

Dataset	kNN (1)	SB (2)	OSB (3)	KNORAU (4)	OKNORAU (5)	TBA (6)	OTBA (7)
<i>glass-0-1-4-6-vs-2</i>	$0.518 \pm 0.062$	$0.510 \pm 0.056$	$0.700 \pm 0.131$	$0.515 \pm 0.059$	$0.691 \pm 0.140$	$0.733 \pm 0.117$	$0.744 \pm 0.101$
<i>ecoli-0-6-7-vs-3-5</i>	$0.792 \pm 0.119$	$0.796 \pm 0.116$	$0.863 \pm 0.099$	$0.783 \pm 0.121$	$0.866 \pm 0.095$	$0.886 \pm 0.073$	$0.882 \pm 0.073$
<i>ecoli-0-3-4-7-vs-5-6</i>	$0.869 \pm 0.097$	$0.856 \pm 0.089$	$0.893 \pm 0.075$	$0.853 \pm 0.094$	$0.893 \pm 0.076$	$0.880 \pm 0.068$	$0.874 \pm 0.067$
<i>glass4</i>	$0.750 \pm 0.158$	$0.774 \pm 0.155$	$0.904 \pm 0.142$	$0.776 \pm 0.160$	$0.905 \pm 0.142$	$0.907 \pm 0.099$	$0.907 \pm 0.099$
<i>glass-0-6-vs-5</i>	$0.714 \pm 0.194$	$0.653 \pm 0.182$	$0.950 \pm 0.086$	$0.688 \pm 0.210$	$0.945 \pm 0.103$	$0.952 \pm 0.080$	$0.952 \pm 0.080$
<i>vowel0</i>	$0.970 \pm 0.038$	$0.949 \pm 0.044$	$0.990 \pm 0.026$	$0.969 \pm 0.039$	$0.991 \pm 0.026$	$0.973 \pm 0.026$	$0.977 \pm 0.023$
<i>ecoli4</i>	$0.894 \pm 0.100$	$0.908 \pm 0.102$	$0.918 \pm 0.094$	$0.911 \pm 0.103$	$0.917 \pm 0.094$	$0.944 \pm 0.047$	$0.944 \pm 0.047$
<i>led7digit-0-2-4-5-6-7-8-9-vs-1</i>	$0.635 \pm 0.077$	$0.642 \pm 0.103$	$0.899 \pm 0.066$	$0.622 \pm 0.091$	$0.857 \pm 0.121$	$0.660 \pm 0.093$	$0.664 \pm 0.082$
<i>shuttle-c0-vs-c4</i>	$0.996 \pm 0.008$	$0.995 \pm 0.008$	$0.996 \pm 0.008$	$0.995 \pm 0.008$	$0.996 \pm 0.008$	$0.998 \pm 0.006$	$0.998 \pm 0.006$
<i>ecoli-0-3-4-vs-5</i>	$0.903 \pm 0.105$	$0.897 \pm 0.112$	$0.912 \pm 0.099$	$0.892 \pm 0.110$	$0.910 \pm 0.099$	$0.902 \pm 0.093$	$0.901 \pm 0.094$
<i>yeast-0-3-5-9-vs-7-8</i>	$0.641 \pm 0.058$	$0.619 \pm 0.053$	$0.707 \pm 0.064$	$0.628 \pm 0.062$	$0.697 \pm 0.070$	$0.704 \pm 0.065$	$0.713 \pm 0.062$
<i>ecoli-0-2-6-7-vs-3-5</i>	$0.797 \pm 0.125$	$0.805 \pm 0.115$	$0.859 \pm 0.091$	$0.801 \pm 0.115$	$0.862 \pm 0.081$	$0.879 \pm 0.069$	$0.876 \pm 0.068$
<i>ecoli-0-6-7-vs-5</i>	$0.840 \pm 0.108$	$0.840 \pm 0.109$	$0.876 \pm 0.101$	$0.842 \pm 0.102$	$0.865 \pm 0.100$	$0.859 \pm 0.089$	$0.853 \pm 0.088$
<i>page-blocks-1-3-vs-4</i>	$0.818 \pm 0.106$	$0.815 \pm 0.100$	$0.912 \pm 0.091$	$0.815 \pm 0.101$	$0.903 \pm 0.094$	$0.939 \pm 0.034$	$0.941 \pm 0.032$
<i>yeast-0-2-5-7-9-vs-3-6-8</i>	$0.892 \pm 0.042$	$0.893 \pm 0.043$	$0.896 \pm 0.038$	$0.891 \pm 0.043$	$0.895 \pm 0.039$	$0.886 \pm 0.029$	$0.884 \pm 0.029$
<i>ecoli-0-2-3-4-vs-5</i>	$0.890 \pm 0.083$	$0.896 \pm 0.090$	$0.910 \pm 0.078$	$0.895 \pm 0.090$	$0.908 \pm 0.078$	$0.903 \pm 0.073$	$0.902 \pm 0.072$
<i>glass5</i>	$0.648 \pm 0.165$	$0.608 \pm 0.159$	$0.823 \pm 0.196$	$0.617 \pm 0.174$	$0.823 \pm 0.203$	$0.909 \pm 0.121$	$0.914 \pm 0.119$
<i>yeast-0-2-5-6-vs-3-7-8-9</i>	$0.756 \pm 0.042$	$0.753 \pm 0.041$	$0.790 \pm 0.041$	$0.755 \pm 0.045$	$0.788 \pm 0.042$	$0.766 \pm 0.038$	$0.768 \pm 0.038$
<i>ecoli-0-3-4-6-vs-5</i>	$0.895 \pm 0.094$	$0.888 \pm 0.091$	$0.908 \pm 0.089$	$0.885 \pm 0.093$	$0.906 \pm 0.089$	$0.895 \pm 0.082$	$0.892 \pm 0.082$
<i>ecoli-0-1-vs-5</i>	$0.891 \pm 0.089$	$0.886 \pm 0.090$	$0.918 \pm 0.074$	$0.889 \pm 0.088$	$0.916 \pm 0.073$	$0.911 \pm 0.072$	$0.911 \pm 0.072$
<i>yeast4</i>	$0.555 \pm 0.043$	$0.574 \pm 0.057$	$0.717 \pm 0.076$	$0.574 \pm 0.052$	$0.718 \pm 0.080$	$0.813 \pm 0.064$	$0.813 \pm 0.064$
<i>shuttle-c2-vs-c4</i>	$0.585 \pm 0.177$	$0.585 \pm 0.177$	$0.995 \pm 0.034$	$0.600 \pm 0.180$	$0.995 \pm 0.034$	$0.995 \pm 0.034$	$0.995 \pm 0.034$
<i>yeast-1-2-8-9-vs-7</i>	$0.508 \pm 0.024$	$0.511 \pm 0.033$	$0.623 \pm 0.085$	$0.512 \pm 0.034$	$0.634 \pm 0.088$	$0.687 \pm 0.088$	$0.686 \pm 0.087$
<i>ecoli-0-1-4-7-vs-5-6</i>	$0.865 \pm 0.098$	$0.853 \pm 0.107$	$0.894 \pm 0.085$	$0.844 \pm 0.107$	$0.894 \pm 0.076$	$0.889 \pm 0.058$	$0.890 \pm 0.058$
<i>ecoli-0-1-4-7-vs-2-3-5-6</i>	$0.833 \pm 0.100$	$0.826 \pm 0.099$	$0.852 \pm 0.077$	$0.828 \pm 0.099$	$0.857 \pm 0.076$	$0.851 \pm 0.069$	$0.847 \pm 0.069$
<i>yeast-2-vs-4</i>	$0.820 \pm 0.066$	$0.825 \pm 0.066$	$0.873 \pm 0.061$	$0.822 \pm 0.065$	$0.873 \pm 0.062$	$0.879 \pm 0.057$	$0.886 \pm 0.053$
<i>glass-0-4-vs-5</i>	$0.744 \pm 0.204$	$0.731 \pm 0.185$	$0.956 \pm 0.096$	$0.756 \pm 0.214$	$0.959 \pm 0.091$	$0.950 \pm 0.033$	$0.950 \pm 0.033$
<i>glass-0-1-6-vs-2</i>	$0.522 \pm 0.062$	$0.499 \pm 0.049$	$0.676 \pm 0.132$	$0.496 \pm 0.041$	$0.643 \pm 0.124$	$0.735 \pm 0.104$	$0.738 \pm 0.096$
<i>glass-0-1-5-vs-2</i>	$0.533 \pm 0.066$	$0.522 \pm 0.062$	$0.670 \pm 0.135$	$0.541 \pm 0.076$	$0.658 \pm 0.131$	$0.690 \pm 0.131$	$0.722 \pm 0.108$
<i>yeast6</i>	$0.757 \pm 0.091$	$0.730 \pm 0.095$	$0.821 \pm 0.087$	$0.728 \pm 0.104$	$0.818 \pm 0.083$	$0.882 \pm 0.056$	$0.882 \pm 0.056$
<i>ecoli-0-1-3-7-vs-2-6</i>	$0.850 \pm 0.200$	$0.849 \pm 0.199$	$0.841 \pm 0.197$	$0.850 \pm 0.199$	$0.843 \pm 0.198$	$0.815 \pm 0.195$	$0.815 \pm 0.195$
<i>yeast-1-vs-7</i>	$0.529 \pm 0.043$	$0.546 \pm 0.058$	$0.631 \pm 0.098$	$0.548 \pm 0.063$	$0.634 \pm 0.099$	$0.662 \pm 0.099$	$0.675 \pm 0.096$
<i>glass-0-1-6-vs-5</i>	$0.668 \pm 0.151$	$0.617 \pm 0.164$	$0.868 \pm 0.157$	$0.636 \pm 0.170$	$0.853 \pm 0.165$	$0.903 \pm 0.129$	$0.902 \pm 0.128$
<i>yeast-2-vs-8</i>	$0.774 \pm 0.114$	$0.774 \pm 0.114$	$0.774 \pm 0.106$	$0.774 \pm 0.114$	$0.786 \pm 0.105$	$0.805 \pm 0.104$	$0.805 \pm 0.104$
<i>glass2</i>	$0.547 \pm 0.083$	$0.528 \pm 0.076$	$0.707 \pm 0.129$	$0.529 \pm 0.069$	$0.712 \pm 0.116$	$0.755 \pm 0.102$	$0.758 \pm 0.102$
<i>ecoli-0-1-4-6-vs-5</i>	$0.886 \pm 0.091$	$0.891 \pm 0.086$	$0.914 \pm 0.073$	$0.888 \pm 0.089$	$0.913 \pm 0.077$	$0.905 \pm 0.070$	$0.905 \pm 0.070$
<i>yeast-0-5-6-7-9-vs-4</i>	$0.649 \pm 0.074$	$0.657 \pm 0.078$	$0.793 \pm 0.065$	$0.661 \pm 0.077$	$0.797 \pm 0.061$	$0.797 \pm 0.051$	$0.796 \pm 0.047$
<i>ecoli-0-1-vs-2-3-5</i>	$0.833 \pm 0.093$	$0.838 \pm 0.090$	$0.877 \pm 0.089$	$0.848 \pm 0.098$	$0.873 \pm 0.090$	$0.864 \pm 0.085$	$0.857 \pm 0.084$
<i>yeast5</i>	$0.821 \pm 0.064$	$0.811 \pm 0.067$	$0.929 \pm 0.052$	$0.819 \pm 0.071$	$0.929 \pm 0.048$	$0.978 \pm 0.011$	$0.978 \pm 0.011$
<i>yeast-1-4-5-8-vs-7</i>	$0.501 \pm 0.010$	$0.503 \pm 0.018$	$0.547 \pm 0.075$	$0.503 \pm 0.018$	$0.553 \pm 0.077$	$0.627 \pm 0.099$	$0.626 \pm 0.099$
<i>ecoli-0-4-6-vs-5</i>	$0.901 \pm 0.084$	$0.903 \pm 0.083$	$0.916 \pm 0.081$	$0.900 \pm 0.084$	$0.912 \pm 0.082$	$0.904 \pm 0.078$	$0.901 \pm 0.079$

Table 1: Results for BAC metric

	kNN (1)	SB (2)	OSB (3)	KNORAU (4)	OKNORAU (5)	TBA (6)	OTBA (7)
<i>Mean rank</i>	3.431	3.263	4.738	3.300	4.542	4.421	4.304
	2,4	—	1,2,4,5,7	—	1,2,4	1,2,4,7	1,2,4

Table 2: Results for mean ranks according to BAC metric

Dataset	kNN (1)	SB (2)	OSB (3)	KNORAU (4)	OKNORAU (5)	TBA (6)	OTBA (7)
<i>glass-0-1-4-6-vs-2</i>	0.098 ± 0.210	0.085 ± 0.195	0.642 ± 0.229	0.106 ± 0.212	0.615 ± 0.261	0.718 ± 0.144	0.735 ± 0.102
<i>ecoli-0-6-7-vs-3-5</i>	0.750 ± 0.159	0.751 ± 0.180	0.849 ± 0.118	0.725 ± 0.208	0.853 ± 0.113	0.882 ± 0.078	0.878 ± 0.078
<i>ecoli-0-3-4-7-vs-5-6</i>	0.852 ± 0.116	0.839 ± 0.107	0.885 ± 0.085	0.833 ± 0.113	0.886 ± 0.086	0.875 ± 0.072	0.870 ± 0.070
<i>glass4</i>	0.641 ± 0.310	0.697 ± 0.274	0.870 ± 0.242	0.692 ± 0.292	0.871 ± 0.242	0.900 ± 0.112	0.900 ± 0.112
<i>glass-0-6-vs-5</i>	0.521 ± 0.407	0.393 ± 0.404	0.944 ± 0.099	0.442 ± 0.437	0.930 ± 0.162	0.947 ± 0.093	0.947 ± 0.093
<i>vowel0</i>	0.969 ± 0.041	0.946 ± 0.048	0.989 ± 0.028	0.967 ± 0.041	0.990 ± 0.028	0.972 ± 0.027	0.976 ± 0.024
<i>ecoli4</i>	0.879 ± 0.124	0.895 ± 0.126	0.908 ± 0.112	0.898 ± 0.127	0.907 ± 0.112	0.942 ± 0.049	0.942 ± 0.049
<i>led7digit-0-2-4-5-6-7-8-9-vs-1</i>	0.494 ± 0.179	0.478 ± 0.241	0.895 ± 0.071	0.444 ± 0.221	0.832 ± 0.184	0.583 ± 0.163	0.602 ± 0.129
<i>shuttle-c0-vs-c4</i>	0.996 ± 0.008	0.995 ± 0.008	0.996 ± 0.008	0.995 ± 0.009	0.996 ± 0.008	0.998 ± 0.006	0.998 ± 0.006
<i>ecoli-0-3-4-vs-5</i>	0.888 ± 0.132	0.880 ± 0.142	0.901 ± 0.121	0.875 ± 0.137	0.899 ± 0.120	0.894 ± 0.112	0.893 ± 0.112
<i>yeast-0-3-5-9-vs-7-8</i>	0.533 ± 0.123	0.486 ± 0.134	0.679 ± 0.084	0.502 ± 0.145	0.668 ± 0.095	0.699 ± 0.065	0.709 ± 0.060
<i>ecoli-0-2-6-7-vs-3-5</i>	0.747 ± 0.192	0.762 ± 0.180	0.844 ± 0.111	0.755 ± 0.181	0.850 ± 0.096	0.875 ± 0.072	0.872 ± 0.072
<i>ecoli-0-6-7-vs-5</i>	0.814 ± 0.139	0.814 ± 0.139	0.863 ± 0.119	0.819 ± 0.126	0.852 ± 0.121	0.853 ± 0.095	0.846 ± 0.094
<i>page-blocks-1-3-vs-4</i>	0.789 ± 0.138	0.786 ± 0.128	0.905 ± 0.105	0.786 ± 0.130	0.895 ± 0.110	0.938 ± 0.035	0.940 ± 0.032
<i>yeast-0-2-5-7-9-vs-3-6-8</i>	0.885 ± 0.047	0.887 ± 0.048	0.893 ± 0.041	0.885 ± 0.049	0.892 ± 0.042	0.885 ± 0.029	0.882 ± 0.029
<i>ecoli-0-2-3-4-vs-5</i>	0.878 ± 0.100	0.884 ± 0.107	0.903 ± 0.086	0.884 ± 0.108	0.901 ± 0.087	0.898 ± 0.080	0.896 ± 0.079
<i>glass5</i>	0.394 ± 0.387	0.290 ± 0.377	0.716 ± 0.376	0.301 ± 0.393	0.709 ± 0.392	0.886 ± 0.201	0.892 ± 0.200
<i>yeast-0-2-5-6-vs-3-7-8-9</i>	0.719 ± 0.058	0.715 ± 0.059	0.777 ± 0.049	0.717 ± 0.063	0.777 ± 0.050	0.764 ± 0.037	0.765 ± 0.037
<i>ecoli-0-3-4-6-vs-5</i>	0.883 ± 0.108	0.876 ± 0.105	0.900 ± 0.101	0.872 ± 0.107	0.898 ± 0.101	0.890 ± 0.089	0.888 ± 0.089
<i>ecoli-0-1-vs-5</i>	0.879 ± 0.104	0.872 ± 0.105	0.911 ± 0.082	0.876 ± 0.102	0.909 ± 0.082	0.907 ± 0.078	0.907 ± 0.078
<i>yeast4</i>	0.288 ± 0.183	0.347 ± 0.183	0.662 ± 0.116	0.348 ± 0.184	0.664 ± 0.121	0.804 ± 0.076	0.804 ± 0.076
<i>shuttle-c2-vs-c4</i>	0.182 ± 0.369	0.182 ± 0.369	0.994 ± 0.041	0.225 ± 0.386	0.994 ± 0.041	0.994 ± 0.041	0.994 ± 0.041
<i>yeast-1-2-8-9-vs-7</i>	0.041 ± 0.122	0.052 ± 0.143	0.481 ± 0.210	0.060 ± 0.151	0.507 ± 0.206	0.658 ± 0.117	0.658 ± 0.117
<i>ecoli-0-1-4-7-vs-5-6</i>	0.844 ± 0.132	0.830 ± 0.137	0.884 ± 0.104	0.818 ± 0.140	0.886 ± 0.088	0.885 ± 0.061	0.887 ± 0.061
<i>ecoli-0-1-4-7-vs-2-3-5-6</i>	0.805 ± 0.133	0.797 ± 0.128	0.840 ± 0.092	0.799 ± 0.130	0.845 ± 0.091	0.845 ± 0.075	0.841 ± 0.075
<i>yeast-2-vs-4</i>	0.797 ± 0.083	0.803 ± 0.083	0.865 ± 0.069	0.800 ± 0.081	0.865 ± 0.071	0.875 ± 0.061	0.883 ± 0.056
<i>glass-0-4-vs-5</i>	0.560 ± 0.419	0.564 ± 0.387	0.942 ± 0.157	0.576 ± 0.430	0.947 ± 0.153	0.948 ± 0.035	0.948 ± 0.035
<i>glass-0-1-6-vs-2</i>	0.118 ± 0.222	0.063 ± 0.171	0.618 ± 0.224	0.050 ± 0.151	0.565 ± 0.239	0.722 ± 0.104	0.725 ± 0.096
<i>glass-0-1-5-vs-2</i>	0.161 ± 0.246	0.139 ± 0.235	0.606 ± 0.226	0.207 ± 0.267	0.593 ± 0.222	0.669 ± 0.157	0.701 ± 0.139
<i>yeast6</i>	0.707 ± 0.136	0.666 ± 0.145	0.799 ± 0.112	0.655 ± 0.179	0.795 ± 0.108	0.878 ± 0.061	0.878 ± 0.061
<i>ecoli-0-1-3-7-vs-2-6</i>	0.741 ± 0.387	0.741 ± 0.387	0.734 ± 0.383	0.741 ± 0.387	0.735 ± 0.384	0.713 ± 0.370	0.713 ± 0.370
<i>yeast-1-vs-7</i>	0.142 ± 0.199	0.204 ± 0.227	0.526 ± 0.190	0.210 ± 0.235	0.535 ± 0.192	0.648 ± 0.108	0.663 ± 0.106
<i>glass-0-1-6-vs-5</i>	0.459 ± 0.368	0.308 ± 0.385	0.818 ± 0.272	0.355 ± 0.394	0.793 ± 0.293	0.878 ± 0.207	0.877 ± 0.206
<i>yeast-2-vs-8</i>	0.718 ± 0.181	0.718 ± 0.181	0.733 ± 0.148	0.718 ± 0.181	0.751 ± 0.142	0.787 ± 0.129	0.787 ± 0.129
<i>glass2</i>	0.201 ± 0.271	0.146 ± 0.248	0.649 ± 0.215	0.153 ± 0.245	0.665 ± 0.188	0.748 ± 0.102	0.751 ± 0.102
<i>ecoli-0-1-4-6-vs-5</i>	0.873 ± 0.105	0.879 ± 0.100	0.908 ± 0.081	0.876 ± 0.103	0.906 ± 0.087	0.900 ± 0.075	0.900 ± 0.075
<i>yeast-0-5-6-7-9-vs-4</i>	0.532 ± 0.164	0.541 ± 0.190	0.779 ± 0.078	0.552 ± 0.179	0.784 ± 0.071	0.794 ± 0.050	0.793 ± 0.045
<i>ecoli-0-1-vs-2-3-5</i>	0.807 ± 0.125	0.814 ± 0.117	0.865 ± 0.106	0.825 ± 0.125	0.861 ± 0.109	0.856 ± 0.100	0.848 ± 0.098
<i>yeast5</i>	0.798 ± 0.083	0.785 ± 0.086	0.926 ± 0.057	0.795 ± 0.089	0.926 ± 0.052	0.978 ± 0.011	0.978 ± 0.011
<i>yeast-1-4-5-8-vs-7</i>	0.008 ± 0.056	0.024 ± 0.096	0.296 ± 0.245	0.024 ± 0.096	0.330 ± 0.243	0.600 ± 0.142	0.600 ± 0.142
<i>ecoli-0-4-6-vs-5</i>	0.892 ± 0.095	0.894 ± 0.094	0.909 ± 0.090	0.891 ± 0.095	0.905 ± 0.090	0.900 ± 0.083	0.898 ± 0.083

Table 3: Results for GMEAN metric

	kNN (1)	SB (2)	OSB (3)	KNORAU (4)	OKNORAU (5)	TBA (6)	OTBA (7)
<i>Mean rank</i>	3.326	3.186	4.754	3.228	4.568	4.541	4.397
	2	—	1,2,4,5	—	1,2,4	1,2,4,7	1,2,4

Table 4: Results for mean ranks according to GMEAN metric