Dataset	OSB (1)	OKNORAU (2)	TBAC (3)	TBAW (4)	OTBAC (5)	OTBAW (6)
glass-0-1-6-vs-2	0.573 ± 0.119	0.598 ± 0.141	0.715 ± 0.115	0.641 ± 0.156	0.716 ± 0.116	0.654 ± 0.152
ecoli-0-3-4-7-vs-5-6	0.837 ± 0.083	0.897 ± 0.075	0.885 ± 0.078	0.822 ± 0.109	0.885 ± 0.078	0.836 ± 0.110
shuttle- $c2$ - vs - $c4$	0.999 ± 0.005	0.999 ± 0.005	0.845 ± 0.222	0.823 ± 0.225	0.845 ± 0.222	$0.838 \stackrel{-}{\pm} 0.222$
$glass\hbox{-}0\hbox{-}1\hbox{-}4\hbox{-}6\hbox{-}vs\hbox{-}2$	0.582 ± 0.129	0.610 ± 0.154	0.727 ± 0.104	0.640 ± 0.156	0.727 ± 0.103	0.646 ± 0.137
yeast-1-2-8-9- vs -7	0.541 ± 0.012	0.597 ± 0.048	0.683 ± 0.087	0.614 ± 0.070	0.683 ± 0.086	0.606 ± 0.073
ecoli-0-1-4-6-vs-5	0.891 ± 0.088	$0.902 \stackrel{1}{\pm} 0.087$	0.899 ± 0.079	0.843 ± 0.089	0.902 ± 0.076	0.843 ± 0.092
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.912 ± 0.144	0.888 ± 0.151	0.861 ± 0.151	0.851 ± 0.158	0.861 ± 0.151	0.856 ± 0.150
yeast-2-vs-4	0.591 ± 0.122	0.852 ± 0.098	0.855 ± 0.070	0.818 ± 0.084	0.856 ± 0.070	0.841 ± 0.092
$glass\hbox{-} 0\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.925 ± 0.149	0.905 ± 0.156	0.840 ± 0.178	0.830 ± 0.189	0.840 ± 0.178	0.830 ± 0.189
ecoli-0-3-4-6-vs-5	0.827 ± 0.099	$0.899 \stackrel{-}{\pm} 0.104$	0.893 ± 0.087	0.857 ± 0.113	0.892 ± 0.086	0.860 ± 0.114
yeast - 0 - 3 - 5 - 9 - vs - 7 - 8	0.539 ± 0.030	0.708 ± 0.073	$0.654 \stackrel{1}{\pm} 0.066$	$0.615 \stackrel{1}{\pm} 0.052$	$0.668 \stackrel{1}{\pm} 0.066$	0.615 ± 0.045
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 5\hbox{-} vs\hbox{-} 2$	0.511 ± 0.115	$0.609 \stackrel{all}{\pm} 0.155$	0.705 ± 0.115	0.624 ± 0.133	0.703 ± 0.116	0.628 ± 0.149
ecoli-0-6-7- vs -5	0.838 ± 0.103	$0.878 \stackrel{1}{\pm} 0.096$	0.869 ± 0.102	0.802 ± 0.097	0.861 ± 0.101	$0.805 \stackrel{1}{\pm} 0.102$
ecoli-0-2-3-4- vs -5	0.846 ± 0.094	0.902 ± 0.084	0.904 ± 0.078	0.867 ± 0.089	0.902 ± 0.077	0.867 ± 0.091
ecoli4	0.896 ± 0.065	0.933 ± 0.066	0.934 ± 0.081	0.867 ± 0.112	$0.936 \stackrel{1}{\pm} 0.081$	0.909 ± 0.108
yeast5	0.801 ± 0.029	0.846 ± 0.023	0.972 ± 0.024	0.964 ± 0.037	0.972 ± 0.024	0.965 ± 0.036
ecoli-0-4-6- vs -5	0.888 ± 0.102	$0.901 \stackrel{1}{\pm} 0.096$	0.901 ± 0.082	0.863 ± 0.111	0.902 ± 0.082	0.864 ± 0.107
$led 7 digit\hbox{-}0\hbox{-}2\hbox{-}4\hbox{-}5\hbox{-}6\hbox{-}7\hbox{-}8\hbox{-}9\hbox{-}vs\hbox{-}1$	0.871 ± 0.065	0.876 ± 0.067	0.654 ± 0.091	0.901 ± 0.084	0.654 ± 0.091	0.888 ± 0.089
ecoli- 0 - 1 - vs - 5	0.853 ± 0.126	0.905 ± 0.082	0.900 ± 0.075	0.893 ± 0.084	0.903 ± 0.072	0.889 ± 0.085
ecoli - 0 - 2 - 6 - 7 - vs - 3 - 5	0.640 ± 0.156	0.722 ± 0.130	0.832 ± 0.102	0.750 ± 0.106	0.824 ± 0.104	0.746 ± 0.117
ecoli - 0 - 1 - 4 - 7 - vs - 2 - 3 - 5 - 6	0.668 ± 0.121	0.783 ± 0.140	0.828 ± 0.101	0.784 ± 0.101	0.856 ± 0.091	0.839 ± 0.102
shuttle-c0-vs-c4	0.989 ± 0.013	0.989 ± 0.013	0.994 ± 0.009	0.993 ± 0.010	0.994 ± 0.009	0.993 ± 0.010 1.2
ecoli-0-6-7- vs -3-5	0.633 ± 0.171	0.746 ± 0.132	0.826 ± 0.104 $1,2,4,6$	0.729 ± 0.102	0.824 ± 0.108 $1,2,4,6$	0.729 ± 0.118
vowel0	0.903 ± 0.024 3,4,6	0.926 ± 0.028 $1,3,4,6$	0.875 ± 0.062	0.810 ± 0.061	0.915 ± 0.051 $1,3,4,6$	0.877 ± 0.048
glass4	0.772 ± 0.145	0.805 ± 0.145	0.751 ± 0.145 4.6	0.607 ± 0.156	0.771 ± 0.141 4.6	0.658 ± 0.145
yeast - 0 - 5 - 6 - 7 - 9 - vs - 4	$0.500 \stackrel{4,6}{\pm} 0.022$	0.737 ± 0.127	0.798 ± 0.051 $1,2,4,6$	0.669 ± 0.080	0.804 ± 0.052 $1,2,4,6$	0.740 ± 0.087
yeast - 0 - 2 - 5 - 6 - vs - 3 - 7 - 8 - 9	0.776 ± 0.049 3,4,5,6	$0.777 \pm 0.045 \\ 3,4,5,6$	0.720 ± 0.054 4.6	0.581 ± 0.038	0.751 ± 0.057 $3,4,6$	0.593 ± 0.058
ecoli-0-1- vs -2-3-5	0.627 ± 0.170	0.849 ± 0.119	0.854 ± 0.098	0.862 ± 0.081	0.854 ± 0.098	0.862 ± 0.079
ecoli-0-3-4- vs -5	0.854 ± 0.110	0.899 ± 0.107	0.909 ± 0.104	0.890 ± 0.101	0.904 ± 0.103 $1,2$	0.886 ± 0.100
glass5	0.895 ± 0.155	0.885 ± 0.156	0.893 ± 0.165	0.869 ± 0.174	0.898 ± 0.156 $1,2$	0.869 ± 0.167
yeast4	0.525 ± 0.025	$0.595 \stackrel{4}{\pm} 0.046$	$0.805 \stackrel{?}{\pm} 0.068$ $1,2,6$	0.783 ± 0.079	0.809 ± 0.069 $1,2,3,6$	0.716 ± 0.067 $1,2$
$glass\hbox{-} 0\hbox{-} 4\hbox{-} vs\hbox{-} 5$	0.930 ± 0.119	0.915 ± 0.125	0.920 ± 0.145	0.920 ± 0.145	0.915 ± 0.146	0.915 ± 0.146
yeast6	0.638 ± 0.023	0.774 ± 0.031	0.888 ± 0.056	0.828 ± 0.071	0.887 ± 0.056	0.831 ± 0.076
page-blocks-1-3-vs-4	0.774 ± 0.102	0.818 ± 0.126	0.758 ± 0.106	0.738 ± 0.089	0.796 ± 0.108	0.754 ± 0.090
yeast-1- vs -7	0.594 ± 0.042	0.702 ± 0.101 $1,3,4,5$	0.664 ± 0.093 1.5	0.641 ± 0.087	0.656 ± 0.098	0.671 ± 0.106 $1,4$
ecoli - 0 - 1 - 3 - 7 - vs - 2 - 6	0.845 ± 0.200	0.846 ± 0.199 $5,6$	0.842 ± 0.203	0.838 ± 0.200	0.839 ± 0.204	0.844 ± 0.200 $3,5$
yeast-1-4-5-8- vs -7	0.546 ± 0.014	0.582 ± 0.055	0.630 ± 0.098	0.592 ± 0.074	0.630 ± 0.098	0.580 ± 0.075
ecoli-0-1-4-7-vs-5-6	0.842 ± 0.128	0.878 ± 0.114	0.865 ± 0.110 $1,4$	0.802 ± 0.092	0.870 ± 0.104 $1,4$	0.849 ± 0.081
$yeast\-2\-vs\-8$	0.694 ± 0.078	0.784 ± 0.111	0.776 ± 0.111	0.771 ± 0.109	0.776 ± 0.111	0.771 ± 0.109
$yeast \hbox{-} 0 \hbox{-} 2 \hbox{-} 5 \hbox{-} 7 \hbox{-} 9 \hbox{-} vs \hbox{-} 3 \hbox{-} 6 \hbox{-} 8$	0.542 ± 0.025	0.829 ± 0.097	0.901 ± 0.034 $1,2,4,6$	0.863 ± 0.043	0.902 ± 0.034 $1,2,4,6$	0.891 ± 0.040 $1,2,4$
glass2	0.618 ± 0.101	0.648 ± 0.128	0.740 ± 0.109	0.687 ± 0.129	0.739 ± 0.109	0.690 ± 0.137 $1,2$
	_	1	1,2,4,6	1,2	1,2,4,6	1,2

Table 1: Results for BAC metric

	OSB (1)	OKNORAU (2)	TBAC (3)	TBAW (4)	OTBAC (5)	OTBAW (6)
$Mean\ rank$	2.305	4.012	4.561	2.451	4.683	2.988
	_	1,4,6	1,4,6	_	1,4,6	4

Table 2: Results for mean ranks according to BAC metric

Dataset	OSB (1)	OKNORAU (2)	TBAC (3)	TBAW (4)	OTBAC (5)	OTBAW (6)
glass-0-1-6-vs-2	0.187 ± 0.062	0.210 ± 0.097	0.303 ± 0.098	0.280 ± 0.170	0.304 ± 0.100	0.280 ± 0.149
ecoli - 0 - 3 - 4 - 7 - vs - 5 - 6	0.513 ± 0.136	$0.759 \stackrel{1}{\pm} 0.107$	0.779 ± 0.123	0.725 ± 0.181	0.779 ± 0.123	0.742 ± 0.176
shuttle-c2-vs-c4	0.990 ± 0.069	$0.990 \stackrel{1}{\pm} 0.069$	0.700 ± 0.443	0.647 ± 0.439	$0.700 \stackrel{1}{\pm} 0.443$	0.673 ± 0.434
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 4\hbox{-} 6\hbox{-} vs\hbox{-} 2$	0.178 ± 0.061	0.203 ± 0.088	0.311 ± 0.090	0.262 ± 0.159	$0.309 \stackrel{-}{\pm} 0.088$	0.250 ± 0.118
yeast-1-2-8-9-vs-7	0.067 ± 0.001	$0.076 \stackrel{1}{\pm} 0.007$	0.169 ± 0.056	0.092 ± 0.039	0.169 ± 0.056	0.093 ± 0.045
ecoli- 0 - 1 - 4 - 6 - vs - 5	0.661 ± 0.184	$0.753 \stackrel{1}{\pm} 0.176$	0.805 ± 0.109	0.765 ± 0.145	0.809 ± 0.102	0.764 ± 0.145
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.763 ± 0.264	0.752 ± 0.268	$0.747 \stackrel{1}{\pm} 0.264$	0.727 ± 0.281	$0.747 \stackrel{1}{\pm} 0.264$	0.741 ± 0.262
yeast-2- vs -4	0.247 ± 0.120	0.617 ± 0.151	0.759 ± 0.111	0.711 ± 0.157	0.736 ± 0.110	0.726 ± 0.154
$glass\hbox{-} 0\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.841 ± 0.279	0.815 ± 0.286	0.740 ± 0.335	0.713 ± 0.365	0.740 ± 0.335	0.713 ± 0.365
ecoli- 0 - 3 - 4 - 6 - vs - 5	0.496 ± 0.166	0.756 ± 0.200	0.769 ± 0.145	0.756 ± 0.187	0.766 ± 0.143	0.762 ± 0.186
yeast - 0 - 3 - 5 - 9 - vs - 7 - 8	0.192 ± 0.011	$0.339 \stackrel{1}{\pm} 0.070$	0.394 ± 0.122	0.345 ± 0.124	0.408 ± 0.111	0.350 ± 0.118
$glass\hbox{-}0\hbox{-}1\hbox{-}5\hbox{-}vs\hbox{-}2$	0.175 ± 0.057	0.240 ± 0.121	0.306 ± 0.096	0.272 ± 0.167	0.304 ± 0.096	0.271 ± 0.169
ecoli-0-6-7- vs -5	0.506 ± 0.148	0.704 ± 0.176	0.764 ± 0.171	0.675 ± 0.175	0.752 ± 0.169	0.675 ± 0.190
ecoli- 0 - 2 - 3 - 4 - vs - 5	0.553 ± 0.167	0.752 ± 0.160	0.807 ± 0.121	0.792 ± 0.153	0.803 ± 0.121	0.788 ± 0.151
ecoli4	0.451 ± 0.126	0.690 ± 0.157	0.852 ± 0.141	0.790 ± 0.182	0.822 ± 0.144	0.813 ± 0.187
yeast5	0.136 ± 0.018	0.169 ± 0.022	0.610 ± 0.068	0.598 ± 0.092	0.610 ± 0.068	0.597 ± 0.096
ecoli- 0 - 4 - 6 - vs - 5	0.713 ± 0.200	0.782 ± 0.191	0.789 ± 0.142	0.769 ± 0.188	0.790 ± 0.140	0.765 ± 0.181
$led 7 digit \hbox{-} 0\hbox{-} 2\hbox{-} 4\hbox{-} 5\hbox{-} 6\hbox{-} 7\hbox{-} 8\hbox{-} 9\hbox{-} vs\hbox{-} 1$	0.532 ± 0.088	0.611 ± 0.129	0.387 ± 0.177	0.733 ± 0.127	0.383 ± 0.173	0.706 ± 0.134
ecoli- 0 - 1 - vs - 5	0.755 ± 0.222	0.845 ± 0.117	0.865 ± 0.102	0.856 ± 0.118	0.869 ± 0.098	0.853 ± 0.117
ecoli-0-2-6-7- vs -3-5	0.322 ± 0.280	0.509 ± 0.232	0.700 ± 0.170	0.586 ± 0.183	0.682 ± 0.174 $1,2,4,6$	0.569 ± 0.209
ecoli-0-1-4-7- vs -2-3-5-6	0.441 ± 0.224	0.651 ± 0.244	0.749 ± 0.156 $1,2,4$	0.688 ± 0.171	0.780 ± 0.144 $1,2,4$	0.767 ± 0.174 $1,2,4$
shuttle-c0-vs-c4	0.978 ± 0.021	0.979 ± 0.021	0.994 ± 0.009	0.993 ± 0.010 1.2	0.994 ± 0.009 1.2	0.993 ± 0.010 1.2
ecoli-0-6-7- vs -3-5	0.284 ± 0.289	0.550 ± 0.206	0.696 ± 0.168 $1,2,4,6$	0.552 ± 0.190	0.690 ± 0.173 $1,2,4,6$	0.544 ± 0.209
vowel0	0.590 ± 0.034	0.641 ± 0.040	0.798 ± 0.083 $1,2,4,6$	0.745 ± 0.093	0.797 ± 0.069 $1,2,4,6$	0.730 ± 0.065 1.2
glass4	0.432 ± 0.219	0.523 ± 0.229 $1,4,6$	0.469 ± 0.238 4.6	0.272 ± 0.305	0.501 ± 0.228 4.6	0.359 ± 0.259
yeast - 0 - 5 - 6 - 7 - 9 - vs - 4	0.176 ± 0.007	0.356 ± 0.101	0.517 ± 0.094	0.395 ± 0.152	0.495 ± 0.094 $1,2,4$	0.469 ± 0.144
yeast - 0 - 2 - 5 - 6 - vs - 3 - 7 - 8 - 9	0.599 ± 0.079 3,4,6	0.605 ± 0.075 3,4,6	0.556 ± 0.098 4.6	0.268 ± 0.106	0.593 ± 0.091 3,4,6	0.293 ± 0.137
ecoli- 0 - 1 - vs - 2 - 3 - 5	0.307 ± 0.353	0.780 ± 0.194	0.799 ± 0.151	0.817 ± 0.115	0.799 ± 0.151	0.821 ± 0.115
ecoli-0-3-4- vs -5	0.575 ± 0.174	0.752 ± 0.177	0.803 ± 0.160 1.2	0.819 ± 0.164 1.2	0.795 ± 0.161 1.2	0.803 ± 0.163 1.2
glass5	0.684 ± 0.254	0.685 ± 0.257	0.787 ± 0.299 1.2	0.761 ± 0.317 $1,2$	0.800 ± 0.278 1.2	0.768 ± 0.297 $1,2$
yeast4	0.070 ± 0.004	0.082 ± 0.008	0.330 ± 0.062	0.221 ± 0.062 $1,2,6$	0.325 ± 0.059 $1,2,4,6$	0.163 ± 0.091
glass-0-4-vs-5	0.866 ± 0.196	0.846 ± 0.198	0.873 ± 0.257	0.873 ± 0.257	0.867 ± 0.258	0.867 ± 0.258
yeast6	0.063 ± 0.004	0.109 ± 0.024	0.386 ± 0.052	0.233 ± 0.081	0.379 ± 0.052 $1,2,4,6$	0.262 ± 0.115 $1,2$
page-blocks-1-3-vs-4	0.493 ± 0.149	0.546 ± 0.174	0.551 ± 0.176	0.521 ± 0.153	0.595 ± 0.169 all	0.536 ± 0.149
yeast-1-vs-7	0.148 ± 0.012	0.218 ± 0.060	0.245 ± 0.095 1.5	0.355 ± 0.180	0.222 ± 0.073	0.313 ± 0.145 $1,2,3,5$
ecoli-0-1-3-7-vs-2-6	0.627 ± 0.359	0.641 ± 0.360	0.625 ± 0.352 $-$	$0.690 \pm 0.377 \\ 1,2,3,5$	0.591 ± 0.341	0.710 ± 0.384 $1,2,3,5$ $1,2,3,5$
yeast-1-4-5-8- vs -7	0.091 ± 0.002	0.099 ± 0.011	0.145 ± 0.053 $1,2,4,6$	0.105 ± 0.027 $1,2,6$	0.145 ± 0.053 $1,2,4,6$	0.101 ± 0.026
ecoli- 0 - 1 - 4 - 7 - vs - 5 - 6	0.704 ± 0.206	0.761 ± 0.189	0.780 ± 0.186	0.716 ± 0.162 -	0.778 ± 0.182	0.776 ± 0.133
yeast-2- vs -8	0.191 ± 0.160	0.586 ± 0.181	$0.665 \overset{1,4}{\pm} 0.200$	0.658 ± 0.194 $1,2$	$0.665 \overset{1,4}{\pm} 0.200$	0.658 ± 0.194 $1,2$
yeast - 0 - 2 - 5 - 7 - 9 - vs - 3 - 6 - 8	0.193 ± 0.010	0.499 ± 0.140	0.785 ± 0.081	0.753 ± 0.106 $1,2$	0.752 ± 0.082 $1,2$	0.756 ± 0.105 $1,2,5$
glass2	0.190 ± 0.052	0.222 ± 0.081	0.322 ± 0.103 $1,2,6$	0.309 ± 0.134 $1,2$	0.320 ± 0.102 $1,2$	0.289 ± 0.122 $1,2$

Table 3: Results for F1 metric

	OSB (1)	OKNORAU (2)	TBAC (3)	TBAW (4)	OTBAC (5)	OTBAW (6)
$Mean\ rank$	1.622	2.768	5.073	3.415	4.683	3.439
	_	1	all	1,2	1,2,4,6	1,2

Table 4: Results for mean ranks according to F1 metric

glass 0.1.6 sus 2 0.107 ± 0.037 0.128 ± 0.084 0.104 ± 0.086 0.213 ± 0.138 0.194 ± 0.090 0.196 ± 0.112 cech 6.9 3.4 7 vas 5.6 0.396 ± 0.014 0.715 ± 0.122 0.720 ± 0.448 0.550 ± 0.014 0.780 ± 0.014 0.855 ± 0.014 0.780 ± 0.014 0.855 ± 0.014 0.780 ± 0.014 0.855 ± 0.016 0.790 ± 0.048 0.080 ± 0.049 0.080 ± 0.049 0.080 ± 0.049 0.080 ± 0.049 0.080 ± 0.049 0.080 ± 0.049 0.080 ± 0.049 0.080 ± 0.049 0.080 ± 0.049 0.080 ± 0.049 0.080 ± 0.049 0.080 ± 0.049 0.080 ± 0.049 0.080 ± 0.049 0.080 ± 0.049 0.080 ± 0.049 0.080	Dataset	OSB (1)	OKNORAU (2)	TBAC (3)	TBAW (4)	OTBAC (5)	OTBAW (6)
cochi σ-2-4-7-re-5-6	glass-0-1-6-vs-2	0.107 ± 0.037	0.128 ± 0.064				
$shattle-e, w-e_t d \\ 0.887 \pm 0.093 \\ 0.887 \pm 0.093 \\ 0.987 \pm 0.093 \\ 0.101 \pm 0.035 \\ 0.101 \pm 0.035 \\ 0.101 \pm 0.035 \\ 0.101 \pm 0.035 \\ 0.010 \pm 0.020 \\ 0.001 \pm$	ecoli-0-3-4-7-vs-5-6	0.396 ± 0.164	0.715 ± 0.126				
space 1-2.8-8-9-e-7 0.034 ± 0.000 0.040 ± 0.004 0.101 ± 0.003 0.050 ± 0.056 0.11 ± 0.003 0.011 ± 0.003 scale 6-1-4-8-e-5 0.770 ± 0.229 0.712 ± 0.218 0.834 ± 0.155 0.885 ± 0.176 0.836 ± 0.152 0.829 ± 0.132 0.831 ± 0.32 0.831 ± 0.310 0.831 ± 0.32 0.831 ± 0.33 0.831 ± 0.33 0.830 ± 0.289 0.830 ± 0.33 0.831 ± 0.33 0.830 ± 0.289 0.830 ± 0.289 0.831 ± 0.33 0.831 ± 0.33 0.831 ± 0.33 0.831 ± 0.33 0.831 ± 0.33 0.831 ± 0.33 0.830 ± 0.389 0.831 ± 0.33	shuttle- $c2$ - vs - $c4$		0.987 ± 0.093				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	glass-0-1-4-6-vs-2	0.101 ± 0.035	0.121 ± 0.053		0.185 ± 0.116		0.166 ± 0.084
coche-0-1-4-6-w-5	yeast-1-2-8-9- vs -7	0.034 ± 0.000	$0.040 \stackrel{1}{\pm} 0.004$	0.101 ± 0.034		0.101 ± 0.034	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	ecoli-0-1-4-6-vs-5	0.570 ± 0.226					
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.745 ± 0.294	$0.770 \stackrel{1}{\pm} 0.299$	$0.830 \stackrel{1,2}{\pm} 0.289$	0.810 ± 0.310	$0.830 \stackrel{1,2}{\pm} 0.289$	0.830 ± 0.289
$\begin{array}{c} glass-6-n-x-5\\ cooli-6-3-4-6-v-s-5\\ cooli-6-3-4-6-v-s-5\\ cooli-6-3-4-6-v-s-5\\ cooli-6-3-4-6-v-s-5\\ cooli-6-3-4-6-v-s-8\\ cooli-6-3-4-6-v-s-8\\ cooli-6-3-4-v-s-8\\ cooli-6-3-4-v-s-8\\ cooli-6-3-4-v-s-8\\ cooli-6-3-4-v-s-8\\ cooli-6-3-4-v-s-5\\ cooli-6-3-4-v-s-5-6\\ cooli-6-3-4-v-s-5\\ cooli-6-3-4-v-s-5\\ cooli-6-3-4-v-s-5-6\\ cooli-6-3-4-v-s-3-5-6\\ cooli-6-3-4-v-s-3-6\\ cooli-6-3-4-v-s-3-6\\ cooli-6-3-4-v-s-3-6\\ cooli-6-3-4-v-s-3-6\\ cooli-6-3-4-v-s-3-6\\ cooli-6-3-4-v-s-3-6\\ cooli-6-3-4-v-s-3-6\\ cooli-6-3-4-v-s-3-6\\ cooli-6-3-4-v-s-3-6\\ cooli-6-3-4-v-s-3-6\\$	yeast-2- vs -4	0.152 ± 0.101	0.511 ± 0.154	$0.817 \stackrel{1}{\pm} 0.144$	0.830 ± 0.169	$0.756 \stackrel{1}{\pm} 0.142$	$0.807 \stackrel{1}{\pm} 0.167$
$\begin{array}{c} y_{cast} - y_{c$	glass-0-6-vs-5	0.850 ± 0.287	0.843 ± 0.293	0.860 ± 0.346			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	ecoli-0-3-4-6-vs-5	0.372 ± 0.181	0.702 ± 0.232	0.744 ± 0.173		0.739 ± 0.172	
$\begin{array}{c} glass-6-1.5-es-2\\ glass-6-1.5-es-2\\ cooli-0-6-7-es-5\\ cooli-0-6-7-es-5\\ cooli-0-6-7-es-5\\ cooli-0-2-3-4-es-5\\ cooli-0-2$	yeast-0-3-5-9-vs-7-8	0.107 ± 0.006					
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$glass\hbox{-} 0\hbox{-} 1\hbox{-} 5\hbox{-} vs\hbox{-} 2$	0.101 ± 0.033	0.153 ± 0.083	0.196 ± 0.066	0.213 ± 0.146	$0.193 \stackrel{1,2}{\pm} 0.067$	0.202 ± 0.133
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	ecoli-0-6-7-vs-5	0.387 ± 0.172	0.655 ± 0.227	0.803 ± 0.197	0.775 ± 0.213	0.796 ± 0.196	0.755 ± 0.239
$ \begin{array}{c} ccolij \\ veast5 \\ veast5 \\ veast6 \\ veast5 \\ veast6 \\ veas$	ecoli-0-2-3-4-vs-5	0.438 ± 0.201	$0.694 \stackrel{1}{\pm} 0.204$		0.864 ± 0.178		
$y_{asst5} = 0.073 \pm 0.010 = 0.093 \pm 0.013 = 0.046 \pm 0.069 = 0.437 \pm 0.087 = 0.446 \pm 0.069 = 0.436 \pm 0.089 = 0.616 \pm 0.46 \pm 0.660 \pm 0.244 = 0.660 \pm 0.245 = 0.881 \pm 0.233 = 0.664 \pm 0.125 = 0.472 \pm 0.226 = 0.820 \pm 0.135 \pm 0.089 = 0.466 \pm 0.125 = 0.472 \pm 0.226 = 0.461 \pm 0.135 = 0.826 \pm 0.194 = 0.861 \pm 0.094 \pm 0.962 \pm 0.099 = 0.960 \pm 0.094 = 0.972 \pm 0.386 = 0.907 \pm 0.339 = 0.966 \pm 0.094 = 0.924 \pm 0.362 \pm 0.099 = 0.960 \pm 0.094 = 0.972 \pm 0.386 = 0.215 = 0.826 \pm 0.215 = 0.908 \pm 0.131 = 0.927 \pm 0.139 = 0.878 \pm 0.134 = 0.937 \pm 0.335 = 0.826 \pm 0.215 = 0.908 \pm 0.131 = 0.927 \pm 0.139 = 0.878 \pm 0.134 = 0.931 \pm 0.139 = 0.961 \pm 0.094 = 0.941 \pm 0.194 = 0.947 \pm 0.280 = 0.660 \pm 0.250 = 0.660 \pm 0.247 = 0.240 = 0.947 \pm 0.280 = 0.660 \pm 0.250 = 0.660 \pm 0.245 = 0.948 = 0.348 \pm 0.332 = 0.978 \pm 0.035 = 0.748 \pm 0.195 = 0.961 \pm 0.094 = 0.941 \pm 0.194 = 0.947 \pm 0.240 = 0.947 \pm 0$	ecoli4	0.304 ± 0.121	$0.574 \stackrel{1}{\pm} 0.192$	0.849 ± 0.171	0.888 ± 0.174		0.825 ± 0.196
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	yeast5	0.073 ± 0.010	$0.093 \stackrel{1}{\pm} 0.013$	0.446 ± 0.069	0.437 ± 0.087	0.446 ± 0.069	0.436 ± 0.089
$ \begin{array}{c} led right collection coll$	ecoli-0-4-6- vs -5	0.646 ± 0.244	0.767 ± 0.249	0.768 ± 0.181	0.836 ± 0.199	0.770 ± 0.178	0.820 ± 0.198
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$led 7 digit \hbox{-} 0\hbox{-} 2\hbox{-} 4\hbox{-} 5\hbox{-} 6\hbox{-} 7\hbox{-} 8\hbox{-} 9\hbox{-} vs\hbox{-} 1$	0.387 ± 0.082			0.664 ± 0.125		0.641 ± 0.131
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	ecoli- 0 - 1 - vs - 5	0.838 ± 0.236	$0.907 \stackrel{1}{\pm} 0.139$		0.962 ± 0.099		
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ecoli\mbox{-}0\mbox{-}2\mbox{-}6\mbox{-}7\mbox{-}vs\mbox{-}3\mbox{-}5$	0.416 ± 0.345	$0.635 \stackrel{1}{\pm} 0.288$	0.734 ± 0.193		0.717 ± 0.208	0.680 ± 0.250
$\begin{array}{c} shuttle-e0-vs-e4 \\ coli-0-6-7-vs-3-5 \\ coli-0-6-7-vs-3-5 \\ double-e0-vs-6-4 \\ double-e0-vs-6-5 \\ double-e0-vs-6-5 \\ double-e0-vs-6-5 \\ double-e0-vs-6-5-5 \\ double-e0-vs-6-5-5 \\ double-e0-vs-6-5-5 \\ double-e0-vs-6-5-5-7-vs-3-5 \\ double-e0-vs-6-7-vs-3-5 \\ double-e0-vs-6-7-vs-3-5 \\ double-e0-vs-6-7-vs-3-5 \\ double-e0-vs-6-7-vs-3-5 \\ double-e0-vs-6-7-vs-3-7-8-9 \\ double-e0-vs-6-7-vs-8-4 \\ double-e0-vs-6-ro-vs-8-7-ro-s-9 \\ double-e0-vs-6-ro-vs-8-7-ro-s-9 \\ double-e0-vs-6-ro-vs-8-ro-s-9 \\ double-e0-vs-6-ro$	ecoli-0-1-4-7-vs-2-3-5-6	0.758 ± 0.295		0.908 ± 0.131	0.927 ± 0.139	0.878 ± 0.134	0.913 ± 0.139
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	shuttle-c0-vs-c4	0.977 ± 0.035	$0.978 \stackrel{1}{\pm} 0.035$	1.000 ± 0.000	1.000 ± 0.000	1.000 ± 0.000	1.000 ± 0.000
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	ecoli-0-6-7- vs -3-5	0.348 ± 0.332		0.748 ± 0.195	0.691 ± 0.226	0.744 ± 0.192	0.672 ± 0.232
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	vowel0	0.434 ± 0.036	0.484 ± 0.039	0.851 ± 0.078	0.951 ± 0.075	0.750 ± 0.072	0.684 ± 0.066
$\begin{array}{c} yeast-0.5-6-7-9-vs-4\\ yeast-0.2-5-6-vs-3-7-8-9\\ veast-0.2-5-6-vs-3-7-8-9\\ veast-0.2-5-6-vs-3-7-8-8\\ veast-0.2-5-7-9-vs-3-6-8\\ veast-0.2-5-7-9$	glass4	0.377 ± 0.262	0.473 ± 0.255		0.336 ± 0.388	0.473 ± 0.262	0.436 ± 0.347
$\begin{array}{c} yeast-0-2-5-6-vs-3-7-8-9 \\ ecoli-0-1-vs-2-3-5 \\ ecoli-0-1-vs-2-3-5 \\ ecoli-0-3-4-vs-5 \\ \end{array} \begin{array}{c} 0.662 \pm 0.088 \\ 0.466 \pm 0.467 \\ \end{array} \begin{array}{c} 0.924 \pm 0.139 \\ 0.924 \pm 0.139 \\ \end{array} \begin{array}{c} 0.933 \pm 0.107 \\ 0.933 \pm 0.107 \\ \end{array} \begin{array}{c} 0.992 \pm 0.088 \\ 0.953 \pm 0.107 \\ \end{array} \begin{array}{c} 0.966 \pm 0.098 \\ 0.953 \pm 0.107 \\ 0.969 \pm 0.084 \\ \end{array} \begin{array}{c} 1.2 \\ 0.962 \pm 0.088 \\ 0.953 \pm 0.107 \\ 0.969 \pm 0.088 \\ \end{array} \begin{array}{c} 0.670 \pm 0.183 \\ 0.962 \pm 0.088 \\ \end{array} \begin{array}{c} 0.953 \pm 0.107 \\ 0.969 \pm 0.084 \\ \end{array} \begin{array}{c} 1.2 \\ 0.962 \pm 0.088 \\ \end{array} \begin{array}{c} 0.953 \pm 0.107 \\ 0.969 \pm 0.084 \\ \end{array} \begin{array}{c} 1.2 \\ 0.969 \pm 0.084 \\ \end{array} \begin{array}{c} 1.2 \\ 0.969 \pm 0.084 \\ \end{array} \begin{array}{c} 1.2 \\ 0.873 \pm 0.166 \\ 0.885 \pm 0.168 \\ 0.845 \pm 0.174 \\ \end{array} \begin{array}{c} 1.2 \\ 0.877 \pm 0.315 \\ 0.840 \pm 0.333 \\ \end{array} \begin{array}{c} 0.873 \pm 0.166 \\ 0.873 \pm 0.168 \\ 0.873 \pm 0.168 \\ 0.873 \pm 0.168 \\ \end{array} \begin{array}{c} 0.877 \pm 0.292 \\ 0.860 \pm 0.311 \\ 0.872 \pm 0.043 \\ 0.132 \pm 0.042 \\ 0.132 \pm 0.042 \\ 0.212 \pm 0.039 \\ 0.940 \pm 0.237 \\ 0.940 \pm 0.2$	yeast - 0 - 5 - 6 - 7 - 9 - vs - 4	0.097 ± 0.004	0.232 ± 0.078			0.382 ± 0.118	0.433 ± 0.166
$\begin{array}{c} ecoli-0-1-vs-2-3-5 \\ ecoli-0-3-4-vs-5 \\ ecoli-0-1-4-7-vs-5-6 \\ ecoli-0-1-4-7-vs-5-6 \\ ecoli-0-1-4-7-vs-5-6 \\ ecoli-0-1-4-7-vs-3-6-8 \\ ecoli-0-1-3-7-vs-3-6-8 \\ ecoli-0-1-3-1-3-1-3-1-3-1-3-1-3-1-3-1-3-1-3-1$	yeast - 0 - 2 - 5 - 6 - vs - 3 - 7 - 8 - 9	0.612 ± 0.088		0.721 ± 0.104		0.696 ± 0.098	0.670 ± 0.183
$\begin{array}{c} ecoli-0-3-4-vs-5 \\ glass5 \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ $	ecoli-0-1- vs -2-3-5	0.466 ± 0.467	0.924 ± 0.139	0.953 ± 0.107	0.962 ± 0.088	0.953 ± 0.107	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	ecoli- 0 - 3 - 4 - vs - 5	0.462 ± 0.190		1	1	0.788 ± 0.168	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	glass5	0.627 ± 0.267		0.837 ± 0.315	0.840 ± 0.333	0.857 ± 0.292	0.860 ± 0.311
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	yeast4	0.036 ± 0.002	0.043 ± 0.004	0.217 ± 0.043	0.132 ± 0.042	0.212 ± 0.039	0.097 ± 0.067
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$glass\hbox{-} 0\hbox{-} 4\hbox{-} vs\hbox{-} 5$	0.910 ± 0.200	0.910 ± 0.200	0.940 ± 0.237	0.940 ± 0.237	0.940 ± 0.237	0.940 ± 0.237
$\begin{array}{c} page-blocks-1-3-vs-4\\ yeast-1-vs-7\\ ecoli-0-1-3-7-vs-2-6\\ yeast-1-4-5-8-vs-7\\ ecoli-0-1-4-7-vs-5-6\\ yeast-0-2-5-7-9-vs-3-6-8\\ yeast-0-2-5-7-9-vs-3-6-8\\ yeast-0-2-5-7-9-vs-3-6-8\\ yeast-1-4-5-8-vs-4\\ yeast-1-4-5-8-vs-4\\ yeast-1-4-5-8-vs-4\\ yeast-1-4-5-8-vs-7\\ yeast-1-4-5-8-vs-7\\ yeast-1-4-5-8-vs-8\\ yeast-1-4-5-8-vs-9\\ y$	yeast6	0.033 ± 0.002			1		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	page-blocks-1-3-vs-4			0.605 ± 0.210	0.585 ± 0.199	0.603 ± 0.179	0.564 ± 0.174
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	yeast-1- vs -7	0.080 ± 0.007	0.127 ± 0.036				0.253 ± 0.129
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	ecoli-0-1-3-7-vs-2-6	_	_				0.770 ± 0.402
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	yeast-1-4-5-8- vs -7			1	0.057 ± 0.016		0.055 ± 0.015
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	ecoli-0-1-4-7-vs-5-6			0.862 ± 0.184			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$yeast\-2\-vs\-8$	0.150 ± 0.191	0.683 ± 0.256				0.912 ± 0.185
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	yeast - 0 - 2 - 5 - 7 - 9 - vs - 3 - 6 - 8			0.757 ± 0.132	0.791 ± 0.183	0.688 ± 0.123	0.718 ± 0.150
$oxed{ \ \ \ \ $	glass2	0.108 ± 0.030	0.133 ± 0.052	0.210 ± 0.078	0.220 ± 0.107	0.209 ± 0.078 $1,2$	0.192 ± 0.091

Table 5: Results for Precision metric

	OSB (1) OKNORAU (2) TBAC (3) TBAW (4) OTBAC (5) OTBAW (6)								
Mean rank	1.244	2.317	4.512	4.659	3.951	4.317			
	_	1	1,2,5	1,2,5	1,2	1,2			

Table 6: Results for mean ranks according to Precision metric

Dataset	OSB (1)	OKNORAU (2)	TBAC (3)	TBAW (4)	OTBAC (5)	OTBAW (6)
glass-0-1-6-vs-2	0.778 ± 0.244	0.640 ± 0.258	0.735 ± 0.222	0.470 ± 0.296	0.740 ± 0.225	0.547 ± 0.285
ecoli-0-3-4-7-vs-5-6	0.844 ± 0.180	0.832 ± 0.151	0.796 ± 0.152	0.656 ± 0.215	0.796 ± 0.152	0.684 ± 0.219
shuttle- $c2$ - vs - $c4$	$3,4,5,6$ 1.000 ± 0.000	$1.000 \overset{4,6}{\pm} 0.000$	0.690 ± 0.445	0.650 ± 0.450	$0.690 \stackrel{4,6}{\pm} 0.445$	0.680 ± 0.444
glass-0-1-4-6-vs-2	0.763 ± 0.273	0.655 ± 0.286	0.730 ± 0.195	0.485 ± 0.298	0.730 ± 0.195	0.557 ± 0.269
yeast-1-2-8-9- vs -7	1.000 ± 0.000	0.927 ± 0.106	0.520 ± 0.172	0.770 ± 0.223	0.520 ± 0.172	$0.760 \stackrel{4}{\pm} 0.228$
ecoli-0-1-4-6-vs-5	0.850 ± 0.150	0.840 ± 0.164	0.815 ± 0.164	0.695 ± 0.175	0.820 ± 0.158	0.695 ± 0.182
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.840 ± 0.290	$0.790 \overset{4,6}{\pm} 0.301$	$0.730 \stackrel{4.6}{\pm} 0.303$	0.710 ± 0.317	0.730 ± 0.303	0.720 ± 0.302
yeast-2-vs-4	0.936 ± 0.083	0.838 ± 0.106	0.731 ± 0.142	0.659 ± 0.175	0.743 ± 0.142	0.710 ± 0.188
$glass\hbox{-} 0\hbox{-} 6\hbox{-} vs\hbox{-} 5$	$0.860 \pm 0.300 \\ 3,4,5,6$	$3,4,5,6$ 0.820 ± 0.312	0.680 ± 0.357	0.660 ± 0.379	0.680 ± 0.357	0.660 ± 0.379
ecoli- 0 - 3 - 4 - 6 - vs - 5	0.860 ± 0.159	0.850 ± 0.173	0.820 ± 0.166	0.735 ± 0.220	0.820 ± 0.166	0.740 ± 0.223
yeast - 0 - 3 - 5 - 9 - vs - 7 - 8	0.974 ± 0.059	0.682 ± 0.176	0.350 ± 0.144	0.244 ± 0.120	0.392 ± 0.146	0.252 ± 0.109
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 5\hbox{-} vs\hbox{-} 2$	0.700 ± 0.244	0.605 ± 0.277	0.745 ± 0.238	0.430 ± 0.270	0.745 ± 0.238	0.468 ± 0.294
ecoli- 0 - 6 - 7 - vs - 5	0.845 ± 0.179	0.815 ± 0.171	0.760 ± 0.199	0.625 ± 0.188	0.745 ± 0.196	0.635 ± 0.194
ecoli- 0 - 2 - 3 - 4 - vs - 5	0.850 ± 0.150	$3,4,5,6$ 0.855 ± 0.150	0.835 ± 0.155	0.750 ± 0.173	0.830 ± 0.153	0.750 ± 0.180
ecoli4	0.950 ± 0.099	0.920 ± 0.116	0.880 ± 0.160	0.740 ± 0.223	0.890 ± 0.159	0.830 ± 0.214
yeast5	0.996 ± 0.031	0.996 ± 0.031	0.982 ± 0.046	0.969 ± 0.067	0.982 ± 0.046	0.973 ± 0.065
ecoli- 0 - 4 - 6 - vs - 5	0.850 ± 0.158	0.845 ± 0.165	0.835 ± 0.155	0.745 ± 0.215	0.835 ± 0.155	0.750 ± 0.206
$led 7 digit \hbox{-} 0 \hbox{-} 2 \hbox{-} 4 \hbox{-} 5 \hbox{-} 6 \hbox{-} 7 \hbox{-} 8 \hbox{-} 9 \hbox{-} vs \hbox{-} 1$	0.874 ± 0.127	0.845 ± 0.138	0.345 ± 0.179	0.843 ± 0.169	0.345 ± 0.179	0.823 ± 0.183
ecoli- 0 - 1 - vs - 5	0.720 ± 0.248	0.820 ± 0.166	0.805 ± 0.152	0.790 ± 0.168	0.810 ± 0.146	0.780 ± 0.170
ecoli-0-2-6-7-vs-3-5	0.315 ± 0.325	$0.476 \stackrel{1}{\pm} 0.266$	0.695 ± 0.198 $1,2,4,6$	0.525 ± 0.211	0.682 ± 0.203 $1,2,4,6$	0.521 ± 0.231
ecoli-0-1-4-7- vs -2-3-5-6	0.346 ± 0.245	0.575 ± 0.279	0.663 ± 0.201 $1,2,4$	0.573 ± 0.201	0.722 ± 0.182 $1,2,3,4$	0.685 ± 0.201
shuttle-c0-vs-c4	0.980 ± 0.027	0.980 ± 0.027	0.989 ± 0.018	0.986 ± 0.020	0.989 ± 0.018	0.986 ± 0.020
ecoli-0-6-7-vs-3-5	0.297 ± 0.359	0.520 ± 0.276	0.681 ± 0.204 $1,2,4,6$	0.483 ± 0.199	0.676 ± 0.213 $1,2,4,6$	0.485 ± 0.231
vowel0	0.929 ± 0.053 3,4,5,6	0.954 ± 0.058	0.763 ± 0.126	0.624 ± 0.124	0.859 ± 0.102 $3,4,6$	0.792 ± 0.099
glass4	0.637 ± 0.280 4.6	0.667 ± 0.288 $3,4,6$	0.553 ± 0.283 4.6	0.253 ± 0.296	0.593 ± 0.275 4.6	0.353 ± 0.284
yeast - 0 - 5 - 6 - 7 - 9 - vs - 4	0.977 ± 0.041	0.871 ± 0.109	0.721 ± 0.111 4.6	0.438 ± 0.225	0.758 ± 0.108 $3,4,6$	0.609 ± 0.196
$yeast \hbox{-} 0\hbox{-} 2\hbox{-} 5\hbox{-} 6\hbox{-} vs\hbox{-} 3\hbox{-} 7\hbox{-} 8\hbox{-} 9$	$0.595 \pm 0.099 \\ 3,4,5,6$	$3,4,5,6 \\ 0.595 \pm 0.090 \\ 3,4,5,6$	0.460 ± 0.109 4.6	0.172 ± 0.076	0.527 ± 0.117 $3,4,6$	0.196 ± 0.116
ecoli- 0 - 1 - vs - 2 - 3 - 5	0.260 ± 0.340	0.704 ± 0.235	0.712 ± 0.196	0.728 ± 0.163	0.712 ± 0.196	0.727 ± 0.158
ecoli-0-3-4-vs-5	0.850 ± 0.193 $4,6$	0.845 ± 0.205 $4,6$	0.845 ± 0.205 4.6	0.795 ± 0.198	0.835 ± 0.203	0.790 ± 0.195
glass5	0.810 ± 0.314	0.790 ± 0.317	0.790 ± 0.333	0.740 ± 0.349	0.800 ± 0.316	0.740 ± 0.335
yeast4	0.971 ± 0.048	0.944 ± 0.067 $3,4,5,6$	0.703 ± 0.140	0.790 ± 0.128 $3,5$	0.714 ± 0.143	0.815 ± 0.149
$glass\hbox{-}0\hbox{-}4\hbox{-}vs\hbox{-}5$	0.870 ± 0.241	0.840 ± 0.253	0.840 ± 0.290	0.840 ± 0.290	0.830 ± 0.293	0.830 ± 0.293
yeast6	0.991 ± 0.033	0.937 ± 0.086	0.837 ± 0.117	0.794 ± 0.159	0.837 ± 0.117	0.794 ± 0.164
page-blocks-1-3-vs-4	0.600 ± 0.205	0.687 ± 0.252 all	0.541 ± 0.209	0.501 ± 0.177	0.620 ± 0.216 $3.4.6$	0.537 ± 0.179
yeast-1-vs-7	0.970 ± 0.086	$0.793 \pm 0.209 \\ 3,4,5,6$	0.540 ± 0.206 $4,6$	0.320 ± 0.179	0.543 ± 0.212	0.443 ± 0.209
ecoli- 0 - 1 - 3 - 7 - vs - 2 - 6	$0.700 \stackrel{all}{\pm} 0.400$	0.700 ± 0.400	0.700 ± 0.400	0.680 ± 0.396	$0.700 \overset{4,6}{\pm} 0.400$	0.690 ± 0.398
yeast-1-4-5-8- vs -7	1.000 ± 0.000	0.910 ± 0.125	0.513 ± 0.193	0.767 ± 0.210	0.513 ± 0.193	0.777 ± 0.209
ecoli- 0 - 1 - 4 - 7 - vs - 5 - 6	0.704 ± 0.256	0.776 ± 0.224 $1.4.6$	0.740 ± 0.220	0.608 ± 0.183	0.752 ± 0.209	0.708 ± 0.161
yeast-2-vs-8	0.870 ± 0.213	0.585 ± 0.232	0.555 ± 0.219	0.545 ± 0.216	0.555 ± 0.219	0.545 ± 0.216
yeast - 0 - 2 - 5 - 7 - 9 - vs - 3 - 6 - 8	0.987 ± 0.026	0.905 ± 0.074 $3,4,5,6$	0.836 ± 0.077	0.762 ± 0.106	0.853 ± 0.078 $3,4,6$	0.827 ± 0.083
glass2	0.823 ± 0.209	0.725 ± 0.235 $4,6$	0.732 ± 0.198 $4,6$	0.585 ± 0.231	0.732 ± 0.198 $4,6$	0.642 ± 0.244

Table 7: Results for Recall metric

	OSB (1)	OKNORAU (2)	TBAC (3)	TBAW (4)	OTBAC (5)	OTBAW (6)
Mean rank	4.927	4.610	3.537	1.768	3.841	2.317
	3,4,5,6	3,4,5,6	4,6	_	3,4,6	4

Table 8: Results for mean ranks according to Recall metric

Dataset	OSB (1)	OKNORAU (2)	TBAC (3)	TBAW (4)	OTBAC (5)	OTBAW (6)
glass-0-1-6-vs-2	0.573 ± 0.119	0.598 ± 0.141	0.715 ± 0.115	0.641 ± 0.156	0.716 ± 0.116	0.654 ± 0.152
ecoli - 0 - 3 - 4 - 7 - vs - 5 - 6	0.837 ± 0.083	0.897 ± 0.075	0.885 ± 0.078	0.822 ± 0.109	0.885 ± 0.078	0.836 ± 0.110
shuttle- $c2$ - vs - $c4$	0.999 ± 0.005	0.999 ± 0.005	0.845 ± 0.222	0.823 ± 0.225	0.845 ± 0.222	$0.838 \stackrel{-}{\pm} 0.222$
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 4\hbox{-} 6\hbox{-} vs\hbox{-} 2$	0.582 ± 0.129	0.610 ± 0.154	0.727 ± 0.104	0.640 ± 0.156	$0.727 \stackrel{-}{\pm} 0.103$	0.646 ± 0.137
yeast-1-2-8-9-vs-7	0.541 ± 0.012	0.597 ± 0.048	0.683 ± 0.087	0.614 ± 0.070	0.683 ± 0.086	0.606 ± 0.073
ecoli-0-1-4-6-vs-5	$0.891 \stackrel{-}{\pm} 0.088$	0.902 ± 0.087	0.899 ± 0.079	0.843 ± 0.089	0.902 ± 0.076	$0.843 \stackrel{1}{\pm} 0.092$
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.912 ± 0.144	0.888 ± 0.151	0.861 ± 0.151	0.851 ± 0.158	0.861 ± 0.151	0.856 ± 0.150
yeast-2-vs-4	0.591 ± 0.122	0.852 ± 0.098	0.855 ± 0.070	0.818 ± 0.084	0.856 ± 0.070	$0.841 \stackrel{-}{\pm} 0.092$
$glass\hbox{-} 0\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.925 ± 0.149	0.905 ± 0.156	0.840 ± 0.178	0.830 ± 0.189	0.840 ± 0.178	0.830 ± 0.189
ecoli- 0 - 3 - 4 - 6 - vs - 5	0.827 ± 0.099	0.899 ± 0.104	0.893 ± 0.087	0.857 ± 0.113	0.892 ± 0.086	0.860 ± 0.114
yeast - 0 - 3 - 5 - 9 - vs - 7 - 8	0.539 ± 0.030	0.708 ± 0.073	0.654 ± 0.066	$0.615 \stackrel{1}{\pm} 0.052$	$0.668 \stackrel{1}{\pm} 0.066$	$0.615 \stackrel{1}{\pm} 0.045$
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 5\hbox{-} vs\hbox{-} 2$	0.511 ± 0.115	0.609 ± 0.155	0.705 ± 0.115	0.624 ± 0.133	0.703 ± 0.116	0.628 ± 0.149
ecoli- 0 - 6 - 7 - vs - 5	0.838 ± 0.103	0.878 ± 0.096	0.869 ± 0.102	0.802 ± 0.097	0.861 ± 0.101	$0.805 \stackrel{1}{\pm} 0.102$
ecoli- 0 - 2 - 3 - 4 - vs - 5	0.846 ± 0.094	0.902 ± 0.084	0.904 ± 0.078	0.867 ± 0.089	0.902 ± 0.077	$0.867 \stackrel{-}{\pm} 0.091$
ecoli4	0.896 ± 0.065	0.933 ± 0.066	0.934 ± 0.081	0.867 ± 0.112	0.936 ± 0.081	0.909 ± 0.108
yeast5	0.801 ± 0.029	0.846 ± 0.023	0.972 ± 0.024	0.964 ± 0.037	0.972 ± 0.024	0.965 ± 0.036
ecoli- 0 - 4 - 6 - vs - 5	0.888 ± 0.102	0.901 ± 0.096 $1,6$	0.901 ± 0.082	0.863 ± 0.111	0.902 ± 0.082	0.864 ± 0.107
$led 7 digit \hbox{-} 0\hbox{-} 2\hbox{-} 4\hbox{-} 5\hbox{-} 6\hbox{-} 7\hbox{-} 8\hbox{-} 9\hbox{-} vs\hbox{-} 1$	0.871 ± 0.065	0.876 ± 0.067	0.654 ± 0.091	0.901 ± 0.084	0.654 ± 0.091	0.888 ± 0.089
ecoli- 0 - 1 - vs - 5	0.853 ± 0.126	0.905 ± 0.082	0.900 ± 0.075	0.893 ± 0.084	0.903 ± 0.072	0.889 ± 0.085
ecoli-0-2-6-7-vs-3-5	0.640 ± 0.156	0.722 ± 0.130	0.832 ± 0.102	0.750 ± 0.106	0.824 ± 0.104 $1,2,4,6$	0.746 ± 0.117
ecoli - 0-1-4-7- vs -2-3-5-6	0.668 ± 0.121	0.783 ± 0.140	0.828 ± 0.101 $1,2,4$	0.784 ± 0.101	0.856 ± 0.091 $1,2,3,4$	0.839 ± 0.102 $1,2,4$
shuttle-c0-vs-c4	0.989 ± 0.013	0.989 ± 0.013	0.994 ± 0.009	0.993 ± 0.010	0.994 ± 0.009	0.993 ± 0.010 1.2
ecoli-0-6-7- vs -3-5	0.633 ± 0.171	0.746 ± 0.132	0.826 ± 0.104 $1,2,4,6$	0.729 ± 0.102	0.824 ± 0.108 $1,2,4,6$	0.729 ± 0.118
vowel0	0.903 ± 0.024 3,4,6	0.926 ± 0.028 $1,3,4,6$	0.875 ± 0.062	0.810 ± 0.061	0.915 ± 0.051 $1,3,4,6$	0.877 ± 0.048
glass4	0.772 ± 0.145 4.6	0.805 ± 0.145 $1,4,6$	0.751 ± 0.145 4.6	0.607 ± 0.156	0.771 ± 0.141 4.6	0.658 ± 0.145
yeast - 0 - 5 - 6 - 7 - 9 - vs - 4	0.500 ± 0.022	0.737 ± 0.127	0.798 ± 0.051 $1,2,4,6$	0.669 ± 0.080	0.804 ± 0.052 $1,2,4,6$	$0.740 \stackrel{4}{\pm} 0.087$ 1.4
yeast-0-2-5-6-vs-3-7-8-9	0.776 ± 0.049 3,4,5,6	0.777 ± 0.045 $3,4,5,6$	0.720 ± 0.054 4.6	0.581 ± 0.038	0.751 ± 0.057 $3,4,6$	0.593 ± 0.058
ecoli- 0 - 1 - vs - 2 - 3 - 5	0.627 ± 0.170	0.849 ± 0.119	0.854 ± 0.098	0.862 ± 0.081	0.854 ± 0.098	0.862 ± 0.079
ecoli-0-3-4-vs-5	0.854 ± 0.110	0.899 ± 0.107	0.909 ± 0.104 1.2	0.890 ± 0.101	0.904 ± 0.103 1.2	0.886 ± 0.100
glass5	0.895 ± 0.155 3	0.885 ± 0.156	0.893 ± 0.165	0.869 ± 0.174	0.898 ± 0.156 $1,2$	0.869 ± 0.167
yeast4	0.525 ± 0.025	0.595 ± 0.046 ₁	0.805 ± 0.068 $1,2,6$	0.783 ± 0.079 $1,2,6$	0.809 ± 0.069 $1,2,3,6$	0.716 ± 0.067 $1,2$
glass-0-4-vs-5	0.930 ± 0.119	0.915 ± 0.125	0.920 ± 0.145	0.920 ± 0.145	0.915 ± 0.146	0.915 ± 0.146
yeast6	0.638 ± 0.023	0.774 ± 0.031 ₁	0.888 ± 0.056	0.828 ± 0.071 $1,2$	0.887 ± 0.056 $1,2,4,6$	0.831 ± 0.076 $1,2$
page-blocks-1-3-vs-4	0.774 ± 0.102	0.818 ± 0.126 $1,3,4,6$ 0.702 ± 0.101	0.758 ± 0.106	0.738 ± 0.089 -	0.796 ± 0.108	0.754 ± 0.090
yeast-1-vs-7	0.594 ± 0.042		0.664 ± 0.093 $1,5$	0.641 ± 0.087 ₁	0.656 ± 0.098 1	0.671 ± 0.106 $1,4$
ecoli-0-1-3-7-vs-2-6	0.845 ± 0.200 $4,6$	0.846 ± 0.199 $5,6$	0.842 ± 0.203 ₄	0.838 ± 0.200 $-$	0.839 ± 0.204 ₄	0.844 ± 0.200 $3,5$
yeast-1-4-5-8-vs-7	0.546 ± 0.014	0.582 ± 0.055	0.630 ± 0.098 1,2,4,6 0.865 ± 0.110	0.592 ± 0.074 $1,6$	0.630 ± 0.098 1.2,4,6 0.870 ± 0.104	0.580 ± 0.075
ecoli-0-1-4-7-vs-5-6	0.842 ± 0.128	0.878 ± 0.114 0.784 ± 0.111		0.802 ± 0.092		0.849 ± 0.081 ₄
yeast-2-vs-8	0.694 ± 0.078	all	0.776 ± 0.111 1	0.771 ± 0.109 ₁	0.776 ± 0.111	$0.771 \stackrel{4}{\pm} 0.109$
yeast-0-2-5-7-9-vs-3-6-8	0.542 ± 0.025	0.829 ± 0.097 ₁	0.901 ± 0.034 $1,2,4,6$	0.863 ± 0.043 ₁	0.902 ± 0.034 $1,2,4,6$	0.891 ± 0.040 $1,2,4$
glass2	0.618 ± 0.101	0.648 ± 0.128 ₁	$0.740 \pm 0.109 \\ 1,2,4,6$	$0.687 \pm 0.129 \\ 1,2$	0.739 ± 0.109 1,2,4,6	0.690 ± 0.137 $1,2$

Table 9: Results for AUC metric

	OSB (1) OKNORAU (2) TBAC (3) TBAW (4) OTBAC (5) OTBAW (6)								
Mean rank	2.305	4.012	4.549	2.439	4.695	3.000			
	_	1,4,6	1,4,6	_	1,4,6	4			

Table 10: Results for mean ranks according to AUC metric

Dataset	OSB (1)	OKNORAU (2)	TBAC (3)	TBAW (4)	OTBAC (5)	OTBAW (6)
glass-0-1-6-vs-2	0.515 ± 0.130	0.568 ± 0.183	0.703 ± 0.121	0.559 ± 0.265	0.705 ± 0.122	0.600 ± 0.239
ecoli-0-3-4-7-vs-5-6	0.828 ± 0.090	0.890 ± 0.083	0.876 ± 0.086	0.793 ± 0.141	0.876 ± 0.086	0.809 ± 0.144
shuttle-c2-vs-c4	0.999 ± 0.005	0.999 ± 0.005	0.702 ± 0.443	0.669 ± 0.446	0.702 ± 0.443	$0.695 \stackrel{-}{\pm} 0.440$
glass-0-1-4-6-vs-2	0.526 ± 0.144	0.579 ± 0.190	0.719 ± 0.109	0.560 ± 0.267	$0.718 \stackrel{-}{\pm} 0.107$	$0.608 \stackrel{-}{\pm} 0.188$
yeast-1-2-8-9-vs-7	0.284 ± 0.042	$0.493 \stackrel{1}{\pm} 0.042$	0.653 ± 0.116	0.561 ± 0.072	0.653 ± 0.116	$0.546\stackrel{1}{\pm}0.080$
ecoli-0-1-4-6-vs-5	0.887 ± 0.092	0.896 ± 0.096	0.890 ± 0.090	0.824 ± 0.105	0.894 ± 0.087	0.823 ± 0.108
$glass \hbox{-} 0 \hbox{-} 1 \hbox{-} 6 \hbox{-} vs \hbox{-} 5$	0.874 ± 0.249	0.846 ± 0.251	0.814 ± 0.249	0.794 ± 0.272	0.814 ± 0.249	$0.808 \stackrel{-}{\pm} 0.248$
yeast-2- vs -4	0.413 ± 0.215	$0.840 \stackrel{-}{\pm} 0.126$	0.841 ± 0.084	0.792 ± 0.121	0.844 ± 0.084	$0.820 \stackrel{-}{\pm} 0.122$
$glass\hbox{-} 0\hbox{-} 6\hbox{-} vs\hbox{-} 5$	0.880 ± 0.276	0.857 ± 0.278	0.755 ± 0.332	0.726 ± 0.364	0.755 ± 0.332	0.726 ± 0.364
ecoli-0-3-4-6- vs -5	0.820 ± 0.102	0.894 ± 0.111	0.885 ± 0.096	0.838 ± 0.139	$0.884 \stackrel{-}{\pm} 0.096$	$0.841 \stackrel{-}{\pm} 0.140$
yeast - 0 - 3 - 5 - 9 - vs - 7 - 8	0.310 ± 0.063	0.694 ± 0.089	$0.562 \stackrel{1}{\pm} 0.132$	0.472 ± 0.125	$0.593 \stackrel{1}{\pm} 0.126$	$0.480 \stackrel{-}{\pm} 0.113$
$glass\hbox{-} 0\hbox{-} 1\hbox{-} 5\hbox{-} vs\hbox{-} 2$	0.453 ± 0.116	0.576 ± 0.201	0.685 ± 0.145	0.528 ± 0.259	0.683 ± 0.145	$0.540\stackrel{1}{\pm}0.269$
ecoli-0-6-7-vs-5	0.831 ± 0.107	0.871 ± 0.104	0.853 ± 0.124	0.772 ± 0.128	0.845 ± 0.123	0.772 ± 0.159
ecoli- 0 - 2 - 3 - 4 - vs - 5	0.842 ± 0.095	0.897 ± 0.090	0.897 ± 0.086	0.853 ± 0.110	0.894 ± 0.085	$0.852 \stackrel{-}{\pm} 0.112$
ecoli4	0.893 ± 0.065	0.931 ± 0.068	0.928 ± 0.091	0.846 ± 0.142	$0.930 \stackrel{1}{\pm} 0.090$	$0.895 \stackrel{-}{\pm} 0.135$
yeast5	0.776 ± 0.037	0.832 ± 0.026	0.971 ± 0.024	0.963 ± 0.038	0.971 ± 0.024	$0.965 \stackrel{4}{\pm} 0.037$
ecoli-0-4-6- vs -5	0.883 ± 0.107	$0.895 \stackrel{1}{\pm} 0.103$	0.895 ± 0.090	0.844 ± 0.137	0.895 ± 0.090	0.847 ± 0.132
$led 7 digit \hbox{-} 0 \hbox{-} 2 \hbox{-} 4 \hbox{-} 5 \hbox{-} 6 \hbox{-} 7 \hbox{-} 8 \hbox{-} 9 \hbox{-} vs \hbox{-} 1$	0.868 ± 0.067	$0.871\overset{1,6}{\pm}0.071$	0.548 ± 0.179	0.892 ± 0.103	0.548 ± 0.178	$0.878 \stackrel{-}{\pm} 0.112$
ecoli- 0 - 1 - vs - 5	0.822 ± 0.186	0.896 ± 0.094	0.891 ± 0.086	0.882 ± 0.097	0.894 ± 0.082	0.876 ± 0.098
ecoli - 0 - 2 - 6 - 7 - vs - 3 - 5	0.436 ± 0.331	0.633 ± 0.241	0.812 ± 0.128	0.700 ± 0.148	0.802 ± 0.130	0.684 ± 0.198
ecoli - 0 - 1 - 4 - 7 - vs - 2 - 3 - 5 - 6	0.539 ± 0.226	0.725 ± 0.211	0.801 ± 0.128	0.743 ± 0.137	0.837 ± 0.115	0.814 ± 0.134
shuttle-c0-vs-c4	0.989 ± 0.013	0.989 ± 0.013	0.994 ± 0.009	0.993 ± 0.010	0.994 ± 0.009	0.993 ± 0.010
ecoli-0-6-7- vs -3-5	0.383 ± 0.366	0.675 ± 0.217	0.803 ± 0.128	0.667 ± 0.165	0.799 ± 0.135	0.663 ± 0.183
vowel0	0.902 ± 0.024	0.925 ± 0.028	0.864 ± 0.072	0.785 ± 0.078	0.911 ± 0.055	0.871 ± 0.055
glass4	0.725 ± 0.231	0.762 ± 0.219	0.671 ± 0.275	0.344 ± 0.358	0.710 ± 0.246	0.487 ± 0.323
yeast - 0 - 5 - 6 - 7 - 9 - vs - 4	$0.140 \overset{4,6}{\pm} 0.059$	0.685 ± 0.214	0.790 ± 0.057	0.591 ± 0.142	0.799 ± 0.054 $1,2,4,6$	0.704 ± 0.136
yeast - 0 - 2 - 5 - 6 - vs - 3 - 7 - 8 - 9	0.752 ± 0.064 $3,4,5,6$	0.753 ± 0.057	0.667 ± 0.079	0.402 ± 0.095	0.712 ± 0.078	0.424 ± 0.121
ecoli-0-1- vs -2-3-5	0.348 ± 0.370	$3,4,5,6 \\ 0.822 \pm 0.155$	0.833 ± 0.125	0.846 ± 0.096	0.833 ± 0.125	0.846 ± 0.094
ecoli-0-3-4-vs-5	0.846 ± 0.119	0.890 ± 0.127	0.898 ± 0.125	0.877 ± 0.123	0.893 ± 0.125	0.873 ± 0.121
glass5	0.846 ± 0.275	0.835 ± 0.275 $3,4$	0.834 ± 0.302	0.797 ± 0.320	0.848 ± 0.278 $1,2$	0.805 ± 0.299
yeast4	$0.274 \stackrel{3}{\pm} 0.045$	0.480 ± 0.058	0.794 ± 0.082 $1,2,6$	0.774 ± 0.093 $1,2,6$	0.799 ± 0.083 $1,2,3,6$	0.692 ± 0.075 $1,2$
glass - 0 - 4 - vs - 5	0.910 ± 0.176	0.893 ± 0.181	0.881 ± 0.251	0.881 ± 0.251	0.876 ± 0.251	0.876 ± 0.251
yeast6	0.528 ± 0.048	0.750 ± 0.043	0.884 ± 0.062	0.821 ± 0.080	0.883 ± 0.062 $1,2,4,6$	0.823 ± 0.084 $1,2$
$page-blocks\hbox{-} 1\hbox{-} 3\hbox{-} vs\hbox{-} 4$	0.741 ± 0.138	0.791 ± 0.163	0.712 ± 0.145	0.687 ± 0.129	0.763 ± 0.146	0.711 ± 0.126
yeast-1- vs -7	0.453 ± 0.059	0.681 ± 0.130	0.637 ± 0.114 $1,4$	0.526 ± 0.170	0.631 ± 0.121 $1,4$	0.603 ± 0.182
ecoli-0-1-3-7-vs-2-6	0.738 ± 0.385 $4,6$	0.738 ± 0.386 $4,6$	0.737 ± 0.384 $4,6$	0.729 ± 0.383	0.735 ± 0.383 $4,6$	0.735 ± 0.385
yeast-1-4-5-8- vs -7	0.301 ± 0.049	0.473 ± 0.051	0.603 ± 0.142	0.539 ± 0.095	0.602 ± 0.142	0.518 ± 0.095
ecoli - 0 - 1 - 4 - 7 - vs - 5 - 6	0.812 ± 0.171	0.860 ± 0.149	0.839 ± 0.171	0.768 ± 0.126	0.845 ± 0.166	0.832 ± 0.097
yeast-2- vs -8	0.636 ± 0.094	0.736 ± 0.176	0.728 ± 0.153	0.722 ± 0.151	0.728 ± 0.153	0.722 ± 0.151
yeast - 0 - 2 - 5 - 7 - 9 - vs - 3 - 6 - 8	0.301 ± 0.068	0.810 ± 0.134	0.897 ± 0.037 $1,2,4,6$	0.854 ± 0.049	0.899 ± 0.037 $1,2,4,6$	0.886 ± 0.043 $1,2,4$
glass2	0.570 ± 0.110	0.627 ± 0.145	0.732 ± 0.113 $1,2,4,6$	0.659 ± 0.165	$0.731 \pm 0.113 \\ 1,2,4,6$	0.668 ± 0.167 $1,2$

Table 11: Results for GMEAN metric

	OSB (1) OKNORAU (2) TBAC (3) TBAW (4) OTBAC (5) OTBAW (6)								
Mean rank	2.305	4.256	4.512	2.366	4.707	2.854			
	_	1,4,6	1,4,6	_	1,4,6	4			

Table 12: Results for mean ranks according to GMEAN metric