Dua skala niezbalansowania prowadzi to sprowadzenia klasy mniejszociowej to licznoci, ktra nie pozwala na efektywne wykorzystanie bardziej zoonych metod, takich jak ADASYN czy SMOTE. Due niezbalansowanie powoduje te znaczny wzrost licznoci komitetu, a wic poza jego waeniem zaproponowana zostaa redukcja do modelu dwuetapowego.

GNB																									
Dataset	Reg	os	US	Without OS										With OS											
				nog.	N   wei	onreduc   cwei	ed nwei	l namei	no.c	wei	Reduced   cwei	d   nwei	l namai	200	N   wei	onreduc   cwei	ed   nwei	l namai	no.c	wei	Reduced cwei	l nwei	nawa;		
		l	<u> </u>	reg	wei	Cwei	nwei	ncwei	reg	wei	Cwei	liwei	ncwei	reg	wei	cwei	liwei	ncwei	reg	wei	cwei	nwei	ncwei		
ecoli-0-1-3-7-vs-2-6	0.825	0.806	0.884	0.845	0.845	0.845	0.845	0.839	0.845	0.845	0.845	0.837	0.835	0.845	0.845	0.845	0.821	0.819	0.845	0.845	0.845	0.835	0.835		
ecoli4	0.878	0.859	0.704	0.834	0.859	0.859	0.901	0.902	0.743	0.790	0.815	0.876	0.895	0.896	0.915	0.902	0.894	0.896	0.767	0.842	0.840	0.898	0.895		
glass-0-1-6-vs-2 glass-0-1-6-vs-5	0.580 0.941	0.577 0.941	0.605 0.980	0.583	0.577	0.580	0.610 0.989	0.607 0.989	0.574 0.989	0.574	0.574	0.577 0.991	0.574	0.610 0.989	0.585	0.549	0.588	0.588	0.577	0.577 0.989	0.577 0.989	0.577 $0.991$	0.577 0.991		
glass2	0.591	0.639	0.552	0.644	0.644	0.644	0.614	0.611	0.641	0.641	0.641	0.611	0.611	0.644	0.644	0.644	0.614	0.611	0.641	0.641	0.641	0.611	0.611		
glass4	0.587	0.704	0.686	0.786	0.819	0.819	0.786	0.819	0.781	0.781	0.781	0.784	0.781	0.791	0.791	0.794	0.791	0.796	0.781	0.781	0.781	0.784	0.784		
glass5	0.938	0.938	0.935	0.938	0.938	0.938	0.938	0.938	0.938	0.938	0.938	0.938	0.938	0.938	0.938	0.938	0.938	0.938	0.938	0.938	0.938	0.938	0.938		
page-blocks-1-3-vs-4	0.763	0.794	0.854	0.823	0.823	0.822	0.847	0.847	0.833	0.833	0.833	0.832	0.832	0.810	0.808	0.808	0.832	0.830	0.833	0.833	0.833	0.832	0.832		
shuttle-c0-vs-c4	0.991	0.991	0.991	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.987	0.987	0.994	0.994	0.994	0.991	0.991		
shuttle-c2-vs-c4	0.996	0.988	0.967	0.967	0.971	0.967	0.984	0.975	0.996	0.996	0.996	0.996	0.996	0.980	0.980	0.980	0.980	0.980	0.996	0.996	0.996	0.996	0.996		
vowel0 yeast-0-5-6-7-9-vs-4	0.917 0.504	0.906	$0.906 \\ 0.592$	0.909 0.634	0.909 0.646	0.909 0.633	$0.908 \\ 0.762$	0.909 0.752	0.909 0.627	0.909	0.909 0.670	0.909 0.781	0.910 0.757	0.910 0.670	0.910 0.721	0.909 $0.721$	0.909	0.909 0.773	0.909 0.668	0.909 0.693	0.909 0.694	$0.909 \\ 0.780$	0.910 0.753		
yeast-1-2-8-9-vs-7	0.544	0.433	0.610	0.579	0.584	0.583	0.702	0.752	0.568	0.709	0.589	0.621	0.628	0.585	0.721	0.721	0.612	0.773	0.560	0.586	0.580	0.780	0.733		
yeast-1-4-5-8-vs-7	0.547	0.541	0.549	0.530	0.532	0.528	0.548	0.570	0.556	0.561	0.560	0.565	0.552	0.532	0.539	0.543	0.552	0.561	0.565	0.569	0.555	0.563	0.548		
yeast-1-vs-7	0.604	0.587	0.670	0.712	0.713	0.715	0.720	0.718	0.700	0.708	0.691	0.710	0.708	0.671	0.635	0.685	0.719	0.711	0.700	0.695	0.680	0.709	0.708		
yeast-2-vs-4	0.561	0.542	0.638	0.869	0.869	0.869	0.868	0.869	0.822	0.824	0.829	0.875	0.866	0.762	0.811	0.775	0.867	0.863	0.810	0.830	0.829	0.875	0.866		
yeast-2-vs-8	0.657	0.615	0.771	0.773	0.773	0.798	0.798	0.798	0.773	0.773	0.773	0.773	0.773	0.795	0.797	0.796	0.798	0.798	0.773	0.773	0.773	0.773	0.773		
yeast4	0.551	0.522	0.575	0.693	0.691	0.692	0.765	0.761	0.715	0.744	0.712	0.818	0.819	0.717	0.728	0.714	0.758	0.760	0.710	0.737	0.726	0.816	0.817		
yeast5	0.831	0.778	0.895	0.940	0.940	0.940	0.939	0.940	0.933	0.939	0.942	0.957	0.955	0.892	0.905	0.898	0.939	0.934	0.931	0.937	0.939	0.956	0.955		
yeast6	0.650	0.628 0.883	0.825 $0.635$	0.750	0.755 0.906	0.754 0.906	0.853 0.896	0.789 0.894	0.830 0.712	0.862 0.737	0.844	0.873	0.880	0.704 0.908	0.702 0.908	0.697 $0.908$	0.852 0.904	0.783 0.902	0.813 0.737	0.858 0.738	0.840 0.788	0.873	0.880		
ecoli-0-1-4-6-vs-5 ecoli-0-1-4-7-vs-2-3-5-6	0.877 0.630	0.883	0.633	0.906 0.630	0.630	0.630	0.896	0.894	0.712	0.737	0.737	0.910 0.677	0.912 0.680	0.630	0.908	0.908	0.904	0.902	0.737	0.738	0.788	$0.910 \\ 0.678$	0.912 0.678		
ecoli-0-1-4-7-vs-5-6	0.735	0.851	0.604	0.617	0.617	0.617	0.617	0.617	0.617	0.617	0.617	0.879	0.867	0.617	0.617	0.677	0.855	0.859	0.617	0.617	0.617	0.864	0.867		
ecoli-0-1-vs-2-3-5	0.638	0.655	0.605	0.558	0.558	0.558	0.558	0.558	0.558	0.558	0.558	0.658	0.618	0.638	0.635	0.635	0.635	0.635	0.558	0.618	0.618	0.655	0.618		
ecoli-0-1-vs-5	0.782	0.800	0.684	0.666	0.666	0.691	0.693	0.693	0.641	0.641	0.641	0.743	0.743	0.714	0.741	0.766	0.818	0.818	0.639	0.689	0.714	0.816	0.816		
ecoli-0-2-3-4-vs-5	0.754	0.638	0.756	0.633	0.683	0.708	0.853	0.831	0.708	0.708	0.708	0.878	0.878	0.764	0.767	0.814	0.837	0.826	0.697	0.783	0.758	0.875	0.878		
ecoli-0-2-6-7-vs-3-5	0.563	0.578	0.580	0.596	0.591	0.593	0.633	0.633	0.563	0.613	0.588	0.696	0.656	0.598	0.598	0.596	0.638	0.636	0.588	0.610	0.613	0.663	0.663		
ecoli-0-3-4-6-vs-5	0.784	0.747	0.784	0.807	0.832	0.832	0.868	0.868	0.865	0.865	0.873	0.887	0.884	0.871	0.866	0.860	0.857	0.852	0.862	0.857	0.857	0.882	0.882		
ecoli-0-3-4-7-vs-5-6 ecoli-0-3-4-vs-5	0.775 $0.817$	0.740 0.731	0.633 $0.714$	0.673 0.739	0.693 0.767	0.673 0.739	0.705 0.797	0.729 0.789	0.633 0.661	0.653 0.661	0.633	0.781 0.886	0.761	0.761 0.794	0.781	0.767 $0.814$	0.787	0.787 0.803	0.633 0.656	0.671 0.733	0.673 0.731	0.848 $0.883$	0.812 0.886		
ecoli-0-3-4-vs-5 ecoli-0-4-6-vs-5	0.817	0.731	0.714	0.739	0.767	0.753	0.797	0.789	0.001	0.853	0.708	0.880	0.903	0.794	0.783	0.814	0.901	0.803	0.830	0.733	0.731	0.903	0.880		
ecoli-0-4-0-vs-3 ecoli-0-6-7-vs-3-5	0.504	0.528	0.550	0.623	0.583	0.618	0.623	0.578	0.731	0.508	0.508	0.657	0.617	0.583	0.603	0.603	0.620	0.595	0.548	0.508	0.508	0.657	0.640		
ecoli-0-6-7-vs-5	0.780	0.855	0.747	0.745	0.762	0.767	0.850	0.855	0.640	0.758	0.713	0.863	0.865	0.860	0.855	0.863	0.843	0.843	0.660	0.853	0.782	0.863	0.865		
glass-0-1-4-6-vs-2	0.577	0.556	0.622	0.625	0.659	0.659	0.659	0.659	0.597	0.597	0.594	0.622	0.622	0.625	0.625	0.625	0.625	0.659	0.600	0.600	0.592	0.595	0.595		
glass-0-1-5-vs-2	0.519	0.553	0.470	0.526	0.526	0.548	0.603	0.583	0.522	0.545	0.525	0.639	0.646	0.589	0.585	0.569	0.513	0.516	0.539	0.551	0.586	0.623	0.613		
glass-0-4-vs-5	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994	0.994		
glass-0-6-vs-5	0.945	0.945	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995		
led7digit-0-2-4-5-6-7-8-9-vs-1 yeast-0-2-5-6-vs-3-7-8-9	0.836 0.670	0.869 0.780	0.866 0.580	0.881 0.581	0.881 0.581	0.881 0.581	0.881 0.586	0.881 0.586	0.882 0.576	0.882 0.576	0.882 0.576	0.882 0.749	0.882 0.729	0.866 0.686	0.866 0.710	0.881 0.719	0.881 0.780	0.881 0.765	0.882 0.576	0.882 0.576	0.882 0.576	0.882 $0.777$	0.882 $0.761$		
yeast-0-2-5-7-9-vs-3-6-8	0.577	0.523	0.702	0.844	0.844	0.844	0.893	0.854	0.898	0.897	0.895	0.900	0.903	0.757	0.786	0.743	0.898	0.863	0.897	0.904	0.894	0.905	0.908		
yeast-0-3-5-9-vs-7-8	0.557	0.537	0.623	0.607	0.607	0.607	0.607	0.607	0.607	0.607	0.607	0.607	0.607	0.565	0.615	0.575	0.607	0.617	0.622	0.613	0.607	0.607	0.607		
ecoli-0-vs-1	0.928	0.928	0.928	0.924	0.924	0.924	0.924	0.924	0.924	0.924	0.924	0.930	0.930	0.928	0.928	0.928	0.928	0.928	0.924	0.924	0.924	0.924	0.924		
ecoli1	0.756	0.715	0.776	0.852	0.852	0.852	0.852	0.852	0.857	0.855	0.856	0.858	0.864	0.784	0.788	0.788	0.793	0.797	0.821	0.837	0.833	0.840	0.846		
ecoli2	0.616	0.627	0.685	0.734	0.732	0.734	0.736	0.734	0.686	0.719	0.730	0.817	0.810	0.701	0.715	0.711	0.736	0.729	0.670	0.689	0.695	0.813	0.806		
ecoli3	0.847	0.825	0.809	0.885	0.883	0.883	0.883	0.883	0.821	0.872	0.876	0.883	0.883	0.877	0.878	0.875	0.878	0.877	0.872	0.883	0.885	0.883	0.882		
glass-0-1-2-3-vs-4-5-6	0.869	0.879	0.853	0.879	0.879	0.879	0.875	0.878	0.873	0.873	0.873	0.905	0.895	0.879	0.879	0.879 $0.722$	0.885	0.878	0.873	0.879	0.879 $0.722$	0.895	0.895		
glass0 glass1	$0.700 \\ 0.671$	0.704 0.673	0.711 $0.671$	0.707	0.707 0.666	0.707 0.666	0.707 0.666	0.707 0.666	0.704 0.666	0.707	0.707	0.707 0.669	0.707	0.722 0.663	0.722	0.722	0.714 0.666	0.722 0.663	0.722 0.663	0.722 0.663	0.722	0.714 $0.677$	0.714 0.666		
glass6	0.871	0.869	0.834	0.870	0.870	0.870	0.870	0.873	0.873	0.875	0.878	0.892	0.889	0.886	0.886	0.883	0.867	0.869	0.889	0.889	0.883	0.892	0.892		
iris0	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		
new-thyroid1	0.983	0.972	0.969	0.978	0.978	0.978	0.983	0.983	0.975	0.975	0.975	0.981	0.981	0.975	0.975	0.978	0.983	0.983	0.972	0.972	0.975	0.981	0.978		
new-thyroid2	0.986	0.975	0.975	0.975	0.975	0.975	0.978	0.978	0.975	0.975	0.978	0.981	0.981	0.975	0.975	0.975	0.978	0.978	0.975	0.975	0.978	0.981	0.981		
pima	0.720	0.729	0.724	0.731	0.731	0.731	0.735	0.735	0.731	0.731	0.731	0.741	0.740	0.732	0.732	0.734	0.732	0.731	0.732	0.732	0.732	0.739	0.735		
wisconsin	0.969	0.969	0.966	0.968	0.968	0.968	0.968	0.968	0.965	0.968	0.967	0.966	0.966	0.969	0.969	0.969	0.968	0.968	0.969	0.969	0.969	0.967	0.967		
yeast1	0.519	0.517	0.514	0.514	0.514	0.514	0.514	0.514	0.514	0.514	0.514	0.515	0.514	0.515	0.515	0.515	0.517	0.516	0.515	0.515	0.515	0.518	0.518		
yeast3	0.605	0.567	0.772	0.664	0.666	0.665	0.719	0.715	0.663	0.710	0.707	0.892	0.881	0.634	0.640	0.640	0.718	0.705	0.631	0.686	0.677	0.890	0.872		

kNN																									
Dataset	Reg	OS	US	Without OS										With OS											
						onreduc		1		1	Reduce					onreduc					Reduced				
		l		reg	wei	cwei	nwei	ncwei	reg	wei	cwei	nwei	ncwei	reg	wei	cwei	nwei	ncwei	reg	wei	cwei	nwei	ncwei		
ecoli-0-1-3-7-vs-2-6	0.850	0.835	0.821	0.845	0.843	0.842	0.838	0.838	0.845	0.842	0.838	0.847	0.844	0.867	0.869	0.828	0.832	0.830	0.847	0.849	0.851	0.853	0.856		
ecoli4	0.848	0.909	0.921	0.934	0.934	0.938	0.949	0.949	0.938	0.938	0.940	0.959	0.953	0.949	0.953	0.945	0.958	0.958	0.940	0.940	0.945	0.950	0.958		
glass-0-1-6-vs-2 glass-0-1-6-vs-5	0.555 0.739	0.656 0.933	0.663 0.799	0.724	$0.726 \\ 0.821$	0.724 0.827	0.699 0.830	0.729 0.830	0.724 0.827	0.726 0.827	0.715 0.830	0.702 0.827	0.726 0.830	0.740 0.850	0.732 0.861	0.775 0.890	0.730 0.924	0.705 $0.921$	0.727 0.830	0.739	0.740 0.836	0.766 0.833	0.777 0.839		
glass2	0.739	0.933	0.676	0.736	0.739	0.729	0.724	0.830	0.694	0.827	0.696	0.827	0.704	0.830	0.734	0.769	0.720	0.720	0.830	0.830	0.830	0.705	0.743		
glass4	0.781	0.925	0.847	0.861	0.861	0.861	0.861	0.861	0.861	0.861	0.861	0.861	0.861	0.863	0.863	0.888	0.913	0.915	0.861	0.861	0.861	0.891	0.893		
glass5	0.695	0.830	0.809	0.809	0.811	0.816	0.823	0.823	0.813	0.813	0.863	0.813	0.813	0.830	0.840	0.855	0.901	0.916	0.816	0.818	0.826	0.823	0.830		
page-blocks-1-3-vs-4	0.808	0.917	0.872	0.877	0.877	0.875	0.888	0.881	0.871	0.872	0.887	0.900	0.894	0.899	0.901	0.922	0.918	0.920	0.876	0.879	0.894	0.916	0.919		
shuttle-c0-vs-c4	0.996	0.996	0.996	0.996	0.996	0.996	0.996	0.996	0.996	0.996	0.996	0.996	0.996	0.996	0.996	0.996	0.996	0.996	0.996	0.996	0.996	0.996	0.996		
shuttle-c2-vs-c4	0.600	1.000	0.870	0.879	0.879	0.859	0.883	0.879	0.863	0.879	0.859	0.879	0.879	0.996	0.996	1.000	1.000	1.000	0.879	0.883	0.891	0.919	0.964		
vowel0 yeast-0-5-6-7-9-vs-4	0.977 0.667	0.999	0.944 $0.761$	0.944	0.944 0.799	0.944 0.802	0.944 0.807	0.943 0.806	0.943 0.799	0.943	0.943 0.794	0.944	0.946 0.787	0.954 0.799	0.956 0.804	0.967 $0.815$	0.997 0.817	0.998 0.823	0.949 0.801	0.949	0.956 $0.821$	0.985 0.816	0.988 0.818		
yeast-1-2-8-9-vs-7	0.499	0.627	0.678	0.662	0.663	0.659	0.677	0.674	0.678	0.679	0.658	0.671	0.665	0.623	0.632	0.622	0.626	0.626	0.672	0.657	0.679	0.685	0.689		
yeast-1-4-5-8-vs-7	0.499	0.615	0.537	0.580	0.580	0.562	0.578	0.573	0.573	0.555	0.565	0.561	0.568	0.643	0.617	0.614	0.611	0.607	0.592	0.602	0.592	0.660	0.648		
yeast-1-vs-7	0.517	0.705	0.660	0.727	0.726	0.726	0.739	0.735	0.736	0.747	0.749	0.750	0.748	0.696	0.695	0.709	0.700	0.698	0.750	0.739	0.710	0.692	0.699		
yeast-2-vs-4	0.819	0.885	0.913	0.913	0.914	0.916	0.915	0.915	0.914	0.914	0.916	0.915	0.914	0.919	0.919	0.908	0.909	0.904	0.918	0.917	0.919	0.910	0.909		
yeast-2-vs-8	0.774	0.803	0.725	0.708	0.709	0.709	0.721	0.715	0.720	0.720	0.725	0.734	0.735	0.753	0.753	0.754	0.803	0.803	0.732	0.738	0.755	0.758	0.754		
yeast4	0.574	0.749	0.808	0.849	0.849	0.850	0.851	0.849	0.838	0.839	0.840	0.839	0.840	0.841	0.844	0.851	0.773	0.774	0.842	0.843	0.843	0.844	0.842		
yeast5 yeast6	0.850 0.739	0.964 0.840	0.959 $0.882$	0.956 0.883	0.956 0.883	0.955 0.883	0.958 0.884	0.958 0.884	0.956 0.884	0.956 0.884	0.956 0.884	0.958 0.885	0.957 0.884	0.959 0.897	0.959	0.962 $0.876$	0.967 0.835	0.969 0.851	0.958 0.887	0.958 0.887	0.958 0.887	0.960 0.892	0.961 0.892		
ecoli-0-1-4-6-vs-5	0.733	0.917	0.860	0.888	0.888	0.888	0.892	0.892	0.892	0.892	0.892	0.892	0.892	0.894	0.894	0.898	0.910	0.913	0.892	0.892	0.892	0.892	0.896		
ecoli-0-1-4-7-vs-2-3-5-6	0.847	0.856	0.879	0.893	0.891	0.891	0.890	0.888	0.895	0.895	0.893	0.906	0.901	0.878	0.881	0.882	0.891	0.889	0.871	0.869	0.874	0.882	0.884		
ecoli-0-1-4-7-vs-5-6	0.838	0.899	0.893	0.880	0.881	0.880	0.886	0.885	0.885	0.885	0.883	0.891	0.894	0.891	0.891	0.881	0.894	0.894	0.889	0.889	0.891	0.884	0.889		
ecoli-0-1-vs-2-3-5	0.830	0.887	0.907	0.885	0.885	0.887	0.896	0.894	0.892	0.892	0.872	0.916	0.896	0.894	0.894	0.894	0.885	0.885	0.874	0.894	0.894	0.890	0.890		
ecoli-0-1-vs-5	0.900	0.916	0.891	0.907	0.907	0.905	0.902	0.909	0.907	0.907	0.907	0.909	0.905	0.911	0.911	0.911	0.914	0.914	0.911	0.911	0.911	0.914	0.914		
ecoli-0-2-3-4-vs-5	0.894	0.909	0.889	0.900	0.900	0.900	0.903	0.903	0.900	0.900	0.900	0.903	0.903	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900 0.860		
ecoli-0-2-6-7-vs-3-5 ecoli-0-3-4-6-vs-5	0.787 $0.875$	0.890	0.811 0.918	0.836	0.836 0.876	0.841	0.848 0.890	0.820 0.893	0.831 0.876	0.828	0.828	0.848	0.846	0.848	0.850	0.858 $0.895$	0.860 0.895	0.860 0.898	0.843	0.846	0.848	0.860 0.895	0.860		
ecoli-0-3-4-7-vs-5-6	0.876	0.894	0.884	0.908	0.908	0.906	0.873	0.893	0.904	0.904	0.900	0.911	0.891	0.891	0.893	0.899	0.890	0.892	0.888	0.888	0.895	0.885	0.885		
ecoli-0-3-4-vs-5	0.875	0.911	0.897	0.903	0.903	0.903	0.903	0.903	0.900	0.900	0.903	0.903	0.903	0.906	0.906	0.903	0.903	0.903	0.906	0.906	0.906	0.903	0.903		
ecoli-0-4-6-vs-5	0.900	0.914	0.890	0.890	0.890	0.890	0.892	0.892	0.890	0.890	0.890	0.892	0.892	0.890	0.890	0.890	0.895	0.895	0.890	0.890	0.890	0.892	0.892		
ecoli-0-6-7-vs-3-5	0.835	0.892	0.832	0.853	0.853	0.855	0.865	0.857	0.860	0.860	0.863	0.870	0.870	0.868	0.870	0.870	0.860	0.863	0.872	0.872	0.872	0.860	0.855		
ecoli-0-6-7-vs-5	0.847	0.863	0.860	0.855	0.855	0.863	0.875	0.877	0.855	0.858	0.853	0.875	0.872	0.872	0.875	0.877	0.895	0.893	0.865	0.868	0.868	0.895	0.893		
glass-0-1-4-6-vs-2	0.512 $0.527$	0.732	0.673	0.712	0.712 0.690	0.704 0.684	0.722	0.717	0.712	0.712	0.704 0.680	0.728	0.722 0.674	0.756	0.723	0.722	0.724	0.718	0.738	0.746	0.714	0.714	0.727 $0.764$		
glass-0-1-5-vs-2 glass-0-4-vs-5	0.850	0.658 0.988	0.636 0.897	0.087	0.090	0.084	0.650 $0.921$	0.687 0.921	0.687 0.939	0.087	0.080	0.684	0.074	0.728 0.951	0.710 0.951	0.731 0.951	0.701 0.951	0.737 0.951	0.686 0.944	0.099	0.716 0.951	0.751 0.951	0.764		
glass-0-4-vs-5	0.745	0.985	0.843	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.873	0.873	0.873	0.913	0.913	0.933	0.959	0.985	0.878	0.878	0.893	0.893	0.933		
led7digit-0-2-4-5-6-7-8-9-vs-1	0.655	0.884	0.893	0.870	0.870	0.867	0.867	0.865	0.864	0.864	0.875	0.867	0.865	0.867	0.867	0.865	0.859	0.857	0.863	0.863	0.878	0.859	0.873		
yeast-0-2-5-6-vs-3-7-8-9	0.762	0.784	0.768	0.786	0.786	0.786	0.781	0.783	0.786	0.786	0.784	0.781	0.783	0.801	0.802	0.804	0.791	0.797	0.793	0.800	0.802	0.790	0.791		
yeast-0-2-5-7-9-vs-3-6-8	0.902	0.904	0.912	0.905	0.905	0.905	0.906	0.905	0.904	0.904	0.906	0.905	0.910	0.908	0.908	0.898	0.905	0.906	0.908	0.908	0.902	0.907	0.900		
yeast-0-3-5-9-vs-7-8	0.639	0.709	0.723	0.737	0.737	0.735	0.718	0.732	0.743	0.743	0.762	0.730	0.742	0.769	0.739	0.730	0.721	0.721	0.769	0.770	0.742	0.726	0.733		
ecoli-0-vs-1 ecoli1	0.980 0.871	0.973 0.896	0.983 0.898	0.983	0.983 0.899	0.983	0.983 0.903	0.983	0.983	0.983	0.983	0.983	0.983	0.983	0.983	0.983 0.902	0.983	0.983 0.900	0.983	0.983	0.983 0.904	0.983 0.893	0.983 0.898		
ecolii ecolii	0.871	0.896	0.896	0.899	0.899	0.899	0.896	0.903	0.899	0.899	0.899	0.898	0.903	0.904	0.904	0.902	0.893	0.900	0.904	0.904	0.904	0.893	0.898		
ecoli3	0.783	0.826	0.860	0.906	0.906	0.906	0.906	0.906	0.909	0.909	0.908	0.898	0.897	0.897	0.898	0.886	0.889	0.889	0.914	0.914	0.913	0.887	0.887		
glass-0-1-2-3-vs-4-5-6	0.870	0.936	0.911	0.910	0.910	0.910	0.923	0.920	0.910	0.910	0.910	0.923	0.920	0.913	0.913	0.913	0.929	0.929	0.913	0.913	0.913	0.929	0.929		
glass0	0.739	0.801	0.776	0.787	0.787	0.787	0.776	0.776	0.772	0.787	0.787	0.776	0.776	0.793	0.793	0.793	0.794	0.787	0.793	0.793	0.793	0.794	0.787		
glass1	0.755	0.780	0.745	0.774	0.774	0.774	0.743	0.746	0.755	0.774	0.774	0.743	0.746	0.768	0.768	0.768	0.774	0.778	0.768	0.768	0.768	0.774	0.778		
glass6	0.873	0.909	0.893	0.882	0.882	0.884	0.901	0.901	0.882	0.882	0.884	0.901	0.884	0.868	0.870	0.878	0.895	0.912	0.868	0.868	0.870	0.895	0.912		
iris0	1.000	1.000 0.981	1.000 0.895	1.000	1.000 0.901	1.000 0.901	1.000 0.898	1.000 0.898	1.000 0.901	1.000	1.000 0.901	1.000 0.901	1.000	1.000 0.949	1.000 0.949	1.000 0.961	1.000 0.966	1.000 0.966	1.000 0.921	1.000	1.000 0.963	1.000 0.966	1.000 0.966		
new-thyroid1 new-thyroid2	0.869 0.857	0.981	0.895	0.901	0.901	0.901	0.898	0.898	0.901	0.901	0.901	0.901	0.901	0.949	0.949	0.961	0.966	0.966	0.921	0.949	0.963	0.966	0.966		
pima	0.677	0.667	0.699	0.704	0.704	0.704	0.699	0.699	0.892	0.892	0.892	0.699	0.699	0.704	0.932	0.704	0.676	0.685	0.704	0.932	0.704	0.676	0.685		
wisconsin	0.971	0.975	0.979	0.976	0.976	0.976	0.974	0.974	0.976	0.976	0.976	0.974	0.974	0.977	0.977	0.977	0.973	0.973	0.977	0.977	0.977	0.973	0.973		
yeast1	0.649	0.672	0.686	0.698	0.698	0.698	0.689	0.691	0.696	0.698	0.698	0.689	0.692	0.713	0.712	0.711	0.699	0.702	0.713	0.713	0.711	0.699	0.702		
yeast3	0.828	0.886	0.899	0.911	0.911	0.919	0.908	0.914	0.912	0.914	0.917	0.908	0.913	0.910	0.910	0.917	0.902	0.903	0.915	0.915	0.914	0.902	0.902		
	LT.																								

DTC																							
Dataset	Reg	os	US	Without OS														Wit	h OS				
					N	onreduc	ed				Reduced	1			N	onreduc	ed				Reduced	l	
				reg	wei	cwei	nwei	ncwei	reg	wei	cwei	nwei	ncwei	reg	wei	cwei	nwei	ncwei	reg	wei	cwei	nwei	ncwei
ecoli-0-1-3-7-vs-2-6	0.841	0.641	0.781	0.705	0.705	0.703	0.716	0.714	0.809	0.807	0.807	0.814	0.814	0.740	0.745	0.754	0.719	0.730	0.809	0.809	0.809	0.825	0.825
ecoli4	0.867	0.816	0.904	0.853	0.853	0.849	0.851	0.851	0.912	0.909	0.909	0.864	0.864	0.860	0.860	0.860	0.847	0.848	0.912	0.912	0.912	0.875	0.875
glass-0-1-6-vs-2	0.580	0.649	0.596	0.679	0.679	0.673	0.643	0.629	0.682	0.713	0.713	0.685	0.685	0.647	0.647	0.650	0.601	0.601	0.699	0.696	0.696	0.642	0.642
glass-0-1-6-vs-5 glass2	0.886 $0.571$	0.844 0.652	0.811 0.706	0.926 0.752	0.926 0.752	0.926 0.752	0.943 0.790	0.940 0.788	0.926 0.782	0.926 0.779	0.926 0.779	0.931 0.830	0.931 0.830	0.937 0.764	0.937 0.767	0.937 0.780	0.957 0.611	0.957 0.613	0.926 0.766	0.926 0.797	0.926 0.797	$0.940 \\ 0.787$	0.940 0.787
glass2 glass4	0.802	0.838	0.700	0.732	0.752	0.752	0.790	0.788	0.782	0.779	0.779	0.830	0.830	0.764	0.767	0.780	0.920	0.013	0.766	0.797	0.797	0.787	0.787
glass5	0.802	0.898	0.800	0.890	0.830	0.890	0.833	0.893	0.934	0.934	0.903	0.913	0.913	0.836	0.934	0.937	0.956	0.916	0.910	0.934	0.910	0.920	0.920
page-blocks-1-3-vs-4	0.996	0.998	0.951	0.984	0.984	0.984	0.989	0.990	0.989	0.989	0.989	0.990	0.990	0.987	0.987	0.988	0.993	0.993	0.990	0.989	0.989	0.990	0.990
shuttle-c0-vs-c4	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
shuttle-c2-vs-c4	1.000	1.000	0.964	0.964	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
vowel0	0.941	0.917	0.960	0.962	0.961	0.961	0.959	0.959	0.960	0.964	0.964	0.965	0.965	0.958	0.958	0.958	0.965	0.965	0.960	0.960	0.960	0.961	0.961
yeast-0-5-6-7-9-vs-4	0.651	0.666	0.782	0.820	0.820	0.820	0.789	0.789	0.803	0.811	0.811	0.800	0.800	0.804	0.806	0.807	0.747	0.730	0.807	0.804	0.804	0.762	0.762
yeast-1-2-8-9-vs-7	0.633	0.640	0.676	0.722	0.722	0.722	0.753	0.757	0.758	0.758	0.758	0.757	0.757	0.758	0.717	0.700	0.620	0.621	0.779	0.776	0.776	0.752	0.752
yeast-1-4-5-8-vs-7 yeast-1-vs-7	$0.524 \\ 0.664$	0.515 0.615	0.584 $0.652$	0.592 0.699	0.592 0.698	0.607 0.699	0.603 0.718	0.600 0.717	0.608 0.729	0.595 0.737	0.595 0.737	0.586 0.759	0.586 0.759	0.612 0.717	0.603 0.718	0.611 0.718	0.587 0.687	0.557 0.679	0.608 0.728	0.608 0.728	$0.608 \\ 0.728$	$0.592 \\ 0.705$	0.592 $0.705$
yeast-1-vs-7 yeast-2-vs-4	0.855	0.850	0.032	0.099	0.098	0.099	0.718	0.717	0.729	0.737	0.737	0.739	0.759	0.717	0.718	0.718	0.874	0.865	0.728	0.728	0.728	0.705	0.705
veast-2-vs-8	0.664	0.692	0.719	0.780	0.778	0.798	0.797	0.792	0.766	0.766	0.766	0.771	0.771	0.775	0.777	0.783	0.770	0.772	0.784	0.806	0.806	0.790	0.790
yeast4	0.644	0.655	0.778	0.846	0.846	0.847	0.835	0.836	0.844	0.842	0.842	0.849	0.849	0.818	0.819	0.835	0.616	0.616	0.847	0.847	0.847	0.835	0.835
yeast5	0.834	0.868	0.931	0.963	0.963	0.963	0.968	0.968	0.964	0.964	0.964	0.967	0.967	0.967	0.967	0.967	0.932	0.922	0.966	0.966	0.966	0.957	0.957
yeast6	0.731	0.766	0.817	0.847	0.847	0.847	0.854	0.869	0.861	0.861	0.861	0.863	0.863	0.859	0.859	0.863	0.885	0.875	0.849	0.848	0.848	0.840	0.840
ecoli-0-1-4-6-vs-5	0.802	0.833	0.781	0.838	0.838	0.838	0.877	0.873	0.906	0.906	0.906	0.908	0.908	0.856	0.856	0.858	0.827	0.827	0.917	0.915	0.915	0.921	0.921
ecoli-0-1-4-7-vs-2-3-5-6	0.815	0.852	0.865	0.847	0.863	0.863	0.843	0.842	0.870	0.863	0.863	0.857	0.857	0.859	0.859	0.861	0.822	0.822	0.865	0.863	0.863	0.884	0.884
ecoli-0-1-4-7-vs-5-6	0.844	0.847	0.815	0.851	0.851	0.850	0.823	0.823	0.883	0.880	0.880	0.881	0.881	0.871	0.851	0.856	0.854	0.857	0.881	0.881	0.881	0.873	0.873
ecoli-0-1-vs-2-3-5 ecoli-0-1-vs-5	0.783 0.861	0.770 0.843	0.777 $0.823$	0.853 0.823	0.853 0.823	0.853 0.823	0.851 0.825	0.851 0.825	0.855 0.836	0.855	0.855 0.836	0.855 0.836	0.855 0.836	0.786 0.841	0.786 0.841	0.786 0.841	0.789 0.848	0.791 0.848	0.842	0.840 0.843	0.840 0.843	0.842 $0.845$	0.842 0.845
ecoli-0-1-vs-5 ecoli-0-2-3-4-vs-5	0.301	0.839	0.823	0.823	0.823	0.823	0.823	0.823	0.886	0.886	0.886	0.889	0.889	0.841	0.841	0.841	0.908	0.908	0.843	0.892	0.892	0.900	0.900
ecoli-0-2-6-7-vs-3-5	0.768	0.793	0.831	0.812	0.812	0.833	0.843	0.843	0.838	0.836	0.836	0.820	0.820	0.848	0.848	0.850	0.835	0.840	0.832	0.818	0.832	0.838	0.838
ecoli-0-3-4-6-vs-5	0.786	0.803	0.833	0.916	0.916	0.916	0.891	0.891	0.918	0.918	0.918	0.901	0.901	0.899	0.899	0.899	0.895	0.895	0.915	0.907	0.907	0.862	0.862
ecoli-0-3-4-7-vs-5-6	0.818	0.845	0.799	0.888	0.888	0.888	0.880	0.880	0.886	0.886	0.886	0.888	0.888	0.899	0.899	0.901	0.908	0.910	0.906	0.897	0.897	0.897	0.897
ecoli-0-3-4-vs-5	0.856	0.836	0.922	0.894	0.894	0.919	0.922	0.922	0.928	0.928	0.928	0.911	0.911	0.919	0.919	0.919	0.919	0.919	0.900	0.917	0.917	0.919	0.919
ecoli-0-4-6-vs-5	0.806	0.859	0.835	0.857	0.857	0.857	0.865	0.865	0.857	0.857	0.857	0.876	0.876	0.873	0.873	0.873	0.889	0.892	0.873	0.873	0.873	0.876	0.876
ecoli-0-6-7-vs-3-5	0.853	0.872	0.823	0.838	0.835	0.835	0.835	0.835	0.838	0.838	0.838	0.840	0.840	0.853	0.853	0.853	0.840	0.847	0.857	0.853	0.853	0.840	0.840
ecoli-0-6-7-vs-5	0.792	0.792	0.842	0.860	0.860	0.860	0.870	0.867	0.885	0.877	0.877	0.877	0.877	0.887	0.887	0.887	0.875	0.878	0.882	0.882	0.882	0.863	0.863
glass-0-1-4-6-vs-2 glass-0-1-5-vs-2	0.610 0.570	0.685 0.566	0.688 0.636	0.778 0.743	0.778 0.743	0.775 0.743	0.778 0.750	0.778 0.713	0.781 0.759	0.775 0.747	0.775 0.747	0.794 0.736	0.794 0.736	0.771 0.687	0.771 0.665	0.779 0.669	0.709 0.607	0.692 0.577	0.771 0.715	0.771 0.715	0.771 0.715	0.742 $0.584$	0.742 $0.584$
glass-0-1-3-vs-2 glass-0-4-vs-5	0.570	0.994	0.030	0.743	0.743	0.743	0.750	0.713	0.759	0.747	0.747	0.730	0.730	0.087	0.003	0.009	0.007	0.982	0.713	0.713	0.713	0.384	0.384
glass-0-4-vs-5	0.940	0.945	0.879	0.939	0.939	0.939	0.949	0.949	0.949	0.949	0.949	0.985	0.985	0.944	0.944	0.944	0.954	0.949	0.970	0.970	0.970	0.985	0.985
led7digit-0-2-4-5-6-7-8-9-vs-1	0.894	0.893	0.893	0.872	0.872	0.856	0.862	0.859	0.875	0.871	0.853	0.871	0.859	0.880	0.880	0.865	0.870	0.870	0.877	0.877	0.871	0.877	0.865
yeast-0-2-5-6-vs-3-7-8-9	0.734	0.728	0.726	0.786	0.786	0.786	0.767	0.765	0.782	0.782	0.782	0.789	0.789	0.782	0.786	0.781	0.734	0.727	0.800	0.802	0.802	0.791	0.791
yeast-0-2-5-7-9-vs-3-6-8	0.859	0.855	0.879	0.894	0.894	0.894	0.886	0.888	0.901	0.901	0.901	0.907	0.907	0.908	0.908	0.910	0.890	0.886	0.905	0.909	0.909	0.915	0.915
yeast-0-3-5-9-vs-7-8	0.687	0.594	0.628	0.707	0.707	0.703	0.705	0.699	0.714	0.714	0.714	0.711	0.711	0.712	0.714	0.717	0.576	0.576	0.700	0.693	0.693	0.637	0.637
ecoli-0-vs-1	0.973	0.969	0.938	0.970	0.970	0.970	0.970	0.970	0.962	0.970	0.970	0.970	0.970	0.973	0.973	0.973	0.966	0.966	0.973	0.973	0.973	0.966	0.966
ecoli1	0.841	0.845	0.867	0.882	0.882	0.882	0.849	0.849	0.882	0.882	0.882	0.849	0.849	0.872	0.872	0.872	0.847	0.847	0.858	0.872	0.872	0.847	0.847
ecoli2 ecoli3	0.846 0.710	0.876	0.822 0.870	0.873	0.873 0.882	0.873 0.881	0.859 0.863	0.859 0.863	0.882	0.878	0.878 0.884	0.877 0.851	0.877 0.851	0.891	0.891	0.892 $0.859$	0.871	0.871 0.804	0.891 0.861	0.891	0.891 0.859	0.864 $0.842$	0.864 0.842
glass-0-1-2-3-vs-4-5-6	0.710	0.704	0.870	0.882	0.882	0.881	0.803	0.803	0.884	0.884	0.884	0.831	0.831	0.839	0.839	0.839	0.816	0.896	0.861	0.839	0.839	0.842	0.842
glass0	0.892	0.832	0.756	0.771	0.927	0.927	0.920	0.920	0.770	0.327	0.771	0.920	0.920	0.803	0.803	0.803	0.770	0.890	0.803	0.803	0.803	0.890	0.390
glass1	0.707	0.698	0.708	0.729	0.729	0.729	0.729	0.729	0.710	0.729	0.729	0.729	0.729	0.735	0.735	0.735	0.650	0.650	0.735	0.735	0.735	0.650	0.650
glass6	0.819	0.866	0.875	0.918	0.918	0.918	0.923	0.906	0.923	0.920	0.920	0.923	0.923	0.923	0.923	0.923	0.914	0.914	0.923	0.923	0.923	0.914	0.914
iris0	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
new-thyroid1	0.935	0.946	0.949	0.969	0.969	0.969	0.975	0.975	0.969	0.969	0.969	0.975	0.975	0.960	0.960	0.960	0.960	0.960	0.960	0.960	0.960	0.960	0.960
new-thyroid2	0.915	0.923	0.941	0.975	0.975	0.975	0.958	0.958	0.975	0.975	0.975	0.972	0.972	0.960	0.960	0.960	0.946	0.946	0.966	0.963	0.963	0.949	0.949
pima	0.684	0.655	0.685	0.695	0.695	0.695	0.695	0.695	0.675	0.695	0.695	0.695	0.695	0.710	0.710	0.710	0.669	0.669	0.710	0.710	0.710	0.669	0.669
wisconsin	0.924 0.665	0.931	0.940 $0.674$	0.951 0.646	0.951 0.646	0.951 0.646	0.951 0.646	0.951 0.646	0.943 0.630	0.951 0.646	0.951 0.646	0.951 0.646	0.951 0.646	0.958	0.958 0.668	0.958 0.668	0.942 0.640	0.942 0.640	0.958	0.958 0.668	0.958 0.668	0.942 $0.640$	0.942 0.640
yeast1 yeast3	0.820	0.830	0.874	0.646	0.646	0.646	0.646	0.646	0.630	0.646	0.046	0.646	0.646	0.668	0.668	0.008	0.840	0.840	0.668	0.668	0.668	0.840	0.840
ycasid	0.020	1 0.020	0.033	11 0.321	0.321	0.321	0.320	0.324	11 0.332	0.321	0.321	0.313	0.913	II 0.331	0.331	0.331	0.002	0.001	II 0.332	0.332	0.332	0.000	3.030