1}{\pm} 0.099$	0.919 ± 0.085	0.929 ± 0.091	$0.930 \overset{1,2}{\pm} 0.082$	0.934 ± 0.089
yeast5	0.819 ± 0.085	$0.815 \stackrel{1}{\pm} 0.071$	$0.820 \stackrel{1}{\pm} 0.076$	0.941 ± 0.052	0.934 ± 0.053	0.952 ± 0.049	0.936 ± 0.053
ecoli-0-4-6-vs-5	0.814 ± 0.102	0.846 ± 0.102	0.851 ± 0.099	0.898 ± 0.082	0.905 ± 0.083	0.896 ± 0.081	0.907 ± 0.084
led7digit-0-2-4-5-6-7-8-9-vs-1	0.881 ± 0.072	$0.879 \stackrel{1}{\pm} 0.071$	$0.879 \stackrel{1}{\pm} 0.072$	0.651 ± 0.090	0.651 ± 0.093	0.903 ± 0.069	0.900 ± 0.078
ecoli-0-1- vs -5	0.814 ± 0.099	0.856 ± 0.100	0.861 ± 0.104	0.900 ± 0.079	0.907 ± 0.079	0.905 ± 0.080	$0.909 \overset{4,5}{\pm} 0.077$
ecoli-0-2-6-7-vs-3-5	0.813 ± 0.129	$0.838 \stackrel{1}{\pm} 0.115$	0.843 ± 0.108	0.836 ± 0.110	0.840 ± 0.101	0.834 ± 0.104	0.828 ± 0.107
ecoli-0-1-4-7-vs-2-3-5-6	0.796 ± 0.092	0.801 ± 0.092	0.808 ± 0.094	0.858 ± 0.084	0.859 ± 0.079	$0.844 \stackrel{7}{\pm} 0.090$	0.846 ± 0.079
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-0-6-7-vs-3-5	0.821 ± 0.123	0.841 ± 0.114	0.843 ± 0.111	0.829 ± 0.104	0.831 ± 0.104	0.841 ± 0.101	0.831 ± 0.104
vowel0	0.963 ± 0.028	0.958 ± 0.029	0.958 ± 0.028	0.818 ± 0.061	0.809 ± 0.067	$0.873 \stackrel{7}{\pm} 0.071$	0.865 ± 0.072
glass4	0.846 ± 0.136	0.854 ± 0.125	0.857 ± 0.127	0.787 ± 0.150	0.805 ± 0.152	0.798 ± 0.123	0.862 ± 0.110
yeast-0-5-6-7-9-vs-4	0.670 ± 0.077	0.665 ± 0.073	0.663 ± 0.073	0.790 ± 0.047	0.793 ± 0.046	0.800 ± 0.055	0.793 ± 0.056
yeast-0-2-5-6-vs-3-7-8-9	0.725 ± 0.050	$0.731 \stackrel{-}{\pm} 0.040$	0.733 ± 0.042	0.773 ± 0.057	0.776 ± 0.054	0.770 ± 0.055	0.775 ± 0.055
ecoli-0-1-vs-2-3-5	0.786 ± 0.114	0.804 ± 0.108	0.807 ± 0.109	0.859 ± 0.088	0.859 ± 0.089	0.850 ± 0.092	0.859 ± 0.091
ecoli-0-3-4-vs-5	0.828 ± 0.116	0.866 ± 0.119	0.866 ± 0.119	0.907 ± 0.107	0.910 ± 0.112	0.910 ± 0.098	0.914 ± 0.100
glass5	0.831 ± 0.189	$0.817 \stackrel{1}{\pm} 0.199$	$0.822 \stackrel{1}{\pm} 0.200$	0.903 ± 0.143	0.912 ± 0.142	0.904 ± 0.126	0.915 ± 0.127
yeast4	0.668 ± 0.071	0.596 ± 0.059	0.601 ± 0.062	0.779 ± 0.074	$0.769 \overset{4,6}{\pm} 0.078$	$0.834 \stackrel{4}{\pm} 0.063$	0.829 ± 0.059
glass-0-4-vs-5	0.992 ± 0.016	0.992 ± 0.016	0.992 ± 0.016	0.903 ± 0.142	0.915 ± 0.137	0.895 ± 0.144	0.908 ± 0.141
yeast6	0.729 ± 0.089	0.730 ± 0.084	0.732 ± 0.085	0.838 ± 0.087	0.833 ± 0.084	0.848 ± 0.072	0.841 ± 0.082
page-blocks-1-3-vs-4	0.956 ± 0.064	0.981 ± 0.051	0.981 ± 0.051	0.716 ± 0.105	0.810 ± 0.110	0.823 ± 0.114	0.883 ± 0.087
yeast-1-vs-7	0.669 ± 0.095	0.550 ± 0.052	0.565 ± 0.062	0.679 ± 0.105	0.665 ± 0.103	$0.724 \stackrel{4}{\pm} 0.082$	0.699 ± 0.092
ecoli-0-1-3-7-vs-2-6	0.820 ± 0.209	0.659 ± 0.205	0.694 ± 0.214	0.838 ± 0.199	0.832 ± 0.199	0.834 ± 0.197	0.831 ± 0.189
yeast-1-4-5-8-vs-7	0.546 ± 0.078	0.501 ± 0.011	0.501 ± 0.011	0.625 ± 0.091	0.620 ± 0.091	0.642 ± 0.079	0.642 ± 0.089
ecoli-0-1-4-7-vs-5-6	0.809 ± 0.095	0.822 ± 0.097	0.828 ± 0.100	0.895 ± 0.086	0.900 ± 0.079	0.888 ± 0.093	0.901 ± 0.077
yeast-2-vs-8	0.704 ± 0.113	0.749 ± 0.122	0.754 ± 0.124	0.776 ± 0.110	0.773 ± 0.115	0.780 ± 0.111	0.771 ± 0.111
yeast-0-2-5-7-9-vs-3-6-8	0.844 ± 0.051	0.872 ± 0.044	0.874 ± 0.043	0.900 ± 0.038	0.901 ± 0.036	0.897 ± 0.038	0.901 ± 0.037
glass2	0.561 ± 0.118	$0.553 \stackrel{1}{\pm} 0.079$	0.560 ± 0.079	0.738 ± 0.119	0.758 ± 0.121	0.696 ± 0.094	0.749 ± 0.094
	_	_	_	1,2,3,6	1,2,3,6	1,2,3	1,2,3,6

Table 9: Results for AUC metric

	CART (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
Mean rank	2.561	2.671	3.280	4.244	4.854	4.756	5.634
	_	_	1,2	1,2	1,2,3,4	1,2,3	all

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)
glass-0-1-6-vs-2	0.358 ± 0.310	0.240 ± 0.313	0.239 ± 0.312	0.725 ± 0.114	0.739 ± 0.111	0.644 ± 0.090	0.708 ± 0.082
ecoli-0-3-4-7-vs-5-6	0.828 ± 0.102	0.843 ± 0.100	0.854 ± 0.099	0.871 ± 0.098	0.878 ± 0.080	0.881 ± 0.094	0.888 ± 0.087
shuttle- $c2$ - vs - $c4$	1.000 ± 0.000	$1.000 \stackrel{1}{\pm} 0.000$	$1.000 \stackrel{1}{\pm} 0.000$	$0.988 \stackrel{1}{\pm} 0.057$	0.988 ± 0.057	$0.988 \stackrel{1}{\pm} 0.057$	0.988 ± 0.057
glass-0-1-4-6-vs-2	0.336 ± 0.298	0.226 ± 0.297	0.241 ± 0.305	0.711 ± 0.155	0.719 ± 0.161	0.629 ± 0.129	0.711 ± 0.106
yeast-1-2-8-9-vs-7	0.475 ± 0.209	0.172 ± 0.224	0.228 ± 0.233	0.625 ± 0.124	0.620 ± 0.111	0.685 ± 0.105	0.693 ± 0.086
ecoli-0-1-4-6-vs-5	0.756 ± 0.151	0.824 ± 0.105	0.829 ± 0.106	0.885 ± 0.089	0.890 ± 0.091	0.885 ± 0.084	0.893 ± 0.088
glass-0-1-6-vs-5	0.729 ± 0.343	0.783 ± 0.293	0.803 ± 0.272	0.825 ± 0.274	0.855 ± 0.250	0.837 ± 0.215	0.871 ± 0.217
yeast-2-vs-4	0.831 ± 0.076	0.812 ± 0.090	0.814 ± 0.090	0.836 ± 0.082	$0.838 \stackrel{4.6}{\pm} 0.079$	$0.860 \stackrel{4}{\pm} 0.085$	0.867 ± 0.082
glass-0-6-vs-5	0.846 ± 0.301	0.856 ± 0.277	0.856 ± 0.278	0.670 ± 0.359	0.674 ± 0.361	0.721 ± 0.297	0.703 ± 0.334
ecoli-0-3-4-6-vs-5	0.796 ± 0.143	$^{4,5,6,7}_{0.821 \pm 0.155}$	0.823 ± 0.154	0.892 ± 0.105	0.896 ± 0.098	0.898 ± 0.107	0.900 ± 0.100
yeast-0-3-5-9-vs-7-8	0.588 ± 0.119	0.432 ± 0.141	0.445 ± 0.134	0.577 ± 0.139	0.605 ± 0.136	0.644 ± 0.133	0.696 ± 0.068
glass-0-1-5-vs-2	$0.389 \stackrel{2,3}{\pm} 0.300$	0.195 ± 0.294	0.219 ± 0.301	0.696 ± 0.158	0.714 ± 0.152	0.628 ± 0.086	$0.675 \stackrel{all}{\pm} 0.100$
ecoli-0-6-7-vs-5	0.811 ± 0.182	0.848 ± 0.149	0.848 ± 0.149	0.855 ± 0.120	0.856 ± 0.117	0.860 ± 0.123	0.863 ± 0.119
ecoli-0-2-3-4-vs-5	0.834 ± 0.109	0.839 ± 0.114	0.845 ± 0.115	0.897 ± 0.090	0.904 ± 0.087	0.896 ± 0.091	0.902 ± 0.088
ecoli4	0.854 ± 0.106	0.859 ± 0.122	0.858 ± 0.122	0.911 ± 0.097	0.921 ± 0.108	$0.923 \overset{1,2}{\pm} 0.093$	0.926 ± 0.106
yeast5	0.793 ± 0.113	$0.790 \stackrel{1}{\pm} 0.091$	$0.796 \stackrel{1}{\pm} 0.096$	0.938 ± 0.058	0.931 ± 0.058	0.950 ± 0.055	0.933 ± 0.057
ecoli-0-4-6-vs-5	0.787 ± 0.136	0.824 ± 0.129	0.830 ± 0.126	0.890 ± 0.091	0.899 ± 0.091	0.888 ± 0.090	0.901 ± 0.091
led7digit-0-2-4-5-6-7-8-9-vs-1	0.871 ± 0.081	$0.872 \stackrel{1}{\pm} 0.080$	0.872 ± 0.080	0.525 ± 0.202	0.529 ± 0.196	0.898 ± 0.078	0.892 ± 0.093
ecoli- 0 - 1 - vs - 5	0.788 ± 0.125	0.836 ± 0.125	0.841 ± 0.128	0.890 ± 0.091	0.898 ± 0.090	0.897 ± 0.090	$0.901 \stackrel{4.5}{\pm} 0.086$
ecoli-0-2-6-7-vs-3-5	0.771 ± 0.207	$0.806 \stackrel{1}{\pm} 0.174$	0.819 ± 0.137	0.813 ± 0.140	0.821 ± 0.124	0.816 ± 0.125	0.813 ± 0.124
ecoli-0-1-4-7-vs-2-3-5-6	0.770 ± 0.117	$0.767 \stackrel{1}{\pm} 0.127$	0.777 ± 0.129	$0.843 \stackrel{1}{\pm} 0.101$	0.844 ± 0.095	0.832 ± 0.104	0.833 ± 0.092
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-0-6-7-vs-3-5	$0.780 \stackrel{-}{\pm} 0.206$	0.809 ± 0.176	0.813 ± 0.171	0.805 ± 0.129	$0.809 \stackrel{-}{\pm} 0.128$	$0.825 \stackrel{-}{\pm} 0.123$	$0.815 \stackrel{-}{\pm} 0.124$
vowel0	0.962 ± 0.029	0.957 ± 0.031	0.957 ± 0.030	0.796 ± 0.077	0.783 ± 0.086	0.861 ± 0.083	0.850 ± 0.087
glass4	0.813 ± 0.193	0.824 ± 0.180	0.827 ± 0.182	0.728 ± 0.255	0.749 ± 0.258	0.776 ± 0.143	0.849 ± 0.124
yeast - 0 - 5 - 6 - 7 - 9 - vs - 4	0.605 ± 0.121	0.573 ± 0.125	0.571 ± 0.125	0.779 ± 0.055	0.782 ± 0.053	0.793 ± 0.058	0.785 ± 0.059
yeast - 0 - 2 - 5 - 6 - vs - 3 - 7 - 8 - 9	0.690 ± 0.067	0.684 ± 0.057	0.687 ± 0.060	0.743 ± 0.076	0.748 ± 0.073	0.745 ± 0.073	0.757 ± 0.068
ecoli-0-1-vs-2-3-5	0.746 ± 0.175	0.769 ± 0.144	0.774 ± 0.146	0.841 ± 0.108	0.841 ± 0.108	0.837 ± 0.109	0.845 ± 0.109
ecoli-0-3-4- vs -5	0.802 ± 0.148	0.845 ± 0.147	0.845 ± 0.147	0.895 ± 0.130	0.892 ± 0.169	0.899 ± 0.116	$0.904 \stackrel{all}{\pm} 0.122$
glass5	0.729 ± 0.364	$0.695 \stackrel{1}{\pm} 0.389$	$0.701 \stackrel{1}{\pm} 0.391$	0.864 ± 0.248	0.874 ± 0.248	0.879 ± 0.207	0.889 ± 0.210
yeast4	0.581 ± 0.126	0.416 ± 0.155	0.425 ± 0.160	0.755 ± 0.095	0.741 ± 0.103	0.828 ± 0.069	0.825 ± 0.064
$glass\hbox{-} 0\hbox{-} 4\hbox{-} vs\hbox{-} 5$	0.991 ± 0.017	0.991 ± 0.017	0.991 ± 0.017	0.871 ± 0.222	0.884 ± 0.220	0.864 ± 0.221	0.878 ± 0.220
yeast6	0.670 ± 0.136	0.668 ± 0.132	0.670 ± 0.132	0.821 ± 0.109	0.813 ± 0.106	0.839 ± 0.082	0.829 ± 0.101
page-blocks-1-3-vs-4	0.952 ± 0.072	0.979 ± 0.057	0.979 ± 0.057	0.630 ± 0.206	0.764 ± 0.193	0.793 ± 0.147	0.870 ± 0.101
yeast-1- vs -7	0.582 ± 0.181	0.234 ± 0.220	0.282 ± 0.230	0.647 ± 0.133	0.628 ± 0.154	$0.714 \stackrel{4}{\pm} 0.084$	0.686 ± 0.090
ecoli - 0 - 1 - 3 - 7 - vs - 2 - 6	0.695 ± 0.405	0.361 ± 0.435	0.435 ± 0.447	0.732 ± 0.382	0.728 ± 0.380	0.729 ± 0.380	0.737 ± 0.361
yeast-1-4-5-8- vs -7	0.261 ± 0.254	0.008 ± 0.057	0.008 ± 0.057	0.579 ± 0.142	0.572 ± 0.144	0.632 ± 0.076	0.634 ± 0.083
ecoli-0-1-4-7-vs-5-6	0.784 ± 0.121	0.794 ± 0.127	0.801 ± 0.131	0.884 ± 0.101	0.891 ± 0.088	0.876 ± 0.113	0.894 ± 0.085
yeast-2-vs-8	0.598 ± 0.252	0.669 ± 0.225	0.676 ± 0.228	0.728 ± 0.153	0.718 ± 0.181	0.736 ± 0.152	0.723 ± 0.176
yeast - 0 - 2 - 5 - 7 - 9 - vs - 3 - 6 - 8	0.832 ± 0.061	0.863 ± 0.050	0.866 ± 0.050	0.896 ± 0.042	0.897 ± 0.039	0.893 ± 0.042	0.897 ± 0.041
glass2	0.276 ± 0.311	$0.211 \stackrel{1}{\pm} 0.271$	0.242 ± 0.274	0.719 ± 0.158	0.743 ± 0.158	0.657 ± 0.088	0.729 ± 0.093
	_	_	_	1,2,3,6	1,2,3,6	1,2,3	1,2,3,6

Table 11: Results for GMEAN metric

	CART (1) OSB (2) OKNORAU (3) TBAC (4) OTBAC (5) TBAW (6) OTBAW (7)									
Mean rank	2.634	2.476	3.207	4.122	4.707	5.000	5.854			
	_	_	1,2	1,2	1,2,3,4	1,2,3,4	all			

Table 12: Results for mean ranks according to GMEAN metric