Table 1: each cell shows "value ± std" with significance markers (comparison indices) in brackets below the value; "[−]" denotes no significant difference and "[all]" denotes significantly better than all others.

Dataset	kNN (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
glass-0-1-6-vs-2	0.522 ± 0.062 [−]	0.686 ± 0.128 [1]	0.679 ± 0.126 [1]	0.763 ± 0.092 [all]	0.745 ± 0.090 [1,2,3,6,7]	0.698 ± 0.094 [1]	0.695 ± 0.096 [1]
ecoli-0-3-4-7-vs-5-6	0.869 ± 0.097 [−]	0.900 ± 0.071 [3,6,7]	0.898 ± 0.071 [7]	0.879 ± 0.074 [−]	0.878 ± 0.078 [−]	0.895 ± 0.080 [1,7]	0.888 ± 0.075 [−]
shuttle-c2-vs-c4	0.585 ± 0.177 [−]	0.995 ± 0.034 [1,4,5,6,7]	0.995 ± 0.034 [1,4,5,6,7]	0.855 ± 0.218 [1,6]	0.875 ± 0.207 [1,6]	0.775 ± 0.235 [1]	0.885 ± 0.201 [1,6]
glass-0-1-4-6-vs-2	0.518 ± 0.062 [−]	0.707 ± 0.110 [1]	0.699 ± 0.122 [1]	0.750 ± 0.113 [1,5,6,7]	0.740 ± 0.106 [1,3,6,7]	0.708 ± 0.106 [1]	0.709 ± 0.104 [1]
yeast-1-2-8-9-vs-7	0.508 ± 0.024 [−]	0.640 ± 0.086 [1]	0.650 ± 0.087 [1]	0.649 ± 0.091 [1]	0.643 ± 0.095 [1]	0.682 ± 0.092 [1,2,3,4,5]	0.695 ± 0.093 [1,2,3,4,5]
ecoli-0-1-4-6-vs-5	0.886 ± 0.091 [−]	0.920 ± 0.075 [3,4,5,6,7]	0.918 ± 0.074 [6,7]	0.901 ± 0.080 [−]	0.903 ± 0.077 [6]	0.902 ± 0.079 [4]	0.905 ± 0.079 [4,5]
glass-0-1-6-vs-5	0.668 ± 0.151 [−]	0.884 ± 0.147 [1,4,5,7]	0.879 ± 0.150 [1,5,7]	0.845 ± 0.160 [1]	0.833 ± 0.159 [1]	0.855 ± 0.153 [1,5]	0.860 ± 0.154 [1,6]
yeast-2-vs-4	0.820 ± 0.066 [−]	0.877 ± 0.063 [1,4,5]	0.879 ± 0.061 [1,4,5]	0.839 ± 0.063 [−]	0.846 ± 0.065 [1]	0.888 ± 0.060 [1,4,5,7]	0.886 ± 0.054 [1,4,5]
glass-0-6-vs-5	0.714 ± 0.194 [−]	0.920 ± 0.139 [1,4,5,6,7]	0.930 ± 0.113 [1,4,5,6,7]	0.810 ± 0.175 [1]	0.817 ± 0.180 [1]	0.816 ± 0.174 [1]	0.861 ± 0.163 [1]
ecoli-0-3-4-6-vs-5	0.895 ± 0.094 [−]	0.917 ± 0.087 [3,4,5,6,7]	0.914 ± 0.087 [4,5,6,7]	0.896 ± 0.088 [1]	0.900 ± 0.090 [1,7]	0.902 ± 0.091 [7]	0.897 ± 0.090 [4]
yeast-0-3-5-9-vs-7-8	0.641 ± 0.058 [−]	0.707 ± 0.060 [1,3,4,5]	0.706 ± 0.059 [1,4,5]	0.652 ± 0.067 [−]	0.650 ± 0.061 [−]	0.713 ± 0.069 [1,4,5]	0.717 ± 0.060 [1,4,5]
glass-0-1-5-vs-2	0.533 ± 0.066 [−]	0.682 ± 0.145 [1]	0.681 ± 0.142 [1]	0.728 ± 0.131 [1,3,5,6,7]	0.727 ± 0.108 [1,3,6,7]	0.672 ± 0.110 [1]	0.674 ± 0.107 [1]
ecoli-0-6-7-vs-5	0.840 ± 0.108 [−]	0.872 ± 0.098 [4,7]	0.874 ± 0.096 [7]	0.869 ± 0.102 [6]	0.865 ± 0.100 [−]	0.869 ± 0.099 [7]	0.863 ± 0.100 [−]
ecoli-0-2-3-4-vs-5	0.890 ± 0.083 [−]	0.913 ± 0.080 [3,6,7]	0.910 ± 0.079 [7]	0.907 ± 0.080 [7]	0.908 ± 0.080 [7]	0.908 ± 0.081 [4,5,7]	0.903 ± 0.079 [−]
ecoli4	0.894 ± 0.100 [−]	0.919 ± 0.097 [−]	0.918 ± 0.097 [−]	0.924 ± 0.091 [2,3]	0.938 ± 0.081 [1,2,3,6,7]	0.932 ± 0.076 [1,4]	0.932 ± 0.073 [1,6]
yeast5	0.821 ± 0.064 [−]	0.935 ± 0.049 [1,3]	0.934 ± 0.053 [1]	0.926 ± 0.061 [1]	0.940 ± 0.052 [1]	0.974 ± 0.017 [all]	0.972 ± 0.018 [1,2,3,4,5]
ecoli-0-4-6-vs-5	0.901 ± 0.084 [7]	0.916 ± 0.082 [4,5,6,7]	0.916 ± 0.081 [4,5,6,7]	0.902 ± 0.080 [1,7]	0.906 ± 0.083 [1,7]	0.902 ± 0.083 [1,7]	0.899 ± 0.083 [1]
led7digit-0-2-4-5-6-7-8-9-vs-1	0.635 ± 0.077 [4]	0.899 ± 0.069 [1,4,5,6,7]	0.878 ± 0.086 [1,4,5,6,7]	0.615 ± 0.080 [−]	0.651 ± 0.087 [4]	0.877 ± 0.064 [1,4,5]	0.879 ± 0.051 [1,4,5]
ecoli-0-1-vs-5	0.891 ± 0.089 [−]	0.920 ± 0.074	0.918 ± 0.074	0.903 ± 0.081	0.908 ± 0.075	0.916 ± 0.075	0.917 ± 0.074
ecoli-0-2-6-7-vs-3-5	0.797 ± 0.125 [−]	0.856 ± 0.087 [1,6,7]	0.872 ± 0.081 [1,4,5,6,7]	0.831 ± 0.109 [−]	0.835 ± 0.103 [−]	0.834 ± 0.086 [1,7]	0.826 ± 0.082 [−]
ecoli-0-1-4-7-vs-2-3-5-6	0.833 ± 0.100 [−]	0.848 ± 0.082 [6,7]	0.850 ± 0.081 [6,7]	0.861 ± 0.081 [2,3,6,7]	0.858 ± 0.081 [2,3,6,7]	0.830 ± 0.080 [7]	0.828 ± 0.077 [−]
shuttle-c0-vs-c4	0.996 ± 0.008 [−]	0.996 ± 0.008 [−]	0.996 ± 0.008 [−]	0.995 ± 0.008 [−]	0.995 ± 0.008 [−]	0.995 ± 0.008 [−]	0.995 ± 0.008 [−]
ecoli-0-6-7-vs-3-5	0.792 ± 0.119 [−]	0.845 ± 0.104 [6]	0.861 ± 0.102 [1,6,7]	0.826 ± 0.104 [−]	0.829 ± 0.105 [−]	0.829 ± 0.097 [1]	0.831 ± 0.088 [1]
vowel0	0.970 ± 0.038 [4,5]	0.999 ± 0.002 [1,4,5,6,7]	0.999 ± 0.002 [1,4,5,6,7]	0.804 ± 0.068 [−]	0.895 ± 0.062 [4]	0.976 ± 0.029 [4,5]	0.966 ± 0.032 [4,5]
glass4	0.750 ± 0.158 [−]	0.909 ± 0.143 [1,4,5,6,7]	0.909 ± 0.143 [1,4,5,6,7]	0.786 ± 0.141 [−]	0.797 ± 0.148 [−]	0.827 ± 0.119 [1]	0.847 ± 0.128 [1,4]
yeast-0-5-6-7-9-vs-4	0.649 ± 0.074 [−]	0.805 ± 0.060 [1,3,4,5]	0.804 ± 0.059 [1,4]	0.785 ± 0.054 [1]	0.789 ± 0.050 [1]	0.796 ± 0.051 [1]	0.794 ± 0.047 [1]
yeast-0-2-5-6-vs-3-7-8-9	0.756 ± 0.042 [−]	0.795 ± 0.046 [all]	0.790 ± 0.045 [1,4,5,6,7]	0.765 ± 0.052 [−]	0.776 ± 0.053 [1,4]	0.768 ± 0.042 [−]	0.768 ± 0.040 [−]
ecoli-0-1-vs-2-3-5	0.833 ± 0.093 [−]	0.879 ± 0.093 [1,7]	0.877 ± 0.091 [1,7]	0.855 ± 0.090 [6,7]	0.859 ± 0.087 [1,6,7]	0.852 ± 0.090 [7]	0.841 ± 0.096 [−]
ecoli-0-3-4-vs-5	0.903 ± 0.105 [−]	0.916 ± 0.100 [3,6,7]	0.913 ± 0.098 [7]	0.912 ± 0.104 [6,7]	0.911 ± 0.104 [7]	0.910 ± 0.103 [7]	0.906 ± 0.101 [1]
glass5	0.648 ± 0.165 [−]	0.820 ± 0.198 [1,4]	0.829 ± 0.199 [1,4]	0.815 ± 0.180 [1]	0.837 ± 0.180 [1,3,6]	0.829 ± 0.167 [1,3,4]	0.859 ± 0.165 [1]
yeast4	0.555 ± 0.043 [−]	0.724 ± 0.072 [1]	0.728 ± 0.076 [1]	0.747 ± 0.071 [1,2]	0.749 ± 0.071 [1,2]	0.812 ± 0.065 [1,2,3,4,5]	0.820 ± 0.061 [1,2,3,4,5]
glass-0-4-vs-5	0.744 ± 0.204 [−]	0.971 ± 0.064 [1,4,5,6,7]	0.981 ± 0.045 [1,4,5,6,7]	0.838 ± 0.156 [−]	0.856 ± 0.159 [1]	0.898 ± 0.135 [1]	0.913 ± 0.127 [1,4,5]
yeast6	0.757 ± 0.091 [−]	0.811 ± 0.097 [1]	0.813 ± 0.098 [1]	0.839 ± 0.088 [1,2,3]	0.845 ± 0.082 [1,2,3]	0.879 ± 0.056 [all]	0.875 ± 0.055 [1,2,3,4,5]
page-blocks-1-3-vs-4	0.818 ± 0.106 [4]	0.929 ± 0.073 [1,4,5,7]	0.930 ± 0.072 [1,4,5,7]	0.758 ± 0.099 [−]	0.794 ± 0.100 [4]	0.927 ± 0.064 [1,4,5]	0.913 ± 0.080 [1,4,5]
yeast-1-vs-7	0.529 ± 0.043 [−]	0.646 ± 0.099 [1]	0.661 ± 0.105 [1,5]	0.637 ± 0.092 [1]	0.622 ± 0.098 [1]	0.680 ± 0.110 [1,2,4,5]	0.690 ± 0.107 [1,2,4,5]
ecoli-0-1-3-7-vs-2-6	0.850 ± 0.200 [all]	0.840 ± 0.197 [6,7]	0.841 ± 0.197 [6,7]	0.842 ± 0.208 [5,6,7]	0.837 ± 0.206 [6,7]	0.700 ± 0.201 [−]	0.821 ± 0.196 [6]
yeast-1-4-5-8-vs-7	0.501 ± 0.010 [−]	0.580 ± 0.079 [1]	0.588 ± 0.086 [1]	0.596 ± 0.086 [1]	0.594 ± 0.091 [1]	0.653 ± 0.104 [all]	0.651 ± 0.098 [1,2,3,4,5]
ecoli-0-1-4-7-vs-5-6	0.865 ± 0.098 [−]	0.907 ± 0.070 [6,7]	0.908 ± 0.067 [2,6,7]	0.894 ± 0.078 [−]	0.889 ± 0.083 [−]	0.897 ± 0.061 [7]	0.894 ± 0.059 [−]
yeast-2-vs-8	0.774 ± 0.114 [−]	0.784 ± 0.122 [1,4,5]	0.790 ± 0.112 [2,6]	0.773 ± 0.116 [−]	0.776 ± 0.111 [−]	0.783 ± 0.111 [−]	0.787 ± 0.105 [6]
yeast-0-2-5-7-9-vs-3-6-8	0.892 ± 0.042 [−]	0.896 ± 0.039 [3,7]	0.894 ± 0.041 [7]	0.897 ± 0.039 [7]	0.901 ± 0.038 [1,3,6,7]	0.889 ± 0.033 [7]	0.882 ± 0.031 [7]
glass2	0.547 ± 0.083 [−]	0.710 ± 0.131 [1]	0.703 ± 0.111 [1]	0.755 ± 0.106 [1,2,3,6,7]	0.757 ± 0.103 [all]	0.721 ± 0.095 [1]	0.721 ± 0.095 [1]

Table 1: Results for BAC metric

	kNN (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
Mean rank	1.561 [−]	5.232 [1,4,5,6]	5.207 [1,4,5]	3.402 [1]	3.988 [1,4]	4.329 [1,4]	4.280 [1]

Table 2: Results for mean ranks according to BAC metric

Table 3: Results for F1 metric. (Each dataset row shows the mean ± standard deviation on the first line and the statistical-significance group markers on the second line.)

Dataset	kNN (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
glass-0-1-6-vs-2	0.088 ± 0.169	0.352 ± 0.163	0.337 ± 0.158	0.350 ± 0.090	0.316 ± 0.077	0.264 ± 0.067	0.261 ± 0.064
	—	1,6,7	1,6,7	1,5,6,7	1,6,7	1	1
ecoli-0-3-4-7-vs-5-6	0.813 ± 0.131	0.773 ± 0.101	0.753 ± 0.100	0.795 ± 0.115	0.787 ± 0.121	0.694 ± 0.136	0.651 ± 0.127
	2,3,6,7	3,6,7	6,7	3,6,7	3,6,7	7	—
shuttle-c2-vs-c4	0.180 ± 0.366	0.993 ± 0.046	0.993 ± 0.046	0.720 ± 0.433	0.760 ± 0.411	0.567 ± 0.472	0.780 ± 0.397
	—	1,4,5,6,7	1,4,5,6,7	1,6	1,6	1	1,6
glass-0-1-4-6-vs-2	0.074 ± 0.165	0.358 ± 0.140	0.350 ± 0.160	0.334 ± 0.104	0.313 ± 0.097	0.271 ± 0.088	0.269 ± 0.079
	—	1,5,6,7	1,5,6,7	1,5,6,7	1,6,7	1	1,6
yeast-1-2-8-9-vs-7	0.026 ± 0.079	0.249 ± 0.132	0.250 ± 0.121	0.175 ± 0.078	0.162 ± 0.088	0.150 ± 0.050	0.153 ± 0.050
	—	1,5,6,7	1,5,6,7	1,5,6,7	1	1	1
ecoli-0-1-4-6-vs-5	0.845 ± 0.127	0.855 ± 0.112	0.832 ± 0.103	0.823 ± 0.111	0.814 ± 0.108	0.771 ± 0.125	0.758 ± 0.114
	5,6,7	3,5,6,7	6,7	6,7	6,7	—	—
glass-0-1-6-vs-5	0.332 ± 0.282	0.611 ± 0.253	0.612 ± 0.264	0.547 ± 0.250	0.521 ± 0.244	0.564 ± 0.243	0.544 ± 0.241
	—	1,5,7	1,5,7	1	1	1,5,7	1
yeast-2-vs-4	0.752 ± 0.104	0.766 ± 0.090	0.762 ± 0.092	0.760 ± 0.096	0.764 ± 0.097	0.666 ± 0.078	0.644 ± 0.080
	6,7	6,7	6,7	6,7	6,7	7	—
glass-0-6-vs-5	0.490 ± 0.393	0.785 ± 0.266	0.801 ± 0.219	0.661 ± 0.314	0.657 ± 0.329	0.660 ± 0.321	0.721 ± 0.285
	—	1,4,5,6	1,4,5,6,7	1	1	1	1
ecoli-0-3-4-6-vs-5	0.853 ± 0.140	0.852 ± 0.131	0.830 ± 0.130	0.778 ± 0.148	0.779 ± 0.153	0.764 ± 0.151	0.737 ± 0.147
	4,5,6,7	3,4,5,6,7	4,5,6,7	7	7	7	—
yeast-0-3-5-9-vs-7-8	0.397 ± 0.126	0.403 ± 0.080	0.393 ± 0.077	0.401 ± 0.130	0.396 ± 0.127	0.338 ± 0.066	0.331 ± 0.054
	6,7	3,6,7	6,7	6,7	6,7	—	—
glass-0-1-5-vs-2	0.113 ± 0.179	0.346 ± 0.179	0.336 ± 0.169	0.335 ± 0.115	0.321 ± 0.098	0.264 ± 0.075	0.265 ± 0.075
	—	1,6,7	1,6,7	1,5,6,7	1,6,7	—	—
ecoli-0-6-7-vs-5	0.774 ± 0.170	0.727 ± 0.153	0.719 ± 0.148	0.782 ± 0.169	0.769 ± 0.166	0.674 ± 0.164	0.620 ± 0.158
	2,3,6,7	6,7	6,7	1,5,6,7	1,6,7	7	—
ecoli-0-2-3-4-vs-5	0.852 ± 0.121	0.825 ± 0.129	0.806 ± 0.128	0.826 ± 0.134	0.819 ± 0.134	0.796 ± 0.137	0.764 ± 0.131
	3,5,6,7	3,6,7	7	2,3,6,7	2,3,6,7	7	—
ecoli4	0.853 ± 0.143	0.802 ± 0.141	0.794 ± 0.140	0.867 ± 0.136	0.870 ± 0.133	0.740 ± 0.133	0.706 ± 0.124
	3,6,7	6,7	6,7	2,3,6,7	2,3,6,7	7	—
yeast5	0.706 ± 0.114	0.706 ± 0.078	0.694 ± 0.081	0.707 ± 0.091	0.698 ± 0.080	0.606 ± 0.064	0.593 ± 0.059
	6,7	6,7	6,7	2,3,6,7	2,3,6,7	7	—
ecoli-0-4-6-vs-5	0.860 ± 0.134	0.851 ± 0.141	0.846 ± 0.134	0.794 ± 0.133	0.793 ± 0.142	0.780 ± 0.146	0.751 ± 0.145
	4,5,6,7	3,6,7	6,7	7	7	7	—
led7digit-0-2-4-5-6-7-8-9-vs-1	0.388 ± 0.185	0.672 ± 0.094	0.661 ± 0.121	0.324 ± 0.185	0.389 ± 0.184	0.593 ± 0.114	0.525 ± 0.073
	4	1,4,5,6,7	1,4,5,6,7	—	4	1,4,5,7	1,4,5
ecoli-0-1-vs-5	0.855 ± 0.117	0.865 ± 0.105	0.847 ± 0.106	0.869 ± 0.108	0.874 ± 0.102	0.851 ± 0.116	0.842 ± 0.114
	4	1,4,5,6,7	1,4,5,6,7	—	4	1,4,5	1,4,5
ecoli-0-2-6-7-vs-3-5	0.699 ± 0.217	0.727 ± 0.135	0.723 ± 0.130	0.728 ± 0.186	0.728 ± 0.174	0.620 ± 0.151	0.569 ± 0.140
	—	—	—	—	3,6,7	—	—
ecoli-0-1-4-7-vs-2-3-5-6	0.773 ± 0.159	0.688 ± 0.123	0.683 ± 0.117	0.798 ± 0.119	0.786 ± 0.121	0.557 ± 0.127	0.516 ± 0.110
	6,7	6,7	6,7	6,7	6,7	7	—
shuttle-c0-vs-c4	0.996 ± 0.008	0.996 ± 0.008	0.996 ± 0.008	0.995 ± 0.008	0.995 ± 0.008	0.995 ± 0.008	0.995 ± 0.008
	2,3,6,7	6,7	6,7	2,3,6,7	2,3,6,7	7	—
ecoli-0-6-7-vs-3-5	0.689 ± 0.199	0.708 ± 0.167	0.710 ± 0.164	0.719 ± 0.180	0.722 ± 0.177	0.617 ± 0.175	0.587 ± 0.161
	—	—	—	—	—	—	—
vowel0	0.963 ± 0.046	0.989 ± 0.020	0.990 ± 0.019	0.706 ± 0.115	0.827 ± 0.085	0.871 ± 0.062	0.878 ± 0.054
	6,7	1,4,5,6,7	1,4,5,6,7	—	4	4,5	4,5
glass4	0.572 ± 0.309	0.709 ± 0.248	0.704 ± 0.247	0.535 ± 0.231	0.541 ± 0.245	0.545 ± 0.198	0.568 ± 0.201
	4	1,4,5,6,7	1,4,5,6,7	—	4	4,5	4,5
yeast-0-5-6-7-9-vs-4	0.405 ± 0.157	0.564 ± 0.089	0.557 ± 0.086	0.558 ± 0.082	0.548 ± 0.090	0.410 ± 0.051	0.399 ± 0.044
	4	1,4,5,6,7	1,4,5,6,7	—	—	—	—
yeast-0-2-5-6-vs-3-7-8-9	0.626 ± 0.075	0.554 ± 0.064	0.536 ± 0.062	0.621 ± 0.086	0.625 ± 0.088	0.396 ± 0.049	0.383 ± 0.041
	2,3,6,7	3,6,7	6,7	1,6,7	1,6,7	7	—
ecoli-0-1-vs-2-3-5	0.773 ± 0.150	0.752 ± 0.141	0.742 ± 0.137	0.803 ± 0.136	0.807 ± 0.131	0.725 ± 0.151	0.630 ± 0.157
	2,3,6,7	3,6,7	6,7	2,3,6,7	1,2,3,6,7	7	—
ecoli-0-3-4-vs-5	0.861 ± 0.162	0.840 ± 0.156	0.817 ± 0.154	0.822 ± 0.162	0.817 ± 0.164	0.803 ± 0.171	0.773 ± 0.161
	3,4,5,6,7	3,6,7	7	2,3,6,7	7	7	—
glass5	0.325 ± 0.332	0.540 ± 0.320	0.543 ± 0.321	0.454 ± 0.250	0.447 ± 0.229	0.424 ± 0.200	0.459 ± 0.211
	—	1,4,5,6,7	1,4,5,6,7	6,7	7	7	7
yeast4	0.170 ± 0.122	0.385 ± 0.101	0.375 ± 0.100	0.384 ± 0.093	0.392 ± 0.091	0.307 ± 0.052	0.298 ± 0.044
	—	1,4,5,6,7	1,4,5,6,7	1,6	1,6	—	1
glass-0-4-vs-5	0.547 ± 0.415	0.891 ± 0.147	0.903 ± 0.138	0.646 ± 0.272	0.669 ± 0.276	0.718 ± 0.248	0.727 ± 0.239
	—	1,3,6,7	1,6,7	1,6,7	1,6,7	1,7	1
yeast6	0.553 ± 0.158	0.473 ± 0.131	0.470 ± 0.134	0.528 ± 0.117	0.506 ± 0.112	0.330 ± 0.051	0.312 ± 0.044
	—	1,4,5,6,7	1,4,5,6,7	6,7	6,7	1	1,4,5
page-blocks-1-3-vs-4	0.648 ± 0.152	0.703 ± 0.113	0.709 ± 0.114	0.532 ± 0.175	0.615 ± 0.170	0.613 ± 0.105	0.615 ± 0.124
	2,3,5,6,7	6,7	6,7	2,3,5,6,7	2,3,6,7	7	—
yeast-1-vs-7	0.101 ± 0.143	0.294 ± 0.141	0.304 ± 0.139	0.230 ± 0.090	0.227 ± 0.110	0.224 ± 0.072	0.225 ± 0.068
	4	1,4,5,6,7	1,4,5,6,7	—	4	4	4
ecoli-0-1-3-7-vs-2-6	0.727 ± 0.386	0.533 ± 0.314	0.554 ± 0.334	0.668 ± 0.394	0.586 ± 0.353	0.279 ± 0.259	0.386 ± 0.260
	—	1,4,5,6,7	1,4,5,6,7	1	1	1	1
yeast-1-4-5-8-vs-7	0.004 ± 0.031	0.164 ± 0.107	0.169 ± 0.111	0.140 ± 0.065	0.133 ± 0.056	0.152 ± 0.052	0.147 ± 0.046
	all	6,7	6,7	2,3,5,6,7	6,7	—	6
ecoli-0-1-4-7-vs-5-6	0.812 ± 0.160	0.787 ± 0.111	0.773 ± 0.104	0.832 ± 0.108	0.820 ± 0.117	0.677 ± 0.119	0.644 ± 0.116
	—	1,5	1,5	1	1	1,5,7	1
yeast-2-vs-8	0.661 ± 0.209	0.551 ± 0.195	0.536 ± 0.170	0.661 ± 0.209	0.665 ± 0.200	0.359 ± 0.125	0.330 ± 0.103
	2,3,6,7	3,6,7	6,7	2,3,6,7	3,6,7	7	—
yeast-0-2-5-7-9-vs-3-6-8	0.829 ± 0.059	0.750 ± 0.052	0.736 ± 0.054	0.823 ± 0.054	0.822 ± 0.054	0.626 ± 0.056	0.583 ± 0.037
	2,3,6,7	3,6,7	6,7	2,3,6,7	2,3,6,7	7	—
glass2	0.152 ± 0.209	0.366 ± 0.169	0.356 ± 0.149	0.337 ± 0.106	0.328 ± 0.097	0.268 ± 0.065	0.268 ± 0.065
	—	1,5,6,7	1,5,6,7	1,5,6,7	1,6,7	1	1

Table 3: Results for F1 metric

	kNN (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
Mean rank	3.963	5.549	4.793	4.707	4.427	2.451	2.110
	6,7	1,3,5,6,7	6,7	6,7	6,7	7	—

Table 4: Results for mean ranks according to F1 metric

Dataset	kNN (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
glass-0-1-6-vs-2	0.161 ± 0.334 [−]	0.289 ± 0.172 [1,4,5,6,7]	0.271 ± 0.142 [1,4,5,6,7]	0.228 ± 0.069 [1,5,6,7]	0.199 ± 0.055 [1,6,7]	0.159 ± 0.044 [−]	0.156 ± 0.041 [−]
ecoli-0-3-4-7-vs-5-6	0.944 ± 0.091 [all]	0.747 ± 0.149 [3,6,7]	0.710 ± 0.148 [6,7]	0.837 ± 0.145 [2,3,6,7]	0.815 ± 0.140 [2,3,6,7]	0.594 ± 0.152 [7]	0.537 ± 0.149 [−]
shuttle-c2-vs-c4	0.200 ± 0.400 [−]	1.000 ± 0.000 [1,4,5,6,7]	1.000 ± 0.000 [1,4,5,6,7]	0.740 ± 0.438 [1]	0.780 ± 0.414 [1,6]	0.600 ± 0.489 [1]	0.800 ± 0.400 [1,6]
glass-0-1-4-6-vs-2	0.133 ± 0.310 [−]	0.277 ± 0.118 [1,4,5,6,7]	0.272 ± 0.132 [1,4,5,6,7]	0.217 ± 0.074 [1]	0.198 ± 0.066 [1,6]	0.165 ± 0.062 [1]	0.162 ± 0.052 [1,6]
yeast-1-2-8-9-vs-7	0.070 ± 0.223 [−]	0.209 ± 0.115 [all]	0.200 ± 0.099 [1,4,5,6,7]	0.113 ± 0.051 [1,5,6,7]	0.109 ± 0.078 [1,6,7]	0.087 ± 0.030 [1]	0.088 ± 0.030 [1]
ecoli-0-1-4-6-vs-5	0.960 ± 0.100 [all]	0.883 ± 0.135 [6,7]	0.840 ± 0.136 [1,4,5,6,7]	0.867 ± 0.145 [1,5,6,7]	0.837 ± 0.141 [1,6,7]	0.751 ± 0.173 [1]	0.721 ± 0.158 [1]
glass-0-1-6-vs-5	0.373 ± 0.371 [all]	0.529 ± 0.267 [3,6,7]	0.530 ± 0.275 [6,7]	0.471 ± 0.253 [6,7]	0.445 ± 0.249 [6,7]	0.483 ± 0.247 [−]	0.453 ± 0.248 [−]
yeast-2-vs-4	0.922 ± 0.095 [1,4,5,7]	0.767 ± 0.111 [1,5,7]	0.753 ± 0.118 [5,7]	0.863 ± 0.101 [2,3,6,7]	0.850 ± 0.103 [2,3,6,7]	0.556 ± 0.089 [5,7]	0.520 ± 0.089 [−]
glass-0-6-vs-5	0.600 ± 0.469 [all]	0.768 ± 0.304 [6,7]	0.782 ± 0.266 [6,7]	0.768 ± 0.364 [2,3,6,7]	0.728 ± 0.377 [2,3,6,7]	0.748 ± 0.369 [7]	0.768 ± 0.327 [−]
ecoli-0-3-4-6-vs-5	0.946 ± 0.119 [−]	0.880 ± 0.146 [1]	0.839 ± 0.156 [1]	0.752 ± 0.167 [1]	0.746 ± 0.174 [−]	0.717 ± 0.178 [1]	0.674 ± 0.175 [1]
yeast-0-3-5-9-vs-7-8	0.605 ± 0.176 [all]	0.326 ± 0.070 [3,4,5,6,7]	0.310 ± 0.069 [4,5,6,7]	0.556 ± 0.181 [6,7]	0.516 ± 0.183 [6,7]	0.226 ± 0.048 [7]	0.215 ± 0.039 [−]
glass-0-1-5-vs-2	0.186 ± 0.333 [all]	0.281 ± 0.175 [3,6,7]	0.260 ± 0.132 [6,7]	0.219 ± 0.080 [2,3,6,7]	0.204 ± 0.072 [2,3,6,7]	0.159 ± 0.048 [7]	0.160 ± 0.049 [−]
ecoli-0-6-7-vs-5	0.953 ± 0.114 [−]	0.723 ± 0.193 [1,4,5,6,7]	0.696 ± 0.187 [1,4,5,6,7]	0.838 ± 0.191 [1,5,6,7]	0.815 ± 0.188 [1,6,7]	0.614 ± 0.207 [−]	0.528 ± 0.182 [−]
ecoli-0-2-3-4-vs-5	0.960 ± 0.092 [all]	0.835 ± 0.176 [6,7]	0.801 ± 0.182 [6,7]	0.846 ± 0.177 [2,3,6,7]	0.825 ± 0.174 [2,3,6,7]	0.779 ± 0.188 [7]	0.727 ± 0.187 [−]
ecoli4	0.973 ± 0.073 [all]	0.810 ± 0.180 [3,6,7]	0.791 ± 0.178 [7]	0.905 ± 0.132 [6,7]	0.876 ± 0.151 [6,7]	0.660 ± 0.181 [7]	0.611 ± 0.178 [−]
yeast5	0.794 ± 0.140 [all]	0.591 ± 0.089 [6,7]	0.576 ± 0.089 [6,7]	0.602 ± 0.100 [2,3,6,7]	0.575 ± 0.085 [2,3,6,7]	0.440 ± 0.066 [7]	0.427 ± 0.060 [−]
ecoli-0-4-6-vs-5	0.935 ± 0.135 [all]	0.873 ± 0.169 [3,5,6,7]	0.866 ± 0.165 [6,7]	0.780 ± 0.176 [5,6,7]	0.766 ± 0.179 [6,7]	0.749 ± 0.191 [7]	0.696 ± 0.184 [−]
led7digit-0-2-4-5-6-7-8-9-vs-1	0.782 ± 0.304 [all]	0.559 ± 0.098 [4,5,6,7]	0.569 ± 0.124 [4,5,6,7]	0.544 ± 0.310 [6,7]	0.502 ± 0.262 [7]	0.468 ± 0.125 [7]	0.377 ± 0.077 [−]
ecoli-0-1-vs-5	0.972 ± 0.076 [all]	0.904 ± 0.124 [6,7]	0.871 ± 0.140 [2,6,7]	0.965 ± 0.090 [7]	0.960 ± 0.094 [7]	0.879 ± 0.143 [7]	0.863 ± 0.157 [−]
ecoli-0-2-6-7-vs-3-5	0.933 ± 0.175 [2,3,6,7]	0.751 ± 0.190 [−]	0.708 ± 0.195 [−]	0.808 ± 0.198 [2,3,6,7]	0.802 ± 0.200 [2,3,6,7]	0.556 ± 0.192 [−]	0.479 ± 0.173 [−]
ecoli-0-1-4-7-vs-2-3-5-6	0.979 ± 0.065 [all]	0.681 ± 0.163 [3,6,7]	0.666 ± 0.155 [6,7]	0.914 ± 0.116 [3,6,7]	0.893 ± 0.135 [3,6,7]	0.465 ± 0.160 [7]	0.402 ± 0.118 [−]
shuttle-c0-vs-c4	1.000 ± 0.000 [all]	1.000 ± 0.000 [6,7]	1.000 ± 0.000 [6,7]	1.000 ± 0.000 [2,3,6,7]	1.000 ± 0.000 [2,3,6,7]	1.000 ± 0.000 [7]	1.000 ± 0.000 [−]
ecoli-0-6-7-vs-3-5	0.907 ± 0.169 [−]	0.738 ± 0.204 [−]	0.697 ± 0.198 [−]	0.811 ± 0.202 [−]	0.810 ± 0.201 [−]	0.557 ± 0.212 [−]	0.500 ± 0.190 [−]
vowel0	0.989 ± 0.027 [all]	0.979 ± 0.038 [6,7]	0.981 ± 0.036 [6,7]	0.840 ± 0.110 [2,3,6,7]	0.867 ± 0.090 [2,3,6,7]	0.787 ± 0.081 [7]	0.818 ± 0.078 [−]
glass4	0.728 ± 0.384 [4,5,6,7]	0.640 ± 0.271 [4,5,6,7]	0.632 ± 0.267 [4,5,6,7]	0.516 ± 0.276 [6]	0.502 ± 0.270 [4,6,7]	0.477 ± 0.231 [−]	0.496 ± 0.242 [6]
yeast-0-5-6-7-9-vs-4	0.647 ± 0.237 [all]	0.488 ± 0.106 [4,5,6,7]	0.475 ± 0.097 [4,5,6,7]	0.511 ± 0.109 [−]	0.486 ± 0.126 [−]	0.273 ± 0.040 [−]	0.262 ± 0.034 [−]
yeast-0-2-5-6-vs-3-7-8-9	0.779 ± 0.092 [all]	0.475 ± 0.061 [3,6,7]	0.450 ± 0.060 [6,7]	0.721 ± 0.088 [3,5,6,7]	0.689 ± 0.102 [6,7]	0.269 ± 0.045 [7]	0.254 ± 0.035 [−]
ecoli-0-1-vs-2-3-5	0.968 ± 0.081 [all]	0.749 ± 0.164 [3,6,7]	0.732 ± 0.171 [6,7]	0.947 ± 0.114 [2,3,5,6,7]	0.943 ± 0.115 [2,3,6,7]	0.748 ± 0.190 [7]	0.578 ± 0.211 [−]
ecoli-0-3-4-vs-5	0.958 ± 0.111 [2,3,6,7]	0.874 ± 0.160 [7]	0.830 ± 0.165 [7]	0.830 ± 0.164 [2,3,6,7]	0.821 ± 0.172 [2,3,6,7]	0.788 ± 0.188 [7]	0.740 ± 0.183 [−]
glass5	0.377 ± 0.406 [all]	0.478 ± 0.309 [3,6,7]	0.476 ± 0.309 [7]	0.365 ± 0.242 [6,7]	0.344 ± 0.209 [7]	0.311 ± 0.161 [7]	0.346 ± 0.196 [−]
yeast4	0.358 ± 0.276 [−]	0.329 ± 0.098 [4,5,6,7]	0.308 ± 0.085 [4,5,6,7]	0.304 ± 0.080 [6]	0.316 ± 0.088 [6]	0.195 ± 0.034 [−]	0.186 ± 0.029 [−]
glass-0-4-vs-5	0.660 ± 0.473 [6,7]	0.853 ± 0.204 [3,4,6,7]	0.850 ± 0.200 [6,7]	0.646 ± 0.320 [6,7]	0.668 ± 0.331 [6,7]	0.661 ± 0.286 [7]	0.665 ± 0.285 [−]
yeast6	0.626 ± 0.178 [−]	0.383 ± 0.117 [1,4,5,6,7]	0.376 ± 0.117 [1,4,5,6,7]	0.434 ± 0.109 [−]	0.400 ± 0.106 [−]	0.207 ± 0.037 [−]	0.193 ± 0.032 [−]
page-blocks-1-3-vs-4	0.686 ± 0.174 [all]	0.584 ± 0.111 [6,7]	0.595 ± 0.121 [6,7]	0.552 ± 0.202 [2,3,5,6,7]	0.659 ± 0.197 [6,7]	0.467 ± 0.118 [7]	0.483 ± 0.139 [−]
yeast-1-vs-7	0.330 ± 0.464 [2,3,4,6,7]	0.261 ± 0.137 [6,7]	0.256 ± 0.124 [6,7]	0.158 ± 0.063 [6,7]	0.171 ± 0.095 [2,3,4,6,7]	0.135 ± 0.044 [−]	0.134 ± 0.041 [−]
ecoli-0-1-3-7-vs-2-6	0.790 ± 0.401 [−]	0.504 ± 0.356 [4,5,6,7]	0.536 ± 0.376 [4,5,6,7]	0.679 ± 0.417 [6,7]	0.569 ± 0.391 [6,7]	0.255 ± 0.311 [−]	0.341 ± 0.322 [−]
yeast-1-4-5-8-vs-7	0.007 ± 0.046 [all]	0.133 ± 0.094 [6,7]	0.132 ± 0.093 [6,7]	0.087 ± 0.042 [2,3,5,6,7]	0.081 ± 0.034 [6,7]	0.087 ± 0.031 [7]	0.084 ± 0.027 [6]
ecoli-0-1-4-7-vs-5-6	0.967 ± 0.091 [−]	0.769 ± 0.163 [1,4,5,6,7]	0.743 ± 0.162 [1,4,5,6,7]	0.895 ± 0.120 [1]	0.885 ± 0.135 [1]	0.579 ± 0.146 [1,7]	0.534 ± 0.157 [1]
yeast-2-vs-8	0.908 ± 0.200 [all]	0.576 ± 0.247 [3,6,7]	0.526 ± 0.217 [6,7]	0.908 ± 0.200 [2,3,6,7]	0.911 ± 0.190 [2,3,6,7]	0.257 ± 0.102 [7]	0.225 ± 0.084 [−]
yeast-0-2-5-7-9-vs-3-6-8	0.871 ± 0.068 [2,3,6,7]	0.686 ± 0.065 [3,6,7]	0.663 ± 0.064 [6,7]	0.840 ± 0.063 [2,3,6,7]	0.829 ± 0.067 [2,3,6,7]	0.491 ± 0.070 [7]	0.436 ± 0.044 [−]
glass2	0.260 ± 0.387 [all]	0.290 ± 0.147 [3,6,7]	0.280 ± 0.132 [6,7]	0.221 ± 0.083 [2,3,6,7]	0.211 ± 0.075 [2,3,6,7]	0.162 ± 0.044 [−]	0.162 ± 0.044 [−]
	[−]	[3,4,5,6,7]	[4,5,6,7]	[5,6,7]	[6,7]	[−]	[−]

Table 5: Results for Precision metric

	kNN (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
Mean rank	5.598 [4,5,6,7]	5.159 [3,5,6,7]	4.378 [6,7]	4.866 [5,6,7]	4.146 [6,7]	2.146 [7]	1.707 [−]

Table 6: Results for mean ranks according to Precision metric

Dataset	kNN (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
glass-0-1-6-vs-2	0.065 ± 0.123 [−]	0.513 ± 0.242 [1]	0.497 ± 0.251 [1]	0.802 ± 0.191 [1,2,3]	0.815 ± 0.193 [1,2,3]	0.827 ± 0.194 [1,2,3]	0.827 ± 0.194 [1,2,3]
ecoli-0-3-4-7-vs-5-6	0.744 ± 0.196 [−]	0.836 ± 0.148 [1]	0.840 ± 0.149 [1]	0.776 ± 0.147 [−]	0.776 ± 0.153 [−]	0.860 ± 0.150 [1,2,3]	0.868 ± 0.147 [1,2,3]
shuttle-c2-vs-c4	0.170 ± 0.355 [−]	0.990 ± 0.069 [1,4,5]	0.990 ± 0.069 [1,4,5]	0.710 ± 0.436 [−]	0.750 ± 0.415 [−]	0.550 ± 0.471 [1,4,5]	0.770 ± 0.402 [1,4,5]
glass-0-1-4-6-vs-2	0.055 ± 0.122 [−]	0.545 ± 0.231 [1,4,5,6,7]	0.525 ± 0.252 [1,4,5,6,7]	0.760 ± 0.215 [1,6]	0.772 ± 0.210 [1,6]	0.807 ± 0.192 [1]	0.813 ± 0.193 [1,6]
yeast-1-2-8-9-vs-7	0.017 ± 0.049 [−]	0.320 ± 0.172 [1]	0.347 ± 0.172 [1]	0.400 ± 0.185 [1,2,3]	0.400 ± 0.208 [1,2,3]	0.560 ± 0.184 [1,2,3]	0.593 ± 0.186 [1,2,3]
ecoli-0-1-4-6-vs-5	0.775 ± 0.182 [−]	0.850 ± 0.150 [1]	0.850 ± 0.150 [1]	0.815 ± 0.164 [1,2,3]	0.820 ± 0.158 [1,2]	0.830 ± 0.161 [1,2,3,4,5]	0.840 ± 0.164 [all]
glass-0-1-6-vs-5	0.360 ± 0.316 [−]	0.810 ± 0.298 [1]	0.800 ± 0.300 [1]	0.740 ± 0.320 [−]	0.720 ± 0.318 [1]	0.760 ± 0.303 [1]	0.780 ± 0.302 [1]
yeast-2-vs-4	0.647 ± 0.132 [−]	0.782 ± 0.129 [1]	0.789 ± 0.126 [1]	0.691 ± 0.126 [1]	0.707 ± 0.131 [1]	0.855 ± 0.131 [1]	0.863 ± 0.113 [1]
glass-0-6-vs-5	0.440 ± 0.382 [−]	0.870 ± 0.279 [1,4,5]	0.890 ± 0.229 [1,4,5]	0.640 ± 0.346 [1]	0.660 ± 0.352 [1]	0.650 ± 0.350 [1,2,3,4,5]	0.750 ± 0.320 [1,2,3,4,5]
ecoli-0-3-4-6-vs-5	0.795 ± 0.185 [−]	0.850 ± 0.173 [1,4,5,6,7]	0.850 ± 0.173 [1,4,5,6,7]	0.825 ± 0.167 [1]	0.835 ± 0.170 [1]	0.845 ± 0.172 [1]	0.845 ± 0.172 [1,6]
yeast-0-3-5-9-vs-7-8	0.306 ± 0.115 [−]	0.540 ± 0.121 [1]	0.550 ± 0.118 [1]	0.338 ± 0.141 [−]	0.338 ± 0.121 [1]	0.688 ± 0.145 [1]	0.730 ± 0.123 [1]
glass-0-1-5-vs-2	0.090 ± 0.139 [−]	0.513 ± 0.286 [1,4,5]	0.515 ± 0.288 [1,4,5]	0.745 ± 0.266 [1]	0.798 ± 0.221 [1]	0.812 ± 0.228 [1,2,3,4,5]	0.817 ± 0.224 [all]
ecoli-0-6-7-vs-5	0.685 ± 0.216 [−]	0.780 ± 0.197 [1]	0.790 ± 0.195 [1]	0.755 ± 0.196 [1,2,3]	0.750 ± 0.193 [1,2,3]	0.800 ± 0.187 [1,2,3]	0.815 ± 0.192 [1,2,3]
ecoli-0-2-3-4-vs-5	0.785 ± 0.165 [−]	0.850 ± 0.158 [1]	0.850 ± 0.158 [1]	0.835 ± 0.155 [1]	0.840 ± 0.156 [1]	0.850 ± 0.158 [1,5]	0.850 ± 0.158 [1,4,5]
ecoli4	0.790 ± 0.202 [−]	0.855 ± 0.200 [1]	0.855 ± 0.200 [1]	0.855 ± 0.180 [1]	0.885 ± 0.159 [1]	0.900 ± 0.158 [1]	0.910 ± 0.156 [1]
yeast5	0.647 ± 0.127 [−]	0.889 ± 0.098 [1]	0.889 ± 0.106 [1]	0.871 ± 0.122 [1]	0.901 ± 0.104 [1]	0.989 ± 0.033 [1,2,3,4]	0.987 ± 0.036 [1,2,3,4]
ecoli-0-4-6-vs-5	0.810 ± 0.162 [−]	0.850 ± 0.158 [1]	0.850 ± 0.158 [1]	0.835 ± 0.155 [1]	0.845 ± 0.157 [1,4]	0.840 ± 0.156 [1,2,3,4,5]	0.845 ± 0.157 [1,2,3,4,5]
led7digit-0-2-4-5-6-7-8-9-vs-1	0.279 ± 0.155 [−]	0.863 ± 0.140 [−]	0.816 ± 0.173 [−]	0.250 ± 0.161 [−]	0.336 ± 0.170 [−]	0.850 ± 0.125 [−]	0.904 ± 0.115 [−]
ecoli-0-1-vs-5	0.785 ± 0.180 [−]	0.850 ± 0.150 [1,3,4,5]	0.850 ± 0.150 [1,4,5]	0.810 ± 0.162 [1]	0.820 ± 0.150 [1,4]	0.845 ± 0.149 [1,4,5]	0.850 ± 0.150 [all]
ecoli-0-2-6-7-vs-3-5	0.597 ± 0.251 [−]	0.746 ± 0.180 [1]	0.788 ± 0.170 [1]	0.680 ± 0.210 [−]	0.691 ± 0.199 [1]	0.745 ± 0.169 [1]	0.759 ± 0.160 [1]
ecoli-0-1-4-7-vs-2-3-5-6	0.668 ± 0.202 [−]	0.733 ± 0.167 [1,4,5]	0.741 ± 0.168 [1,4,5]	0.730 ± 0.164 [1]	0.727 ± 0.163 [1]	0.760 ± 0.163 [1,4,5]	0.782 ± 0.161 [1,4,5]
shuttle-c0-vs-c4	0.992 ± 0.016 [−]	0.992 ± 0.016 [1]	0.992 ± 0.016 [1]	0.990 ± 0.017 [1]	0.990 ± 0.017 [1]	0.990 ± 0.017 [1,4,5]	0.990 ± 0.017 [1,2,3,4,5]
ecoli-0-6-7-vs-3-5	0.593 ± 0.237 [−]	0.724 ± 0.205 [−]	0.765 ± 0.203 [−]	0.672 ± 0.201 [−]	0.678 ± 0.204 [−]	0.736 ± 0.180 [−]	0.760 ± 0.164 [−]
vowel0	0.941 ± 0.077 [−]	1.000 ± 0.000 [1,4,5]	1.000 ± 0.000 [1,2,4,5]	0.621 ± 0.137 [1]	0.803 ± 0.125 [1]	0.979 ± 0.054 [1,4,5]	0.953 ± 0.065 [1,4,5]
glass4	0.513 ± 0.310 [4,5]	0.857 ± 0.278 [1,4,5,6,7]	0.857 ± 0.278 [1,4,5,6,7]	0.620 ± 0.272 [−]	0.643 ± 0.286 [4]	0.717 ± 0.233 [1,4,5,7]	0.757 ± 0.252 [4,5]
yeast-0-5-6-7-9-vs-4	0.317 ± 0.153 [−]	0.693 ± 0.123 [1,4,5,6,7]	0.695 ± 0.123 [1,4,5,6,7]	0.642 ± 0.115 [1]	0.661 ± 0.107 [1]	0.834 ± 0.106 [1]	0.847 ± 0.102 [1,4,5]
yeast-0-2-5-6-vs-3-7-8-9	0.529 ± 0.083 [−]	0.673 ± 0.093 [1,4,5]	0.671 ± 0.091 [1,4,5]	0.555 ± 0.106 [1]	0.582 ± 0.108 [1]	0.774 ± 0.097 [1,2,3,4,5]	0.798 ± 0.091 [1,2,3,4,5]
ecoli-0-1-vs-2-3-5	0.670 ± 0.187 [−]	0.791 ± 0.188 [1,4,5]	0.791 ± 0.184 [1,4,5]	0.715 ± 0.179 [1]	0.723 ± 0.173 [1,4]	0.736 ± 0.178 [1,2,3,4,5]	0.757 ± 0.191 [all]
ecoli-0-3-4-vs-5	0.810 ± 0.209 [−]	0.850 ± 0.200 [1,4,5,6]	0.850 ± 0.200 [1,4,5,6]	0.845 ± 0.205 [1]	0.845 ± 0.205 [1]	0.850 ± 0.200 [1]	0.850 ± 0.200 [1]
glass5	0.310 ± 0.330 [−]	0.670 ± 0.395 [−]	0.690 ± 0.398 [−]	0.690 ± 0.359 [−]	0.740 ± 0.363 [−]	0.730 ± 0.334 [−]	0.790 ± 0.333 [−]
yeast4	0.117 ± 0.088 [−]	0.484 ± 0.146 [1]	0.497 ± 0.156 [1]	0.540 ± 0.143 [1]	0.542 ± 0.146 [1]	0.732 ± 0.135 [1]	0.760 ± 0.129 [1]
glass-0-4-vs-5	0.490 ± 0.406 [−]	0.970 ± 0.118 [1]	0.990 ± 0.069 [1]	0.730 ± 0.319 [1,2]	0.770 ± 0.319 [1,2]	0.860 ± 0.265 [1,2,3,4,5]	0.890 ± 0.250 [all]
yeast6	0.523 ± 0.184 [−]	0.649 ± 0.196 [1,4,5,6]	0.654 ± 0.198 [1,4,5,6]	0.700 ± 0.178 [1]	0.717 ± 0.165 [1]	0.837 ± 0.117 [1,4]	0.837 ± 0.117 [1,4,5]
page-blocks-1-3-vs-4	0.657 ± 0.217 [−]	0.901 ± 0.144 [1]	0.901 ± 0.144 [1]	0.545 ± 0.200 [1,2]	0.610 ± 0.200 [1,2,3]	0.924 ± 0.125 [1,2,3,4,5]	0.893 ± 0.161 [1,2,3,4,5]
yeast-1-vs-7	0.060 ± 0.086 [4]	0.373 ± 0.195 [1,4,5]	0.413 ± 0.208 [1,4,5]	0.447 ± 0.183 [−]	0.390 ± 0.212 [−]	0.660 ± 0.213 [1,4,5]	0.700 ± 0.210 [1,4,5]
ecoli-0-1-3-7-vs-2-6	0.700 ± 0.400 [−]	0.700 ± 0.400 [1]	0.700 ± 0.400 [1,2]	0.700 ± 0.400 [1,2,5]	0.700 ± 0.400 [1]	0.460 ± 0.397 [1,2,3,4,5]	0.700 ± 0.400 [all]
yeast-1-4-5-8-vs-7	0.003 ± 0.023 [6]	0.230 ± 0.159 [6]	0.253 ± 0.173 [6]	0.373 ± 0.171 [6]	0.390 ± 0.193 [6]	0.593 ± 0.197 [−]	0.607 ± 0.187 [6]
ecoli-0-1-4-7-vs-5-6	0.732 ± 0.198 [−]	0.840 ± 0.144 [1]	0.844 ± 0.140 [1]	0.796 ± 0.157 [1,2,3]	0.788 ± 0.166 [1,2,3]	0.852 ± 0.125 [1,2,3,4,5]	0.860 ± 0.121 [1,2,3,4,5]
yeast-2-vs-8	0.550 ± 0.229 [−]	0.590 ± 0.248 [1,4,5]	0.610 ± 0.230 [1,4,5]	0.550 ± 0.229 [1]	0.555 ± 0.219 [−]	0.655 ± 0.228 [1,4,5]	0.685 ± 0.222 [1,4,5]
yeast-0-2-5-7-9-vs-3-6-8	0.797 ± 0.084 [−]	0.835 ± 0.081 [1,4,5]	0.834 ± 0.084 [1,4,5]	0.812 ± 0.078 [1]	0.821 ± 0.076 [−]	0.883 ± 0.074 [1,2,4,5]	0.893 ± 0.076 [1,2,3,4,5]
glass2	0.117 ± 0.164 [−]	0.537 ± 0.265 [1,4,5]	0.528 ± 0.227 [1,4,5]	0.757 ± 0.193 [1]	0.778 ± 0.191 [1]	0.818 ± 0.170 [1,2,3,4,5]	0.818 ± 0.170 [all]

Table 7: Results for Recall metric

	kNN (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
Mean rank	1.341 [−]	4.488 [1,4,5]	4.866 [1,2,4,5]	2.671 [1]	3.488 [1,4]	5.134 [1,4,5]	6.012 [all]

Table 8: Results for mean ranks according to Recall metric

Table 9 — Results for AUC metric. (Each cell shows value $\pm$ std with its significance markers — the method numbers it significantly outperforms — given in brackets below the value.)

Dataset	kNN (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
glass-0-1-6-vs-2	0.522 ± 0.062 [−]	0.686 ± 0.128 [1]	0.679 ± 0.126 [1]	0.763 ± 0.092 [all]	0.745 ± 0.090 [1,2,3,6,7]	0.698 ± 0.094 [1]	0.695 ± 0.096 [1]
ecoli-0-3-4-7-vs-5-6	0.869 ± 0.097 [−]	0.900 ± 0.071 [1]	0.898 ± 0.071 [1]	0.879 ± 0.074 [all]	0.878 ± 0.078 [1,2,3,6,7]	0.895 ± 0.080 [1]	0.888 ± 0.075 [1]
shuttle-c2-vs-c4	0.585 ± 0.177 [−]	0.995 ± 0.034 [3,6,7]	0.995 ± 0.034 [7]	0.855 ± 0.218 [−]	0.875 ± 0.207 [−]	0.775 ± 0.235 [1,7]	0.885 ± 0.201 [1]
glass-0-1-4-6-vs-2	0.518 ± 0.062 [−]	0.707 ± 0.110 [1,4,5,6,7]	0.699 ± 0.122 [1,4,5,6,7]	0.750 ± 0.113 [1,6]	0.740 ± 0.106 [1,6]	0.708 ± 0.106 [1]	0.709 ± 0.104 [1,6]
yeast-1-2-8-9-vs-7	0.508 ± 0.024 [−]	0.640 ± 0.086 [1]	0.650 ± 0.087 [1]	0.649 ± 0.091 [1,5,6,7]	0.643 ± 0.095 [1,3,6,7]	0.682 ± 0.092 [1]	0.695 ± 0.093 [1]
ecoli-0-1-4-6-vs-5	0.886 ± 0.091 [−]	0.920 ± 0.075 [1]	0.918 ± 0.074 [1]	0.901 ± 0.080 [1]	0.903 ± 0.077 [1]	0.902 ± 0.079 [1,2,3,4,5]	0.905 ± 0.079 [1,2,3,4,5]
glass-0-1-6-vs-5	0.668 ± 0.151 [−]	0.884 ± 0.147 [3,4,5,6,7]	0.879 ± 0.150 [6,7]	0.845 ± 0.160 [−]	0.833 ± 0.159 [6]	0.855 ± 0.153 [4]	0.860 ± 0.154 [4,5]
yeast-2-vs-4	0.820 ± 0.066 [−]	0.877 ± 0.063 [1,4,5,6,7]	0.879 ± 0.061 [1,5,7]	0.839 ± 0.063 [1]	0.846 ± 0.065 [1]	0.888 ± 0.060 [1,5]	0.886 ± 0.054 [1,6]
glass-0-6-vs-5	0.714 ± 0.194 [−]	0.920 ± 0.139 [1,4,5]	0.930 ± 0.113 [1,4,5]	0.810 ± 0.175 [−]	0.817 ± 0.180 [1]	0.816 ± 0.174 [1,4,5,7]	0.861 ± 0.163 [1,4,5]
ecoli-0-3-4-6-vs-5	0.895 ± 0.094 [−]	0.917 ± 0.087 [1,4,5,6,7]	0.914 ± 0.087 [1,4,5,6,7]	0.896 ± 0.088 [1]	0.900 ± 0.090 [1]	0.902 ± 0.091 [1]	0.897 ± 0.090 [1]
yeast-0-3-5-9-vs-7-8	0.641 ± 0.058 [−]	0.707 ± 0.060 [3,4,5,6,7]	0.706 ± 0.059 [4,5,6,7]	0.652 ± 0.067 [1]	0.650 ± 0.061 [1,7]	0.713 ± 0.069 [7]	0.717 ± 0.060 [4]
glass-0-1-5-vs-2	0.533 ± 0.066 [−]	0.682 ± 0.145 [1,3,4,5]	0.681 ± 0.142 [1,4,5]	0.728 ± 0.131 [−]	0.727 ± 0.108 [−]	0.672 ± 0.110 [1,4,5]	0.674 ± 0.107 [1,4,5]
ecoli-0-6-7-vs-5	0.840 ± 0.108 [−]	0.872 ± 0.098 [1]	0.874 ± 0.096 [1]	0.869 ± 0.102 [1,3,5,6,7]	0.865 ± 0.100 [1,3,6,7]	0.869 ± 0.099 [1]	0.863 ± 0.100 [1]
ecoli-0-2-3-4-vs-5	0.890 ± 0.083 [−]	0.913 ± 0.080 [7]	0.910 ± 0.079 [7]	0.907 ± 0.080 [6]	0.908 ± 0.080 [7]	0.908 ± 0.081 [7]	0.903 ± 0.079 [−]
ecoli4	0.894 ± 0.100 [−]	0.919 ± 0.097 [3,6,7]	0.918 ± 0.097 [7]	0.924 ± 0.091 [2,3]	0.938 ± 0.081 [1,2,3,6,7]	0.932 ± 0.076 [1,4]	0.932 ± 0.073 [1,6]
yeast5	0.821 ± 0.064 [−]	0.935 ± 0.049 [1,3]	0.934 ± 0.053 [1]	0.926 ± 0.061 [1]	0.940 ± 0.052 [1]	0.974 ± 0.017 [all]	0.972 ± 0.018 [1,2,3,4,5]
ecoli-0-4-6-vs-5	0.901 ± 0.084 [−]	0.916 ± 0.082 [1,3]	0.916 ± 0.081 [1]	0.902 ± 0.080 [1]	0.906 ± 0.083 [1]	0.902 ± 0.083 [all]	0.899 ± 0.083 [1,2,3,4,5]
led7digit-0-2-4-5-6-7-8-9-vs-1	0.635 ± 0.077 [7]	0.899 ± 0.069 [4,5,6,7]	0.878 ± 0.086 [4,5,6,7]	0.615 ± 0.080 [1,7]	0.651 ± 0.087 [1,7]	0.877 ± 0.064 [1,7]	0.879 ± 0.051 [−]
ecoli-0-1-vs-5	0.891 ± 0.089 [4]	0.920 ± 0.074 [1,4,5,6,7]	0.918 ± 0.074 [1,4,5]	0.903 ± 0.081 [−]	0.908 ± 0.075 [4]	0.916 ± 0.075 [1,4,5]	0.917 ± 0.074 [1,4,5]
ecoli-0-2-6-7-vs-3-5	0.797 ± 0.125 [−]	0.856 ± 0.087 [1,6,7]	0.872 ± 0.081 [1,4,5,6,7]	0.831 ± 0.109 [−]	0.835 ± 0.103 [−]	0.834 ± 0.086 [1,7]	0.826 ± 0.082 [−]
ecoli-0-1-4-7-vs-2-3-5-6	0.833 ± 0.100 [−]	0.848 ± 0.082 [1,6,7]	0.850 ± 0.081 [1,4,5,6,7]	0.861 ± 0.081 [−]	0.858 ± 0.081 [−]	0.830 ± 0.080 [1,7]	0.828 ± 0.077 [−]
shuttle-c0-vs-c4	0.996 ± 0.008 [−]	0.996 ± 0.008 [6,7]	0.996 ± 0.008 [6,7]	0.995 ± 0.008 [2,3,6,7]	0.995 ± 0.008 [2,3,6,7]	0.995 ± 0.008 [7]	0.995 ± 0.008 [−]
ecoli-0-6-7-vs-3-5	0.792 ± 0.119 [−]	0.845 ± 0.104 [−]	0.861 ± 0.102 [1,6,7]	0.826 ± 0.104 [−]	0.829 ± 0.105 [−]	0.829 ± 0.097 [−]	0.831 ± 0.088 [−]
vowel0	0.970 ± 0.038 [−]	0.999 ± 0.002 [6]	0.999 ± 0.002 [1,6,7]	0.804 ± 0.068 [−]	0.895 ± 0.062 [−]	0.976 ± 0.029 [1]	0.966 ± 0.032 [1,6]
glass4	0.750 ± 0.158 [4,5]	0.909 ± 0.143 [1,4,5,6,7]	0.909 ± 0.143 [1,4,5,6,7]	0.786 ± 0.141 [−]	0.797 ± 0.148 [4]	0.827 ± 0.119 [4,5]	0.847 ± 0.128 [4,5]
yeast-0-5-6-7-9-vs-4	0.649 ± 0.074 [−]	0.805 ± 0.060 [1,4,5,6,7]	0.804 ± 0.059 [1,4,5,6,7]	0.785 ± 0.054 [−]	0.789 ± 0.050 [−]	0.796 ± 0.051 [1]	0.794 ± 0.047 [1,4]
yeast-0-2-5-6-vs-3-7-8-9	0.756 ± 0.042 [−]	0.795 ± 0.046 [1,3,4,5]	0.790 ± 0.045 [1,4,5]	0.765 ± 0.052 [1]	0.776 ± 0.053 [1]	0.768 ± 0.042 [1]	0.768 ± 0.040 [1]
ecoli-0-1-vs-2-3-5	0.833 ± 0.093 [−]	0.879 ± 0.093 [all]	0.877 ± 0.091 [1,4,5,6,7]	0.855 ± 0.090 [−]	0.859 ± 0.087 [1,4]	0.852 ± 0.090 [−]	0.841 ± 0.096 [−]
ecoli-0-3-4-vs-5	0.903 ± 0.105 [−]	0.916 ± 0.100 [1,7]	0.913 ± 0.098 [1,7]	0.912 ± 0.104 [6,7]	0.911 ± 0.104 [1,6,7]	0.910 ± 0.103 [7]	0.906 ± 0.101 [−]
glass5	0.648 ± 0.165 [−]	0.820 ± 0.198 [3,6,7]	0.829 ± 0.199 [7]	0.815 ± 0.180 [6,7]	0.837 ± 0.180 [7]	0.829 ± 0.167 [7]	0.859 ± 0.165 [1]
yeast4	0.555 ± 0.043 [−]	0.724 ± 0.072 [1,4]	0.728 ± 0.076 [1,4]	0.747 ± 0.071 [1]	0.749 ± 0.071 [1,3,6]	0.812 ± 0.065 [1,3,4]	0.820 ± 0.061 [1]
glass-0-4-vs-5	0.744 ± 0.204 [−]	0.971 ± 0.064 [1]	0.981 ± 0.045 [1]	0.838 ± 0.156 [1,2]	0.856 ± 0.159 [1,2]	0.898 ± 0.135 [1,2,3,4,5]	0.913 ± 0.127 [1,2,3,4,5]
yeast6	0.757 ± 0.091 [−]	0.811 ± 0.097 [1,4,5,6,7]	0.813 ± 0.098 [1,4,5,6,7]	0.839 ± 0.088 [−]	0.845 ± 0.082 [1]	0.879 ± 0.056 [1]	0.875 ± 0.055 [1,4,5]
page-blocks-1-3-vs-4	0.818 ± 0.106 [−]	0.929 ± 0.073 [1]	0.930 ± 0.072 [1]	0.758 ± 0.099 [1,2,3]	0.794 ± 0.100 [1,2,3]	0.927 ± 0.064 [all]	0.913 ± 0.080 [1,2,3,4,5]
yeast-1-vs-7	0.529 ± 0.043 [4]	0.646 ± 0.099 [1,4,5,7]	0.661 ± 0.105 [1,4,5,7]	0.637 ± 0.092 [−]	0.622 ± 0.098 [4]	0.680 ± 0.110 [1,4,5]	0.690 ± 0.107 [1,4,5]
ecoli-0-1-3-7-vs-2-6	0.850 ± 0.200 [−]	0.840 ± 0.197 [1]	0.841 ± 0.197 [1,5]	0.842 ± 0.208 [1]	0.837 ± 0.206 [1]	0.700 ± 0.201 [1,2,4,5]	0.821 ± 0.196 [1,2,4,5]
yeast-1-4-5-8-vs-7	0.501 ± 0.010 [all]	0.580 ± 0.079 [6,7]	0.588 ± 0.086 [6,7]	0.596 ± 0.086 [5,6,7]	0.594 ± 0.091 [6,7]	0.653 ± 0.104 [all]	0.651 ± 0.098 [6]
ecoli-0-1-4-7-vs-5-6	0.865 ± 0.098 [−]	0.907 ± 0.070 [1]	0.908 ± 0.067 [1]	0.894 ± 0.078 [1]	0.889 ± 0.083 [1]	0.897 ± 0.061 [all]	0.894 ± 0.059 [1,2,3,4,5]
yeast-2-vs-8	0.774 ± 0.114 [−]	0.784 ± 0.122 [6,7]	0.790 ± 0.112 [2,6,7]	0.773 ± 0.116 [−]	0.776 ± 0.111 [−]	0.783 ± 0.111 [7]	0.787 ± 0.105 [6]
yeast-0-2-5-7-9-vs-3-6-8	0.892 ± 0.042 [−]	0.896 ± 0.039 [1,4,5]	0.894 ± 0.041 [2,6]	0.897 ± 0.039 [−]	0.901 ± 0.038 [−]	0.889 ± 0.033 [−]	0.882 ± 0.031 [6]
glass2	0.547 ± 0.083 [−]	0.710 ± 0.131 [1]	0.703 ± 0.111 [1]	0.755 ± 0.106 [1,2,3,6,7]	0.757 ± 0.103 [all]	0.721 ± 0.095 [1]	0.721 ± 0.095 [1]

Table 9: Results for AUC metric

	kNN (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
Mean rank	1.561 [−]	5.232 [1,4,5,6]	5.207 [1,4,5]	3.402 [1]	3.988 [1,4]	4.329 [1,4]	4.280 [1]

Table 10: Results for mean ranks according to AUC metric

Dataset	kNN (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
glass-0-1-6-vs-2	0.118 ± 0.222 [−]	0.637 ± 0.192 [1]	0.618 ± 0.208 [1]	0.753 ± 0.095 [all]	0.733 ± 0.092 [1,2,3,6,7]	0.678 ± 0.090 [1]	0.674 ± 0.092 [1]
ecoli-0-3-4-7-vs-5-6	0.852 ± 0.116 [−]	0.894 ± 0.079 [1]	0.892 ± 0.078 [1]	0.869 ± 0.085 [−]	0.867 ± 0.088 [−]	0.891 ± 0.085 [1]	0.884 ± 0.080 [1]
shuttle-c2-vs-c4	0.182 ± 0.369 [−]	0.994 ± 0.041 [3,7]	0.994 ± 0.041 [7]	0.722 ± 0.433 [−]	0.762 ± 0.410 [−]	0.571 ± 0.473 [1,7]	0.782 ± 0.397 [1]
glass-0-1-4-6-vs-2	0.098 ± 0.210 [−]	0.660 ± 0.183 [1,4,5,6,7]	0.636 ± 0.225 [1,4,5,6,7]	0.739 ± 0.120 [1,6]	0.724 ± 0.141 [1,6]	0.693 ± 0.103 [1]	0.693 ± 0.102 [1,6]
yeast-1-2-8-9-vs-7	0.041 ± 0.122 [−]	0.515 ± 0.205 [1]	0.545 ± 0.183 [1]	0.573 ± 0.173 [1,3,5,6,7]	0.550 ± 0.217 [1,2,3,6,7]	0.660 ± 0.118 [1]	0.677 ± 0.115 [1]
ecoli-0-1-4-6-vs-5	0.873 ± 0.105 [−]	0.913 ± 0.083 [1]	0.911 ± 0.082 [1]	0.892 ± 0.092 [1,2]	0.894 ± 0.088 [1]	0.894 ± 0.089 [1,2,3,4,5]	0.898 ± 0.089 [1,2,3,4,5]
glass-0-1-6-vs-5	0.459 ± 0.368 [−]	0.844 ± 0.247 [3,4,5,6,7]	0.839 ± 0.248 [6,7]	0.794 ± 0.269 [−]	0.780 ± 0.266 [−]	0.813 ± 0.246 [4,5]	0.821 ± 0.245 [4,5]
yeast-2-vs-4	0.797 ± 0.083 [−]	0.868 ± 0.072 [1,5,7]	0.871 ± 0.070 [1,5,7]	0.822 ± 0.076 [1]	0.831 ± 0.078 [1]	0.884 ± 0.066 [1,5]	0.883 ± 0.057 [1,5]
glass-0-6-vs-5	0.521 ± 0.407 [−]	0.885 ± 0.244 [1,4,5]	0.912 ± 0.171 [1,4,5]	0.725 ± 0.320 [−]	0.734 ± 0.325 [1]	0.730 ± 0.323 [all]	0.810 ± 0.273 [1,4,5]
ecoli-0-3-4-6-vs-5	0.883 ± 0.108 [−]	0.910 ± 0.098 [1,4,5,6]	0.907 ± 0.098 [1,4,5,6,7]	0.889 ± 0.098 [1]	0.893 ± 0.100 [1]	0.895 ± 0.100 [1,7]	0.891 ± 0.099 [1]
yeast-0-3-5-9-vs-7-8	0.533 ± 0.123 [−]	0.682 ± 0.080 [3,4,5,6,7]	0.684 ± 0.078 [4,5,6,7]	0.554 ± 0.136 [1]	0.556 ± 0.125 [1,7]	0.707 ± 0.076 [7]	0.713 ± 0.060 [4]
glass-0-1-5-vs-2	0.161 ± 0.246 [−]	0.612 ± 0.248 [1,4,5]	0.610 ± 0.247 [1,2,4,5]	0.706 ± 0.166 [−]	0.707 ± 0.140 [−]	0.639 ± 0.130 [1,2,3,4,5]	0.641 ± 0.128 [1,2,3,4,5]
ecoli-0-6-7-vs-5	0.814 ± 0.139 [−]	0.858 ± 0.116 [1]	0.862 ± 0.114 [1]	0.854 ± 0.120 [1,2,3,6,7]	0.850 ± 0.118 [all]	0.860 ± 0.109 [1]	0.855 ± 0.110 [1]
ecoli-0-2-3-4-vs-5	0.878 ± 0.100 [−]	0.906 ± 0.089 [4,7]	0.903 ± 0.088 [7]	0.900 ± 0.088 [−]	0.901 ± 0.089 [−]	0.902 ± 0.089 [4,7]	0.897 ± 0.087 [−]
ecoli4	0.879 ± 0.124 [−]	0.908 ± 0.116 [3,6,7]	0.908 ± 0.116 [7]	0.916 ± 0.104 [7]	0.932 ± 0.091 [7]	0.927 ± 0.086 [4,5,7]	0.927 ± 0.082 [−]
yeast5	0.798 ± 0.083 [−]	0.932 ± 0.053 [−]	0.931 ± 0.057 [−]	0.922 ± 0.067 [2,3]	0.937 ± 0.056 [1,2,3,6,7]	0.974 ± 0.017 [1,4]	0.972 ± 0.018 [1,6]
ecoli-0-4-6-vs-5	0.892 ± 0.095 [−]	0.910 ± 0.091 [1]	0.909 ± 0.090 [1]	0.896 ± 0.088 [1]	0.900 ± 0.091 [1]	0.896 ± 0.090 [all]	0.893 ± 0.090 [1,2,3,4,5]
led7digit-0-2-4-5-6-7-8-9-vs-1	0.494 ± 0.179 [−]	0.895 ± 0.075 [4,5,6,7]	0.870 ± 0.099 [4,5,6,7]	0.450 ± 0.205 [1,7]	0.542 ± 0.176 [1,7]	0.873 ± 0.068 [1,7]	0.876 ± 0.052 [1]
ecoli-0-1-vs-5	0.879 ± 0.104 [4]	0.913 ± 0.083 [1,4,5,6,7]	0.912 ± 0.082 [1,4,5]	0.894 ± 0.092 [−]	0.900 ± 0.084 [4]	0.910 ± 0.083 [1,4,5]	0.911 ± 0.082 [1,4,5]
ecoli-0-2-6-7-vs-3-5	0.747 ± 0.192 [−]	0.841 ± 0.106 [−]	0.861 ± 0.093 [1,4,5,6,7]	0.807 ± 0.136 [−]	0.813 ± 0.127 [−]	0.823 ± 0.100 [−]	0.817 ± 0.093 [−]
ecoli-0-1-4-7-vs-2-3-5-6	0.805 ± 0.133 [−]	0.833 ± 0.098 [1,6,7]	0.836 ± 0.098 [1,4,5,6,7]	0.845 ± 0.099 [−]	0.842 ± 0.099 [−]	0.821 ± 0.091 [1,7]	0.820 ± 0.086 [1]
shuttle-c0-vs-c4	0.996 ± 0.008 [−]	0.996 ± 0.008 [6]	0.996 ± 0.008 [6,7]	0.995 ± 0.008 [2,3,6,7]	0.995 ± 0.008 [2,3,6,7]	0.995 ± 0.008 [7]	0.995 ± 0.008 [−]
ecoli-0-6-7-vs-3-5	0.750 ± 0.159 [−]	0.826 ± 0.127 [−]	0.847 ± 0.120 [−]	0.802 ± 0.129 [−]	0.805 ± 0.130 [−]	0.817 ± 0.112 [1]	0.821 ± 0.101 [1,6]
vowel0	0.969 ± 0.041 [−]	0.999 ± 0.002 [6]	0.999 ± 0.002 [1,6,7]	0.778 ± 0.091 [−]	0.887 ± 0.072 [−]	0.975 ± 0.030 [1]	0.965 ± 0.033 [1,6]
glass4	0.641 ± 0.310 [4,5]	0.875 ± 0.243 [1,4,5,6,7]	0.875 ± 0.243 [1,4,5,6,7]	0.735 ± 0.230 [−]	0.741 ± 0.254 [4]	0.808 ± 0.139 [4,5]	0.824 ± 0.175 [4,5]
yeast-0-5-6-7-9-vs-4	0.532 ± 0.164 [−]	0.793 ± 0.071 [1,4,5,6,7]	0.793 ± 0.070 [1,4,5,6,7]	0.768 ± 0.066 [−]	0.775 ± 0.060 [−]	0.793 ± 0.050 [−]	0.789 ± 0.045 [1,4]
yeast-0-2-5-6-vs-3-7-8-9	0.719 ± 0.058 [−]	0.784 ± 0.055 [1,3,4,5]	0.779 ± 0.053 [1,4,5]	0.732 ± 0.072 [1]	0.748 ± 0.071 [1]	0.765 ± 0.043 [1,4,7]	0.765 ± 0.039 [1]
ecoli-0-1-vs-2-3-5	0.807 ± 0.125 [−]	0.867 ± 0.111 [all]	0.866 ± 0.108 [1,4,5,6,7]	0.836 ± 0.110 [−]	0.842 ± 0.106 [1,4]	0.837 ± 0.108 [1,4]	0.829 ± 0.111 [1,4]
ecoli-0-3-4-vs-5	0.888 ± 0.132 [−]	0.905 ± 0.122 [1,7]	0.902 ± 0.121 [1,7]	0.901 ± 0.126 [7]	0.900 ± 0.126 [1,6,7]	0.900 ± 0.124 [4,7]	0.896 ± 0.121 [−]
glass5	0.394 ± 0.387 [−]	0.713 ± 0.376 [3,6,7]	0.723 ± 0.379 [7]	0.738 ± 0.324 [6,7]	0.762 ± 0.328 [7]	0.770 ± 0.288 [7]	0.804 ± 0.291 [1]
yeast4	0.288 ± 0.183 [−]	0.674 ± 0.108 [1]	0.681 ± 0.113 [1]	0.711 ± 0.098 [1,3]	0.713 ± 0.097 [1,3]	0.804 ± 0.075 [1,4,5]	0.814 ± 0.071 [1]
glass-0-4-vs-5	0.560 ± 0.419 [−]	0.969 ± 0.072 [1]	0.981 ± 0.048 [1]	0.784 ± 0.267 [1,2]	0.807 ± 0.269 [1,2]	0.871 ± 0.213 [1,2,3,4,5]	0.888 ± 0.207 [1,2,3,4,5]
yeast6	0.707 ± 0.136 [−]	0.784 ± 0.129 [1,4,5,6,7]	0.787 ± 0.130 [1,4,5,6,7]	0.819 ± 0.115 [−]	0.829 ± 0.101 [1]	0.875 ± 0.061 [1]	0.872 ± 0.060 [1,4,5]
page-blocks-1-3-vs-4	0.789 ± 0.138 [−]	0.925 ± 0.081 [1]	0.926 ± 0.081 [1]	0.708 ± 0.164 [1,2,3]	0.761 ± 0.132 [1,2,3]	0.924 ± 0.068 [all]	0.908 ± 0.091 [1,2,3,4,5]
yeast-1-vs-7	0.142 ± 0.199 [4]	0.553 ± 0.192 [1,4,5,7]	0.583 ± 0.187 [1,4,5,7]	0.594 ± 0.129 [−]	0.545 ± 0.174 [4]	0.669 ± 0.115 [1,4,5]	0.681 ± 0.111 [1,4,5]
ecoli-0-1-3-7-vs-2-6	0.741 ± 0.387 [−]	0.733 ± 0.382 [1]	0.734 ± 0.383 [1,5]	0.738 ± 0.387 [1]	0.734 ± 0.383 [1]	0.519 ± 0.404 [1,2,3,4,5]	0.718 ± 0.373 [1,2,3,4,5]
yeast-1-4-5-8-vs-7	0.008 ± 0.056 [all]	0.416 ± 0.200 [6,7]	0.434 ± 0.211 [6,7]	0.530 ± 0.156 [2,3,5,6,7]	0.531 ± 0.160 [6,7]	0.637 ± 0.137 [−]	0.637 ± 0.130 [6]
ecoli-0-1-4-7-vs-5-6	0.844 ± 0.132 [−]	0.901 ± 0.078 [1]	0.902 ± 0.074 [1]	0.884 ± 0.088 [1,2,3]	0.878 ± 0.094 [1,2,3]	0.893 ± 0.065 [all]	0.891 ± 0.062 [1,2,3,4,5]
yeast-2-vs-8	0.718 ± 0.181 [−]	0.735 ± 0.187 [6,7]	0.754 ± 0.151 [2,6,7]	0.718 ± 0.181 [−]	0.728 ± 0.154 [−]	0.753 ± 0.168 [7]	0.767 ± 0.131 [7]
yeast-0-2-5-7-9-vs-3-6-8	0.885 ± 0.047 [−]	0.893 ± 0.043 [1,4,5]	0.890 ± 0.045 [2,6]	0.892 ± 0.043 [−]	0.896 ± 0.042 [−]	0.888 ± 0.034 [−]	0.881 ± 0.032 [1,4,5,6]
glass2	0.201 ± 0.271 [−]	0.651 ± 0.217 [1]	0.653 ± 0.184 [1]	0.748 ± 0.109 [1,2,3,6,7]	0.749 ± 0.105 [all]	0.708 ± 0.093 [1,3]	0.708 ± 0.093 [1,3]

Table 11: Results for GMEAN metric

	kNN (1)	OSB (2)	OKNORAU (3)	TBAC (4)	OTBAC (5)	TBAW (6)	OTBAW (7)
Mean rank	1.451 [−]	5.037 [1,4,5]	5.037 [1,4,5]	3.341 [1]	3.939 [1,4]	4.671 [1,4,5]	4.524 [1,4]

Table 12: Results for mean ranks according to GMEAN metric