Table II – Experimental results (extended)
ecoli2

	Metrics	C4.5	C5.0	XGB	LR	1-NN	ecoli2 3-NN	5-NN	NB	NN	RF	SVM
BASE	F1 / GM	.786 / .797	.825 / .831	.735 / .748	.666 / .684	.832 / .836	.859 / .865	.894 / .898	.469 / .543	.690 / .713	.815 / .826	.859 / .865
	AUROC / AUPRC F1 / GM	.849 / .730 .788 / .794	.935 / .875 .809 / .813	.930 / .825 .778 / .788	.938 / .849 .720 / .739	.912 / .745 .832 / .836	.730 / .745	.952 / .911 .713 / .733	.939 / .816 .390 / .481	.937 / .845 .782 / .794	.967 / .911 .824 / .831	.962 / .905 .846 / .850
ROS	AUROC / AUPRC	.882 / .627	.964 / .900	.954 / .888	.937 / .837	.912 / .745	.935 / .765	.938 / .783	.936 / .815	.941 / .840	.960 / .913	.962 / .921
SMOTE	F1 / GM AUROC / AUPRC	.763 / .773 .858 / .556	.800 / .804 .957 / .875	.755 / .766 .945 / .881	.747 / .762 .936 / .843	.773 / .782 .903 / .654	.763 / .774 .936 / .780	.774 / .785 .942 / .843	.514 / .578 .944 / .845	.768 / .781 .936 / .846	.836 / .840 .969 / .927	.886 / .889 .963 / .917
RSLS	F1 / GM	.758 / .767	.820 / .823	.755 / .766	.741 / .748	.832 / .836	.858 / .861	.873 / .876	.569 / .621	.738 / .746	.821 / .830	.892 / .895
	AUROC / AUPRC F1 / GM	.862 / .679 .811 / .821	.962 / .902 .877 / .881	.941 / .840 .794 / .805	.937 / .845 .728 / .733	.912 / .745 .832 / .836	.948 / .873 .870 / .875	.951 / .900 . 894 / .898	.938 / .828 .469 / .543	.939 / .850 .759 / .765	.960 / .918 .875 / .880	.956 / .897 . 905 / .908
TOP+V	AUROC / AUPRC	.869 / .752	.957 / .900	.912 / .819	.931 / .838	.912 / .745	.950 / .890	.952 / .911	.939 / .816	.911 / .818	.954 / .892	.969 / .905
TOP+ ROSE	F1 / GM AUROC / AUPRC	.832 / .843 .864 / .764	.877 / .881 .957 / .900	.785 / .796 .925 / .855	.738 / .745 .939 / .850	.846 / .851 .930 / .756	.870 / .875 .950 / .890	.894 / .898 .951 / .896	.469 / .543 .939 / .816	.746 / .755 .933 / .841	.850 / .858 .973 / .922	.905 / .908 .976 / .913
TOP+	F1 / GM	.811 / .821	.877 / .881	.787 / .795	.730 / .738	.846 / .851	.870 / .875	.894 / .898	.522 / .584	.748 / .765	.857 / .862	.894 / .897
SMOTE TOP+	AUROC / AUPRC F1 / GM	.869 / .752 .811 / .821	.957 / .900 . 877 / .881	.951 / .886 . 816 / .823	.935 / .837 .743 / .760	.930 / .756 . 846 / .851	.950 / .890 .870 / .875	.951 / .896 . 894 / .898	.945 / .834 .617 / .659	.952 / .859 .769 / .782	.970 / .911 .868 / .873	.968 / .914 .894 / .897
RSLS	AUROC / AUPRC	.869 / .752	.957 / .900	.949 / .899	.939 / .852	.930 / .756	.950 / .890	.951 / .896	.950 / .876	.937 / .837	.978 / .926	.968 / .914
OVUN	F1 / GM AUROC / AUPRC	.812 / .819 .876 / .719	.801 / .807 .950 / .876	.723 / .739 .935 / .832	.732 / .742 .935 / .838	.836 / .842 .921 / .749	.778 / .788 .940 / .813	.865 / .868 .948 / .872	.434 / .515 .939 / .831	.725 / .737 .937 / .839	.852 / .858 .965 / .900	.886 / .889 .960 / .908
ROSE	F1 / GM	.275 / .399	.275 / .399	.428 / .515	.737 / .755	.633 / .666	.677 / .704	.673 / .701	.342 / .447	.728 / .744	.311 / .425	.769 / .781
DDCM*	AUROC / AUPRC F1 / GM	.518 / .160 .767 /	.518 / .160	.937 / .848	.934 / .801	.863 / .472	.928 / .729	.944 / .784	.946 / .866	.934 / .797	.945 / .854	.952 / .889
DBSM*	AUROC / AUPRC	.894 /	/	/	/	/	/	/	/	/	/	/
	Metrics						glass0					
	F1 / GM	C4.5 .704 / .714	C5.0 .747 / .755	XGB .670 / .678	LR .595 / .604	1-NN .711 / .717	3-NN .663 / .672	5-NN .692 / .694	NB .622 / .654	NN .634 / .639	RF .787 / .794	SVM .688 / .696
BASE	AUROC / AUPRC	.772 / .629	.904 / .863	.871 / .754	.818 / .668	.785 / .625	.847 / .709	.880 / .773	.762 / .573	.828 / .696	.937 / .901	.874 / .776
ROS	F1 / GM AUROC / AUPRC	.721 / .732 .792 / .655	.786 / .793 .898 / .848	.763 / .774 .903 / .824	.638 / .648 .812 / .659	.711 / .717 .785 / .625	.727 / .739 .843 / .678	.708 / .722 .856 / .714	.635 / .669 .760 / .588	.692 / .701 .825 / .640	.780 / .789 .929 / .870	.743 / .754 .886 / .800
SMOTE	F1 / GM	.675 / .684	.768 / .772	.691 / .706	.622 / .630	.718 / .725	.709 / .716	.717 / .729	.622 / .654	.650 / .663	.807 / .812	.724 / .733
	AUROC / AUPRC F1 / GM	.724 / .550 .708 / .717	.900 / .836 .781 / .786	.896 / .800 .711 / .720	.816 / .667 .614 / .622	.792 / .620 .714 / .721	.853 / .701 .685 / .690	.866 / .715 .691 / .700	.766 / .580 .620 / .653	.818 / .628 .659 / .671	.931 / .879 .814 / .819	.879 / .785 .738 / .745
RSLS	AUROC / AUPRC	.764 / .579	.923 / .868	.897 / .801	.809 / .661	.789 / .615	.852 / .698	.866 / .730	.764 / .577	.825 / .662	.934 / .881	.878 / .781
TOP+V	F1 / GM AUROC / AUPRC	.759 / .773 .826 / .638	.806 / .815 .918 / .865	.747 / .757 .867 / .750	.713 / .727 .817 / .656	.745 / .753 .817 / .648	.748 / .757 .876 / .730	.743 / .751 .889 / .783	.661 / .700 .762 / .560	. 714 / .734 .815 / .650	.831 / .836 .938 / .888	.743 / .751 .854 / .740
TOP+	F1 / GM	.743 / .754	.763 / .772	.741 / .752	.652 / .667	.711 / .717	.716 / .739	.732 / .748	.658 / .698	.692 / .708	.819 / .822	.704 / .713
ROSE TOP+	AUROC / AUPRC F1 / GM	.819 / .633 .724 / .736	.911 / .838 .747 / .755	.913 / .849 .730 / .741	.816 / .673 .659 / .675	.785 / .625 .711 / .717	.858 / .696 .716 / .739	.862 / .715 .732 / .748	.756 / .548 .658 / .698	.822 / .664 .695 / .711	.939 / .874 .799 / .806	.869 / .784 .712 / .722
SMOTE	AUROC / AUPRC	.815 / .611	.904 / .863	.901 / .822	.816 / .671	.785 / .625	.856 / .694	.863 / .716	.756 / .548	.828 / .677	.940 / .885	.884 / .805
TOP+ RSLS	F1 / GM AUROC / AUPRC	.724 / .736 .815 / .611	.747 / .755 .904 / .863	.741 / .754 .902 / .823	.659 / .675 .816 / .671	.711 / .717 .785 / .625	.716 / .739 .856 / .694	.732 / .748 .863 / .716	.658 / .698 .756 / .548	.692 / .708 .830 / .680	.806 / .812 .937 / .875	.710 / .721 .879 / .800
OVUN	F1 / GM	.716 / .725	.763 / .774	.689 / .699	.606 / .615	.700 / .705	.687 / .692	.686 / .689	.625 / .656	.643 / .649	.775 / .781	.684 / .690
ROSE	AUROC / AUPRC F1 / GM	.780 / .609 .644 / .682	.892 / .822 .639 / .680	.871 / .758 .631 / .676	.816 / .666 .640 / .658	.778 / .606 .607 / .648	.851 / .717 .631 / .679	.877 / .767 .623 / .673	.788 / .606 .636 / .678	.830 / .689 .637 / .679	.934 / .895 .636 / .678	.878 / .782 .641 / .680
	AUROC / AUPRC F1 / GM	.729 / .484	.823 / .635	.818 / .685	.792 / .612	.688 / .450	.715 / .472	.729 / .497	.751 / .574	.800 / .624	.789 / .596	.814 / .665
DBSM*	AUROC / AUPRC	.788 /	/	/	/	/	/	/	/	/	/	/
	3.7						glass1					
	Metrics	C4.5	C5.0	XGB	LR	1-NN	glass1 3-NN	5-NN	NB	NN ((2) (78	RF	SVM
BASE	Metrics F1 / GM AUROC / AUPRC	C4.5 .608 / .629 .735 / .646	C5.0 .679 / .693 .860 / .754	XGB .590 / .611 .828 / .746	.435 / .460 .703 / .564	1-NN .783 / .789 .832 / .762		5-NN .716 / .724 .895 / .814	NB .612 / .645 .714 / .569	NN .663 / .678 .852 / .755	RF .731 / .742 .915 / .866	SVM .602 / .611 .789 / .699
BASE ROS	F1 / GM AUROC / AUPRC F1 / GM	.608 / .629 .735 / .646 .621 / .628	.679 / .693 .860 / .754 .720 / .728	.590 / .611 .828 / .746 .690 / .699	.435 / .460 .703 / .564 .575 / .592	.783 / .789 .832 / .762 .778 / .787	3-NN .709 / .718 .879 / .817 .751 / .756	.716 / .724 .895 / .814 .732 / .740	.612 / .645 .714 / .569 .606 / .646	.663 / .678 .852 / .755 .672 / .690	.731 / .742 .915 / .866 .771 / .782	.602 / .611 .789 / .699 .612 / .619
ROS	F1 / GM AUROC / AUPRC	.608 / .629 .735 / .646	.679 / .693 .860 / .754	.590 / .611 .828 / .746	.435 / .460 .703 / .564	.783 / .789 .832 / .762	3-NN .709 / .718 .879 / .817	.716 / .724 .895 / .814	.612 / .645 .714 / .569	.663 / .678 .852 / .755	.731 / .742 .915 / .866	.602 / .611 .789 / .699
ROS SMOTE	F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569	.679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745	.435 / .460 .703 / .564 .575 / .592 .715 / .578 .435 / .460 .703 / .564	.783 / .789 .832 / .762 .778 / .787 .827 / .771 .783 / .789 .832 / .762	3-NN .709 / .718 .879 / .817 .751 / .756 .883 / .824 .709 / .718 .879 / .817	.716 / .724 .895 / .814 .732 / .740 .875 / .811 .716 / .724 .895 / .814	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786	.731 / .742 .915 / .866 .771 / .782 .914 / .866 .760 / .776 .904 / .858	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721
ROS	F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .676 .777 / .673	.679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761	.435 / .460 .703 / .564 .575 / .592 .715 / .578 .435 / .460 .703 / .564 .576 / .590 .706 / .569	.783 / .789 .832 / .762 .778 / .787 .827 / .771 .783 / .789 .832 / .762 .783 / .787 .832 / .750	3-NN .709 / .718 .879 / .817 .751 / .756 .883 / .824 .709 / .718 .879 / .817 .755 / .759 .887 / .826	.716 / .724 .895 / .814 .732 / .740 .875 / .811 .716 / .724 .895 / .814 .760 / .765 .897 / .832	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748	.731 / .742 .915 / .866 .771 / .782 .914 / .866 .760 / .776 .904 / .858 .778 / .787 .907 / .843	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695
ROS SMOTE	F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .676 .777 / .673	.679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761	.435 / .460 .703 / .564 .575 / .592 .715 / .578 .435 / .460 .703 / .564 .576 / .590 .706 / .569	.783 / .789 .832 / .762 .778 / .787 .827 / .771 .783 / .789 .832 / .762 .783 / .787 .832 / .750 .819 / .824	3-NN .709 / .718 .879 / .817 .751 / .756 .883 / .824 .709 / .718 .879 / .817 .755 / .759 .887 / .826 .757 / .762	716 / .724 .895 / .814 732 / .740 .875 / .811 716 / .724 .895 / .814 760 / .765 .897 / .832 .771 / .775	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748	731 / .742 .915 / .866 .771 / .782 .914 / .866 .760 / .776 .904 / .858 .778 / .787 .907 / .843 .805 / .810	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654
ROS SMOTE RSLS TOP+V TOP+	F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .676 .777 / .673 .748 / .751 .829 / .745 .678 / .682	.679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .899 / .834 .769 / .776	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .662 / .668	.435 / .460 .703 / .564 .575 / .592 .715 / .578 .435 / .460 .703 / .564 .576 / .590 .706 / .569 .621 / .640 .719 / .552 .612 / .644	.783 / .789 .832 / .762 .778 / .787 .827 / .771 .783 / .789 .832 / .762 .783 / .787 .832 / .750 .819 / .824 .864 / .784 .792 / .798	3-NN .709 / .718 .879 / .817 .751 / .756 .883 / .824 .709 / .718 .879 / .817 .755 / .759 .887 / .826 .757 / .762 .895 / .826 .776 / .781	.716 / .724 .895 / .814 .732 / .740 .875 / .811 .716 / .724 .895 / .814 .760 / .765 .897 / .832 .771 / .775 .903 / .822 .752 / .759	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517 .628 / .666 .696 / .541	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .813	731 / 742 915 / 866 771 / 782 914 / 866 760 / 776 904 / 858 778 / 787 907 / 843 805 / 810 921 / 875	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .781 / .676
ROS SMOTE RSLS TOP+V	F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .676 .777 / .673 .748 / .751	.679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .899 / .834	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648	.435 / .460 .703 / .564 .575 / .592 .715 / .578 .435 / .460 .703 / .564 .576 / .590 .706 / .569 .621 / .640 .719 / .552	.783 / .789 .832 / .762 .778 / .787 .827 / .771 .783 / .789 .832 / .762 .783 / .787 .832 / .750 .819 / .824 .864 / .784	3-NN .709 / .718 .879 / .817 .751 / .756 .883 / .824 .709 / .718 .879 / .817 .755 / .759 .887 / .826 .757 / .762 .895 / .826	.716 / .724 .895 / .814 .732 / .740 .875 / .811 .716 / .724 .895 / .814 .760 / .765 .897 / .832 .771 / .775 .903 / .822	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517 .628 / .666 .696 / .541	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .813 .683 / .703	731 / 742 915 / 866 771 / 782 914 / 866 760 / 776 904 / 858 778 / 787 907 / 843 805 / 810 921 / 875	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .781 / .676
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE	F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .676 .777 / .673 .748 / .751 .829 / .745 .678 / .682 .746 / .611 .698 / .711	679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .899 / .834 .769 / .776 .899 / .829 .757 / .766 .903 / .854	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .662 / .668 .856 / .793 .650 / .657 .834 / .767	.435 / .460 .703 / .564 .575 / .592 .715 / .578 .435 / .460 .703 / .564 .576 / .590 .621 / .640 .719 / .552 .612 / .644 .727 / .597 .600 / .639 .724 / .599		3-NN .709 / .718 .879 / .817 .751 / .756 .883 / .824 .709 / .718 .879 / .817 .755 / .759 .887 / .826 .757 / .762 .895 / .826 .776 / .781 .892 / .830 .772 / .777 .885 / .814	.716 / .724 .895 / .814 .732 / .740 .875 / .811 .716 / .724 .895 / .814 .760 / .765 .897 / .832 .771 / .775 .903 / .822 .752 / .759 .904 / .811 .744 / .755 .912 / .839	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517 .628 / .666 .696 / .541 .620 / .659 .716 / .570 .620 / .659 .706 / .566	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .813 .683 / .703 .848 / .716 .703 / .714	731 / 742 915 / 866 771 / 782 914 / 866 760 / 776 904 / 858 778 / 787 907 / 843 805 / 810 921 / 875 768 / 775 763 / 775 772 / 774 908 / 855	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .781 / .676 .658 / .669 .821 / .733 .675 / .683 .802 / .703
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+	F1/GM AUROC / AUPRC F1/GM AUROC / AUPRC F1/GM AUROC / AUPRC F1/GM AUROC / AUPRC F1/GM AUROC / AUPRC F1/GM AUROC / AUPRC F1/GM AUROC / AUPRC F1/GM	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .676 .777 / .673 .748 / .751 .829 / .745 .678 / .682 .746 / .611	679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .899 / .834 .769 / .776 .899 / .829 .757 / .766	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .662 / .668 .856 / .793 .650 / .657	.435 / .460 .703 / .564 .575 / .592 .715 / .578 .435 / .460 .703 / .564 .576 / .590 .621 / .640 .719 / .552 .612 / .644 .727 / .597 .600 / .639		3-NN .709 / 718 .879 / 817 .751 / .756 .883 / .824 .709 / .718 .879 / .817 .755 / .759 .887 / .826 .757 / .762 .895 / .826 .776 / .781 .892 / .830 .772 / .777	.716 / .724 .895 / .814 .732 / .740 .875 / .811 .716 / .724 .895 / .814 .760 / .765 .897 / .832 .771 / .775 .903 / .822 .752 / .759 .904 / .811 .744 / .755	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517 .628 / .666 .696 / .541 .620 / .659 .716 / .570	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .813 .683 / .703 .848 / .716 .703 / .714	731 / 742 915 / 866 771 / 782 914 / 866 760 / 776 904 / 858 778 / 787 907 / 843 805 / 810 921 / 875 768 / 775 913 / 870 772 / 774	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .781 / .676 .658 / .669 .821 / .733
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+	F1/GM AUROC/AUPRC F1/GM	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .676 .777 / .673 .748 / .751 .829 / .745 .678 / .682 .746 / .611 .698 / .711 .784 / .650 .662 / .674 .723 / .556	679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .899 / .834 .769 / .776 .899 / .829 .757 / .766 .903 / .854 .750 / .756 .902 / .845 .760 / .767	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .662 / .668 .856 / .793 .650 / .657 .834 / .767 .646 / .682 .839 / .777 .629 / .641	.435 / .460 .703 / .564 .575 / .592 .715 / .578 .435 / .460 .703 / .564 .576 / .590 .621 / .640 .719 / .552 .612 / .644 .727 / .597 .600 / .639 .724 / .599 .605 / .643 .726 / .600 .524 / .541		3-NN .709 / 718 .879 / .817 .751 / .756 .883 / .824 .709 / .718 .879 / .817 .755 / .759 .887 / .826 .757 / .762 .895 / .826 .776 / .781 .892 / .830 .772 / .777 .885 / .814 .772 / .777 .888 / .820 .731 / .741	.716 / .724 .895 / .814 .732 / .740 .875 / .811 .716 / .724 .895 / .814 .760 / .765 .897 / .832 .771 / .775 .903 / .822 .752 / .759 .904 / .811 .744 / .755 .912 / .839 .770 / .779 .910 / .826 .746 / .754	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517 .628 / .666 .696 / .541 .620 / .659 .706 / .566 .618 / .657 .683 / .554	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .813 .683 / .703 .848 / .716 .703 / .714 .851 / .743 .703 / .711 .849 / .774 .669 / .688	731 / 742 915 / 866 771 / 782 914 / 866 760 / 776 904 / 858 778 / 787 907 / 843 805 / 810 921 / 875 768 / 775 913 / 870 772 / 774 908 / 855 771 / 773 892 / 834 745 / 751	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .781 / .676 .658 / .669 .821 / .733 .675 / .683 .802 / .703 .648 / .654 .802 / .709 .611 / .615
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN	F1/GM AUROC/AUPRC F1/GM	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .676 .777 / .673 .748 / .751 .829 / .745 .678 / .682 .746 / .611 .698 / .711 .784 / .650 .662 / .674 .723 / .556	.679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .899 / .834 .769 / .776 .899 / .829 .757 / .766 .903 / .854 .750 / .756 .902 / .845	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .662 / .668 .856 / .793 .650 / .657 .834 / .767 .646 / .682 .839 / .777 .629 / .641 .843 / .753 .628 / .648	.435 / .460 .703 / .564 .575 / .592 .715 / .578 .435 / .460 .703 / .564 .576 / .590 .706 / .569 .621 / .640 .719 / .552 .612 / .644 .727 / .597 .600 / .639 .724 / .599 .605 / .643 .726 / .600		3-NN .709 / .718 .879 / .817 .751 / .756 .883 / .824 .709 / .718 .879 / .817 .755 / .759 .887 / .826 .757 / .762 .895 / .826 .776 / .781 .892 / .830 .772 / .777 .885 / .814 .772 / .777 .888 / .820	.716 / .724 .895 / .814 .732 / .740 .875 / .811 .716 / .724 .895 / .814 .760 / .765 .897 / .832 .771 / .775 .903 / .822 .752 / .759 .904 / .811 .744 / .755 .912 / .839 .770 / .779 .910 / .826	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517 .628 / .666 .696 / .541 .620 / .659 .716 / .570 .620 / .659 .706 / .566 .618 / .657	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .813 .683 / .703 .848 / .716 .703 / .714 .851 / .743 .703 / .711 .849 / .774	731 / 742 915 / 866 771 / 782 914 / 866 760 / 776 904 / 858 778 / 787 907 / 843 805 / 810 921 / 875 768 / 775 913 / 870 772 / 774 908 / 855 771 / 773 892 / 834	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .781 / .676 .658 / .669 .821 / .733 .675 / .683 .802 / .703 .648 / .654 .802 / .709
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE	F1/GM AUROC/AUPRC	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .673 .748 / .751 .829 / .745 .678 / .682 .746 / .611 .698 / .711 .784 / .650 .662 / .674 .723 / .556 .642 / .657 .748 / .646 .578 / .604	.679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .899 / .834 .769 / .776 .903 / .854 .750 / .756 .902 / .845 .760 / .767 .906 / .865 .567 / .582 .699 / .535	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .662 / .668 .856 / .793 .650 / .657 .834 / .767 .646 / .682 .839 / .777 .629 / .641 .843 / .753 .628 / .648 .734 / .610	.435 / .460 .703 / .564 .575 / .592 .715 / .578 .435 / .460 .703 / .564 .576 / .590 .706 / .569 .621 / .640 .719 / .552 .612 / .644 .727 / .597 .600 / .639 .724 / .599 .605 / .643 .726 / .660 .524 / .541 .735 / .603 .442 / .447		3-NN .709 / 718 .879 / 817 .751 / .756 .883 / .824 .709 / .718 .879 / .817 .755 / .759 .887 / .826 .757 / .762 .895 / .826 .776 / .781 .892 / .830 .772 / .777 .885 / .814 .772 / .777 .888 / .820 .731 / .741 .878 / .817 .646 / .666 .736 / .557	.716 / .724 .895 / .814 .732 / .740 .875 / .811 .716 / .724 .895 / .814 .760 / .765 .897 / .832 .771 / .775 .903 / .822 .752 / .759 .904 / .811 .744 / .755 .912 / .839 .770 / .779 .910 / .826 .746 / .754 .899 / .821 .614 / .635 .720 / .549	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517 .628 / .666 .696 / .541 .620 / .659 .706 / .566 .618 / .657 .683 / .554 .597 / .636 .646 / .514 .594 / .638 .724 / .597	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .813 .683 / .703 .848 / .716 .703 / .714 .851 / .743 .703 / .711 .849 / .774 .669 / .688 .857 / .788 .647 / .665 .747 / .669	731 / 742 915 / 866 771 / 782 914 / 866 760 / 776 904 / 858 778 / 787 907 / 843 805 / 810 921 / 875 768 / 775 913 / 870 772 / 774 908 / 855 771 / 773 892 / 834 745 / 751 919 / 861 670 / 682 744 / 607	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .781 / .676 .658 / .669 .821 / .733 .675 / .683 .802 / .703 .648 / .654 .802 / .709 .611 / .615 .798 / .719 .588 / .606 .741 / .632
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN	F1/GM AUROC/AUPRC F1/GM	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .676 .777 / .673 .748 / .751 .678 / .682 .746 / .611 .698 / .711 .784 / .650 .662 / .674 .723 / .556 .642 / .657 .748 / .646	.679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .899 / .834 .769 / .776 .899 / .829 .757 / .766 .903 / .854 .750 / .756 .902 / .845 .760 / .767 .906 / .865 .567 / .582	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .662 / .668 .856 / .793 .650 / .657 .834 / .767 .646 / .682 .839 / .777 .629 / .641 .843 / .753 .628 / .648	.435 / .460 .703 / .564 .575 / .592 .715 / .578 .435 / .460 .703 / .564 .576 / .590 .706 / .569 .621 / .640 .719 / .552 .612 / .644 .727 / .597 .600 / .639 .724 / .599 .605 / .643 .726 / .600 .524 / .541 .735 / .603 .442 / .447		3-NN .709 / .718 .879 / .817 .751 / .756 .883 / .824 .709 / .718 .879 / .817 .755 / .759 .887 / .826 .757 / .762 .895 / .826 .776 / .781 .892 / .830 .772 / .777 .885 / .814 .772 / .777 .888 / .820 .731 / .741 .878 / .817	716 / 724 895 / 814 732 / 740 875 / 811 716 / 724 895 / 814 760 / 765 897 / 832 771 / 775 903 / 822 752 / 759 904 / 811 744 / 755 912 / 839 770 / 779 910 / 826 746 / 754 899 / 821 614 / 635	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517 .628 / .666 .696 / .541 .620 / .659 .716 / .570 .620 / .659 .706 / .566 .618 / .657 .683 / .554 .597 / .636 .646 / .514	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .813 .683 / .703 .848 / .716 .703 / .714 .851 / .743 .703 / .711 .849 / .774 .669 / .688 .857 / .788 .647 / .665	731 / 742 915 / 866 771 / 782 914 / 866 760 / 776 904 / 858 778 / 787 907 / 843 805 / 810 921 / 875 913 / 870 772 / 774 908 / 855 771 / 773 892 / 834 745 / 751 919 / 861 670 / 682	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .658 / .669 .821 / .733 .675 / .683 .802 / .709 .611 / .615 .798 / .719 .588 / .606
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE	F1/GM AUROC/AUPRC	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .676 .777 / .673 .748 / .751 .829 / .745 .678 / .682 .746 / .611 .698 / .711 .784 / .650 .662 / .674 .723 / .556 .642 / .657 .748 / .646 .578 / .604 .578 / .604	679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .899 / .834 .769 / .776 .899 / .829 .757 / .766 .902 / .845 .750 / .756 .902 / .845 .760 / .767 .906 / .865 .567 / .582 .569 / .535	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .662 / .668 .856 / .793 .650 / .657 .834 / .767 .646 / .682 .839 / .777 .646 / .682 .839 / .777 .629 / .641 .843 / .753 .628 / .648 .744 / .610		783 / 789 .832 / 762 .778 / 787 .827 / 771 .783 / 789 .822 / 762 .783 / 787 .832 / 762 .783 / 787 .832 / 750 .819 / 824 .864 / 784 .792 / .798 .842 / .753 .792 / .802 .847 / .691 .797 / .798 .845 / .740 .787 / .793 .836 / .761 .625 / .642 .695 / .505	3-NN .709 / .718 .879 / .817 .751 / .756 .883 / .824 .709 / .718 .879 / .817 .755 / .759 .887 / .826 .757 / .762 .895 / .826 .776 / .781 .892 / .830 .772 / .777 .885 / .814 .772 / .777 .888 / .820 .731 / .741 .878 / .817 .646 / .666 .736 / .557 /	716 / .724 .895 / .814 .732 / .740 .875 / .811 .716 / .724 .895 / .811 .716 / .724 .895 / .814 .760 / .765 .897 / .832 .771 / .775 .903 / .822 .752 / .759 .904 / .811 .744 / .755 .912 / .839 .770 / .779 .910 / .826 .746 / .754 .899 / .821 .614 / .635 .720 / .549 /	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517 .628 / .666 .696 / .541 .620 / .659 .716 / .570 .620 / .659 .706 / .566 .618 / .657 .683 / .554 .597 / .636 .646 / .514	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .738 .864 / .716 .703 / .714 .851 / .743 .703 / .711 .849 / .774 .669 / .688 .857 / .788 .647 / .665 .747 / .669	731 / 742 915 / 866 771 / 782 914 / 866 760 / 776 904 / 858 778 / 787 907 / 843 805 / 810 921 / 875 768 / 775 913 / 870 772 / 774 908 / 855 771 / 773 892 / 834 745 / 751 919 / 861 670 / 682 744 / 607	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .781 / .676 .658 / .669 .821 / .733 .675 / .683 .802 / .703 .648 / .654 .802 / .709 .611 / .615 .798 / .719 .588 / .606 .741 / .632
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE	F1/GM AUROC/AUPRC	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .676 .777 / .673 .748 / .751 .829 / .745 .678 / .682 .746 / .611 .698 / .711 .784 / .650 .662 / .674 .723 / .556 .642 / .657 .748 / .646 .578 / .664 .578 / .604 .643 / .478 .710 /	.679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .899 / .834 .769 / .776 .899 / .829 .757 / .766 .902 / .845 .760 / .767 .906 / .865 .567 / .582 .699 / .535 /	.590 / .611 .828 / .746 .690 / .669 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .662 / .668 .856 / .793 .650 / .657 .834 / .767 .646 / .682 .839 / .777 .629 / .641 .843 / .753 .628 / .648 .734 / .610		7.83 / 7.89 .832 / 762 .778 / 787 .827 / 771 .783 / 789 .832 / 762 .783 / 787 .832 / 762 .783 / 787 .832 / 750 .819 / 824 .792 / 798 .842 / 753 .792 / 802 .847 / 691 .797 / 798 .845 / 740 .787 / 793 .836 / 761 .625 / 642 .695 / 505 / /	3-NN .709 / 718 .879 / 817 .751 / 756 .883 / 824 .709 / 718 .879 / 817 .755 / 759 .887 / 826 .757 / 762 .895 / 826 .776 / 781 .892 / .830 .772 / .777 .885 / .814 .772 / .777 .888 / .820 .731 / .741 .878 / .817 .646 / .666 .736 / .557 /	716 / .724 .895 / .814 .732 / .740 .875 / .811 .716 / .724 .895 / .811 .716 / .724 .895 / .814 .760 / .765 .897 / .832 .771 / .775 .903 / .822 .752 / .759 .904 / .811 .744 / .755 .912 / .839 .770 / .779 .910 / .826 .746 / .754 .899 / .821 .614 / .635 .720 / .549 /	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517 .628 / .666 .696 / .541 .620 / .659 .716 / .570 .620 / .659 .706 / .566 .618 / .657 .683 / .554 .597 / .636 .646 / .514 .594 / .638 .724 / .597	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .748 .726 / .738 .848 / .716 .703 / .714 .851 / .743 .703 / .714 .851 / .743 .703 / .714 .8549 / .774 .669 / .688 .857 / .788 .647 / .665 .747 / .669 /	731 / 742 915 / 866 771 / 782 914 / 866 760 / 776 904 / 858 778 / 787 907 / 843 805 / 810 921 / 875 768 / 775 913 / 870 772 / 774 908 / 855 771 / 773 892 / 834 745 / 751 919 / 861 670 / 682 744 / 607 /	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .781 / .676 .658 / .669 .821 / .733 .675 / .683 .802 / .703 .648 / .654 .802 / .709 .611 / .615 .798 / .719 .588 / .606 .741 / .632 /
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE	F1/GM AUROC/AUPRC	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .676 .777 / .673 .748 / .751 .629 / .745 .678 / .682 .746 / .611 .698 / .711 .784 / .650 .662 / .674 .723 / .556 .642 / .657 .748 / .646 .578 / .604 .643 / .478 .710 /	.679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .899 / .834 .769 / .776 .903 / .854 .750 / .756 .902 / .845 .760 / .767 .906 / .865 .567 / .582 .699 / .535	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .662 / .668 .856 / .793 .650 / .657 .646 / .682 .839 / .777 .629 / .641 .843 / .753 .628 / .648 .734 / .610 /		783 / 789 832 / 762 778 / 787 827 / 771 783 / 789 832 / 762 783 / 789 832 / 762 783 / 787 832 / 750 819 / 824 864 / 784 792 / 798 842 / 753 792 / 802 847 / 691 797 / 798 845 / 740 787 / 793 836 / 761 625 / 642 695 / 505	3-NN .709 / 718 .879 / 817 .751 / .756 .883 / .824 .709 / .718 .879 / .817 .755 / .759 .887 / .826 .757 / .762 .895 / .826 .776 / .781 .892 / .830 .772 / .777 .885 / .814 .772 / .777 .885 / .814 .772 / .777 .887 / .817 .646 / .666 .736 / .557		.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517 .628 / .666 .696 / .541 .620 / .659 .716 / .570 .620 / .659 .706 / .566 .618 / .657 .683 / .554 .597 / .636 .646 / .514 .594 / .638 .724 / .597	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .813 .683 / .703 .848 / .716 .703 / .714 .849 / .774 .669 / .688 .857 / .788 .647 / .665 .747 / .609	731 / 742 915 / 866 771 / 782 914 / 866 760 / 776 904 / 858 778 / 787 907 / 843 805 / 810 921 / 875 768 / 775 913 / 870 772 / 774 908 / 855 771 / 773 892 / 834 745 / 751 919 / 861 670 / 682 744 / 607	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .781 / .676 .658 / .669 .821 / .733 .675 / .683 .802 / .703 .648 / .654 .802 / .709 .611 / .615 .798 / .719 .588 / .606 .741 / .632
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM*	F1/GM AUROC/AUPRC	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .676 .777 / .673 .748 / .751 .829 / .745 .678 / .682 .746 / .611 .698 / .711 .784 / .650 .662 / .674 .723 / .556 .642 / .657 .748 / .646 .578 / .604 .578 / .604 .604 / .478 / .604	679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .899 / .834 .769 / .776 .899 / .839 .757 / .766 .902 / .854 .750 / .756 .902 / .845 .750 / .756 .902 / .859 .567 / .582 .699 / .535	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .662 / .668 .856 / .793 .650 / .657 .834 / .767 .646 / .682 .839 / .777 .629 / .641 .843 / .753 .628 / .648 .734 / .610//////		7.83 / 7.89 .832 / 762 .778 / 787 .827 / 771 .783 / 789 .832 / 762 .783 / 787 .832 / 762 .783 / 787 .832 / 750 .819 / 824 .864 / 784 .792 / 798 .842 / 753 .792 / 802 .847 / 691 .797 / 798 .845 / 740 .787 / 793 .836 / 761 .625 / .642 .695 / .505	3-NN .709 / 718 .879 / 817 .751 / 756 .883 / 824 .709 / 718 .879 / 817 .755 / 759 .887 / 826 .757 / 762 .895 / 826 .776 / 781 .892 / .830 .772 / 777 .885 / .814 .772 / .777 .888 / .814 .772 / .777 .888 / .814 .772 / .777 .886 / .814 .772 / .777 .887 / .817 .878 / .817 .646 / .666 .736 / .557/////	716 / .724 .895 / .814 .732 / .740 .875 / .811 .716 / .724 .895 / .811 .716 / .724 .895 / .814 .760 / .765 .897 / .832 .771 / .775 .903 / .822 .752 / .759 .904 / .811 .744 / .755 .912 / .839 .770 / .779 .910 / .826 .746 / .754 .899 / .821 .614 / .635 .720 / .549 /	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517 .628 / .666 .696 / .541 .620 / .659 .716 / .570 .620 / .659 .716 / .570 .638 / .554 .597 / .636 .646 / .514 .594 / .638 .724 / .597 /	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .738 .848 / .716 .703 / .714 .851 / .743 .703 / .711 .849 / .774 .669 / .688 .857 / .788 .647 / .665 .747 / .669	731 / 742 915 / 866 771 / 782 915 / 866 771 / 782 914 / 866 760 / 776 904 / 858 778 / 787 907 / 843 805 / 810 921 / 875 768 / 775 913 / 870 772 / 774 908 / 855 771 / 773 892 / 834 745 / 751 919 / 861 670 / 682 744 / 607 / RF 886 / 895 979 / 962 886 / 895	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .781 / .676 .658 / .669 .821 / .733 .675 / .683 .802 / .703 .648 / .654 .802 / .709 .611 / .615 .798 / .719 .588 / .606 .741 / .632 /
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM*	F1/GM AUROC/AUPRC	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .673 .748 / .751 .829 / .745 .678 / .682 .746 / .611 .698 / .711 .784 / .650 .662 / .674 .723 / .556 .642 / .657 .748 / .646 .578 / .604 .643 / .478 .710 /777 /777 /	.679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .899 / .834 .769 / .776 .899 / .829 .757 / .766 .902 / .845 .760 / .767 .906 / .865 .567 / .582 .699 / .535 /	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .662 / .668 .856 / .793 .650 / .657 .834 / .767 .646 / .682 .839 / .777 .629 / .641 .843 / .753 .628 / .648 .734 / .610	.435 / .460 .703 / .564 .575 / .592 .715 / .578 .435 / .460 .703 / .564 .576 / .590 .706 / .569 .621 / .640 .719 / .552 .612 / .644 .727 / .597 .600 / .639 .724 / .599 .605 / .643 .726 / .600 .524 / .541 .735 / .603 .442 / .447 .647 / .479		3-NN .709 / 718 .879 / 817 .751 / .756 .883 / .824 .709 / .718 .879 / .817 .755 / .759 .887 / .826 .757 / .762 .895 / .826 .776 / .781 .892 / .830 .772 / .777 .885 / .814 .772 / .777 .888 / .820 .731 / .741 .878 / .817 .646 / .666 .736 / .557//	7.16 / .724 8.95 / .814 7.32 / .740 8.75 / .811 7.16 / .724 8.95 / .811 7.16 / .724 8.95 / .814 7.60 / .765 8.897 / .832 7.71 / .775 9.03 / .822 7.52 / .759 9.04 / .811 7.44 / .755 9.12 / .839 7.70 / .779 9.10 / .826 7.46 / .754 8.99 / .821 6.14 / .635 7.20 / .549 / 5-NN 8.10 / .822 9.12 / .854	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517 .628 / .666 .696 / .541 .620 / .659 .716 / .570 .620 / .659 .706 / .566 .618 / .657 .683 / .554 .597 / .636 .646 / .514 .594 / .638 .724 / .597	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .813 .683 / .703 .848 / .716 .703 / .714 .851 / .743 .703 / .711 .849 / .774 .669 / .688 .857 / .788 .647 / .665 .747 / .609	731 / 742 915 / 866 771 / 782 915 / 866 771 / 782 914 / 866 760 / 776 904 / 885 778 / 787 907 / 843 805 / 810 921 / 875 913 / 870 772 / 774 908 / 855 771 / 773 892 / 834 745 / 751 919 / 861 670 / 682 744 / 607 / RF 886 / 895 979 / 962	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .781 / .676 .658 / .669 .821 / .733 .675 / .683 .802 / .703 .648 / .654 .802 / .709 .611 / .615 .798 / .719 .588 / .606 .741 / .632
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM*	F1/GM AUROC/AUPRC	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .676 .777 / .673 .748 / .751 .829 / .745 .678 / .682 .746 / .611 .784 / .650 .662 / .674 .723 / .556 .642 / .657 .748 / .646 .578 / .604	.679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .899 / .834 .769 / .776 .899 / .829 .757 / .766 .903 / .854 .750 / .757 .760 / .767 .906 / .865 .567 / .582 .699 / .535 /	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .662 / .668 .856 / .793 .650 / .657 .834 / .767 .646 / .682 .839 / .777 .629 / .641 .843 / .753 .628 / .648 .734 / .610		7.83 / 7.89 8.32 / 762 778 / 7.87 8.27 / 771 7.83 / 7.89 8.32 / 762 7.83 / 7.89 8.32 / 762 7.83 / 789 8.32 / 750 8.19 / 8.24 8.64 / 7.84 7.92 / 7.98 8.42 / 7.53 7.92 / 802 8.47 / 691 7.97 / 7.98 8.45 / 7.40 7.87 / 7.93 8.45 / 7.40 7.87 / 7.93 8.45 / 7.40 7.87 / 7.93 8.45 / 7.40 7.87 / 7.93 8.45 / 7.40 7.87 / 7.93 8.45 / 7.40 7.87 / 7.93 8.45 / 7.40 7.87 / 7.93 8.45 / 7.40 7.87 / 7.93 8.45 / 7.40 7.87 / 7.93 8.45 / 7.94 8.57 / 7.93 8.64 / 8.75 9.17 / 8.13 8.64 / 8.75 9.17 / 8.13 8.86 / 8.96 9.39 / 8.38	3-NN .709 / 718 .879 / 817 .751 / .756 .883 / .824 .709 / .718 .879 / .817 .755 / .759 .887 / .826 .757 / .762 .895 / .826 .776 / .781 .892 / .830 .772 / .777 .885 / .814 .772 / .777 .885 / .814 .772 / .777 .878 / .879 .731 / .741 .878 / .817 .646 / .666 .736 / .557/	7.16 / .724 8.95 / .814 7.32 / .740 8.95 / .814 7.32 / .740 8.95 / .811 7.16 / .724 8.95 / .814 7.60 / .765 8.97 / .832 7.71 / .775 9.03 / .822 7.52 / .759 9.04 / .811 7.44 / .755 9.12 / .839 7.70 / .779 9.10 / .826 7.46 / .754 8.99 / .821 6.14 / .635 7.20 / .549 / 5-NN 8.10 / .822 9.12 / .854 7.40 / .753 9.11 / .807 8.12 / .825 9.54 / .872	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .618 / .517 .628 / .666 .696 / .541 .620 / .659 .716 / .570 .620 / .659 .706 / .566 .618 / .557 .683 / .554 .597 / .636 .646 / .514 .594 / .638 .724 / .597 /	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .813 .683 / .703 .848 / .716 .703 / .714 .851 / .743 .703 / .714 .851 / .743 .669 / .688 .857 / .788 .647 / .665 .747 / .609	731 / 742 915 / 866 771 / 782 915 / 866 771 / 782 914 / 866 760 / 776 904 / 858 778 / 787 907 / 843 805 / 810 921 / 875 768 / 775 913 / 870 772 / 774 908 / 855 771 / 773 892 / 834 745 / 751 919 / 861 670 / 682 744 / 607 / RF 886 / 895 979 / 962 886 / 895 970 / 922 891 / 900 970 / 942	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .781 / .676 .658 / .669 .821 / .733 .675 / .683 .802 / .703 .648 / .654 .802 / .709 .611 / .615 .798 / .719 .588 / .606 .741 / .632 / .
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM*	F1/GM AUROC/AUPRC F1/GM	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .679 .774 / .673 .748 / .751 .829 / .745 .678 / .682 .746 / .611 .698 / .711 .784 / .650 .662 / .674 .723 / .556 .642 / .657 .748 / .640 .578 / .6604 .643 / .478 .710 /777 /777 / C4.5 .766 / .781 .907 / .805 .763 / .781 .852 / .624 .789 / .805	.679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .899 / .834 .769 / .776 .899 / .829 .757 / .766 .902 / .845 .760 / .767 .906 / .865 .567 / .582 .699 / .535 / / /	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .662 / .668 .856 / .793 .650 / .657 .646 / .682 .839 / .777 .629 / .641 .843 / .753 .628 / .648 .734 / .610 /		7.83 / 7.89 8.32 / 762 778 / 7.87 8.27 / 771 7.83 / 7.89 8.32 / 762 7.83 / 7.89 8.32 / 762 7.83 / 7.87 8.32 / 7.50 8.19 / 8.24 8.64 / 7.84 7.92 / 7.98 8.42 / 7.53 7.92 / 802 8.47 / 6.91 7.97 / 7.98 8.45 / 7.40 7.87 / 7.93 8.36 / 7.61 6.25 / 6.42 6.95 / 5.05 / / 1-NN 8.64 / 8.75 9.17 / 8.13 8.86 / 8.876	3-NN .709 / 718 .879 / 817 .751 / .756 .883 / .824 .709 / .718 .879 / .817 .755 / .759 .887 / .826 .757 / .762 .895 / .826 .757 / .762 .895 / .826 .776 / .781 .892 / .830 .772 / .777 .885 / .814 .772 / .777 .888 / .820 .731 / .741 .878 / .817 .646 / .666 .736 / .557	7.16 / .724 8.95 / .814 7.32 / .740 8.75 / .811 7.16 / .724 8.95 / .814 7.16 / .724 8.95 / .814 7.60 / .765 8.97 / .832 7.71 / .775 9.03 / .822 7.52 / .759 9.04 / .811 7.44 / .755 9.10 / .826 7.46 / .754 8.99 / .821 6.14 / .635 7.20 / .549 / 5-NN 8.10 / .822 9.12 / .854 7.40 / .753 9.11 / .807 8.812 / .825	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517 .628 / .666 .696 / .541 .620 / .659 .716 / .570 .620 / .659 .706 / .566 .618 / .657 .683 / .554 .597 / .636 .646 / .514 .594 / .638 .724 / .597 /	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .813 .683 / .703 .848 / .716 .703 / .714 .849 / .774 .669 / .688 .857 / .788 .647 / .665 .747 / .609	731 / 742 915 / 866 771 / 782 915 / 866 771 / 782 914 / 866 760 / 776 904 / 858 778 / 787 907 / 843 805 / 810 921 / 875 913 / 870 772 / 774 908 / 855 771 / 773 892 / 834 745 / 751 919 / 861 670 / 682 744 / 607 / / RF 886 / 895 979 / 962 886 / 895 970 / 992 891 / 900	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .781 / .676 .658 / .669 .821 / .733 .675 / .683 .802 / .703 .648 / .654 .802 / .709 .611 / .615 .798 / .719 .588 / .606 .741 / .632
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE	F1/GM AUROC/AUPRC F1/GM	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .673 .748 / .751 .829 / .745 .678 / .682 .746 / .611 .698 / .711 .784 / .650 .662 / .674 .723 / .556 .642 / .657 .748 / .660 .578 / .660 .578 / .660 .578 / .660 .578 / .678 .710 /777 /777 /777 /777 /777 / .829 / .805 .882 / .721 .824 / .835 .939 / .822 .830 / .838	.679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .899 / .834 .769 / .776 .899 / .829 .757 / .766 .902 / .845 .750 / .756 .902 / .845 .760 / .767 .906 / .865 .567 / .582 .699 / .535 /	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .662 / .668 .856 / .793 .650 / .657 .834 / .767 .646 / .682 .839 / .777 .629 / .641 .843 / .753 .628 / .648 .734 / .610		7.83 / 7.89 8.32 / 762 778 / 7.87 8.27 / 771 7.83 / 7.89 8.32 / 762 7.83 / 7.89 8.32 / 762 7.83 / 7.87 8.32 / 7.62 7.83 / 7.87 8.32 / 7.50 8.19 / 8.24 8.64 / 7.84 7.92 / 7.98 8.42 / 7.53 7.92 / 802 8.47 / 6.91 7.97 / 7.98 8.45 / 7.40 7.87 / 7.93 8.36 / 7.61 6.25 / 6.42 6.95 / 5.05 / / 1.NN 8.64 / 8.75 9.17 / 8.13 8.86 / 8.896 9.39 / 8.38 8.86 / 8.896 9.39 / 8.38 8.86 / 8.875 9.17 / 8.13 8.864 / 8.75 9.17 / 8.13	3-NN .709 / 718 .879 / 817 .751 / 756 .883 / 824 .709 / 718 .879 / 817 .755 / 759 .887 / 826 .757 / 762 .895 / 826 .776 / 781 .892 / 830 .772 / 777 .885 / 814 .772 / 777 .885 / 814 .772 / 777 .887 / 817 .646 / 666 .736 / .557//	7.16 / .724 8.95 / .814 7.32 / .740 8.95 / .814 7.32 / .740 8.95 / .811 7.16 / .724 8.95 / .811 7.16 / .724 8.95 / .814 7.60 / .765 8.897 / .832 7.71 / .775 9.03 / .822 7.52 / .759 9.04 / .811 7.44 / .755 9.12 / .839 7.70 / .779 9.10 / .826 7.46 / .754 8.99 / .821 6.14 / .635 7.20 / .549	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517 .628 / .666 .696 / .541 .620 / .659 .716 / .570 .620 / .659 .706 / .566 .618 / .657 .683 / .554 .597 / .636 .646 / .514 .594 / .638 .724 / .597 //////////	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .813 .683 / .703 .848 / .716 .703 / .714 .851 / .743 .703 / .711 .849 / .774 .669 / .688 .857 / .788 .647 / .665 .747 / .609	731 / 742 915 / 866 771 / 782 915 / 866 771 / 782 914 / 866 760 / 776 904 / 885 778 / 787 907 / 843 805 / 810 921 / 875 913 / 870 772 / 774 908 / 855 771 / 773 892 / 834 745 / 751 919 / 861 670 / 682 744 / 607 / / RF 886 / 895 979 / 962 886 / 895 970 / 922 891 / 900 970 / 942 891 / 900 982 / 970 926 / 932	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .781 / .676 .658 / .669 .821 / .733 .675 / .683 .802 / .703 .648 / .654 .802 / .709 .611 / .615 .798 / .719 .588 / .606 .741 / .632 / .
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS	F1/GM AUROC/AUPRC	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .676 .777 / .673 .748 / .751 .678 / .682 .746 / .611 .698 / .711 .784 / .650 .662 / .674 .723 / .556 .642 / .657 .748 / .646 .578 / .604 .643 / .478 .710 /777 / C4.5 .766 / .781 .907 / .805 .763 / .781 .852 / .624 .789 / .805 .882 / .721 .824 / .835 .939 / .822	.679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .799 / .834 .769 / .776 .899 / .834 .769 / .776 .899 / .829 .757 / .766 .902 / .845 .760 / .767 .906 / .865 .567 / .582 .699 / .535	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .662 / .668 .856 / .793 .650 / .657 .646 / .682 .839 / .777 .629 / .641 .843 / .753 .628 / .648 .734 / .610 /		7.83 / 7.89 8.32 / 762 778 / 787 8.27 / 771 7.83 / 7.89 8.32 / 762 7.83 / 7.87 8.32 / 762 7.83 / 787 8.32 / 750 8.19 / 8.24 8.64 / 7.84 7.92 / 7.92 8.42 / 7.53 7.92 / 8.92 8.47 / 6.91 7.97 / 7.98 8.45 / 7.40 7.87 / 7.93 8.36 / 7.61 6.25 / 6.42 6.95 / 5.05 / 1-NN 8.64 / 8.75 9.17 / 8.13 8.86 / 8.86 9.39 / 8.38 8.86 / 8.85 9.39 / 8.38 8.86 / 8.85 9.31 / 8.13	3-NN .709 / 718 .879 / 817 .751 / 756 .883 / 824 .709 / 718 .879 / 817 .755 / 759 .887 / 826 .757 / 762 .895 / 826 .776 / 781 .892 / 830 .772 / 777 .885 / 814 .772 / 777 .888 / 820 .731 / 741 .878 / 817 .646 / 666 .736 / .557 /	7.16 / .724 8.95 / .814 7.32 / .740 8.75 / .811 7.16 / .724 8.95 / .811 7.16 / .724 8.95 / .812 7.76 / .765 8.97 / .832 7.71 / .775 9.03 / .822 7.52 / .759 9.04 / .811 7.44 / .755 9.12 / .839 7.70 / .779 9.10 / .826 7.46 / .754 8.899 / .821 6.14 / .635 7.20 / .549 / 5-NN 8.10 / .822 9.12 / .834 7.40 / .753 9.11 / .807 8.12 / .825 9.54 / .872 7.82 / .795 9.911 / .851	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517 .628 / .666 .696 / .541 .620 / .659 .716 / .570 .620 / .659 .706 / .566 .618 / .657 .683 / .554 .597 / .636 .646 / .514 .594 / .638 .724 / .597 //////	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .813 .683 / .703 .848 / .716 .703 / .714 .849 / .774 .669 / .688 .857 / .788 .647 / .665 .747 / .609	731 / 742 915 / 866 771 / 782 915 / 866 771 / 782 914 / 866 760 / 776 904 / 858 778 / 787 907 / 843 805 / 810 921 / 875 913 / 875 768 / 775 913 / 870 772 / 774 908 / 855 771 / 773 892 / 834 745 / 751 919 / 861 670 / 682 744 / 607 / RF 886 / 895 979 / 962 886 / 895 970 / 922 891 / 900 970 / 942 891 / 900 970 / 942 891 / 900	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .781 / .676 .658 / .669 .821 / .733 .675 / .683 .802 / .709 .611 / .615 .798 / .719 .588 / .606 .741 / .632 /
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS TOP+V TOP+ ROSE	FI/GM AUROC/AUPRC	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .676 .777 / .673 .748 / .751 .829 / .745 .678 / .682 .746 / .611 .698 / .711 .784 / .650 .662 / .674 .723 / .556 .642 / .657 .748 / .646 .578 / .604 .643 / .478 .710 /	679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .899 / .834 .769 / .776 .899 / .834 .750 / .756 .902 / .845 .750 / .756 .902 / .845 .750 / .757 .756 .750 / .757 .756 .750 / .757 .756 .750 / .757 .756 .750 / .757 .756 .750 / .757 .757 .7582 .759 / .7582 .759	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .662 / .668 .856 / .793 .650 / .657 .644 / .682 .839 / .777 .629 / .641 .843 / .753 .628 / .648 .734 / .610 /		7.83 / 7.89 8.32 / 762 778 / 787 8.27 / 771 7.83 / 7.89 8.32 / 762 7.83 / 7.87 8.27 / 771 7.83 / 7.89 8.32 / 762 7.83 / 787 8.32 / 750 8.19 / 8.24 8.64 / 7.84 7.92 / 7.98 8.42 / 7.53 7.92 / 802 8.47 / 691 7.97 / 7.98 8.45 / 740 7.87 / 7.93 8.36 / 761 6.25 / 6.42 6.95 / 5.05 / 1.NN 8.64 / 8.75 9.17 / 8.13 8.86 / 8.96 9.39 / 8.38 8.86 / 8.96 9.39 / 8.38 8.86 / 8.96 9.39 / 8.38 8.86 / 8.75 9.17 / 8.13 8.86 / 8.75 9.17 / 8.13 8.86 / 8.75 9.17 / 8.13	3-NN .709 / 718 .879 / 817 .751 / .756 .883 / .824 .709 / .718 .879 / .817 .755 / .759 .887 / .826 .757 / .762 .895 / .826 .757 / .762 .895 / .826 .776 / .781 .882 / .830 .772 / .777 .885 / .814 .772 / .777 .888 / .820 .731 / .741 .878 / .817 .646 / .666 .736 / .557 / / glass6 .3-NN .805 / .819 .920 / .878 .782 / .789 .913 / .808 .805 / .819 .920 / .878 .805 / .819 .939 / .850 .805 / .819 .920 / .878 .805 / .819 .920 / .878 .805 / .819 .920 / .878 .805 / .819 .920 / .878 .805 / .819 .920 / .878 .805 / .819 .920 / .878 .805 / .819 .920 / .878 .805 / .819 .920 / .878 .805 / .819 .920 / .878 .805 / .819 .920 / .878 .805 / .819 .920 / .878 .805 / .828 .805 / .839 .805 / .839 .805 / .839 .805 / .839 .805 / .839	7.16 / .724 8.95 / .814 7.32 / .740 8.875 / .811 7.16 / .724 8.95 / .814 7.16 / .724 8.95 / .814 7.16 / .724 8.95 / .814 7.16 / .724 8.95 / .814 7.170 8.97 / .832 7.71 / .775 9.03 / .822 7.752 / .759 9.04 / .811 7.44 / .755 9.12 / .839 7.70 / .779 9.10 / .826 7.46 / .754 8.899 / .821 6.14 / .635 7.20 / .549	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517 .628 / .666 .696 / .541 .620 / .659 .716 / .570 .620 / .659 .716 / .570 .633 / .554 .597 / .636 .646 / .514 .594 / .638 .724 / .597///	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .813 .683 / .703 .848 / .716 .703 / .714 .849 / .774 .669 / .688 .857 / .788 .647 / .665 .747 / .609/	731 / 742 915 / 866 771 / 782 915 / 866 771 / 782 914 / 866 760 / 776 904 / 858 778 / 787 907 / 843 805 / 810 921 / 875 913 / 875 913 / 870 772 / 774 908 / 835 771 / 773 892 / 834 745 / 751 919 / 861 670 / 682 744 / 607 / RF 886 / 895 979 / 962 886 / 895 979 / 992 891 / 900 970 / 942 891 / 900 970 / 942 891 / 900 970 / 942 971 / 946 996 / 932 974 / 946 996 / 933 953 / 917	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .658 / .669 .821 / .733 .675 / .683 .802 / .709 .611 / .615 .798 / .719 .588 / .606 .741 / .632 /
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS TOP+V TOP+ ROSE	F1/GM AUROC/AUPRC	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .676 .777 / .673 .748 / .751 .829 / .745 .678 / .682 .746 / .611 .698 / .711 .784 / .650 .662 / .674 .723 / .556 .642 / .657 .748 / .646 .578 / .604 .643 / .478 .710 /777 / C4.5 .766 / .781 .852 / .624 .789 / .805 .882 / .721 .824 / .835 .939 / .822 .830 / .838 .934 / .775 .870 / .876 .937 / .805 .839 / .849 .902 / .766	.679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .769 / .776 .899 / .829 .757 / .766 .903 / .854 .750 / .756 .902 / .845 .760 / .767 .906 / .865 .567 / .582 .699 / .535 /	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .662 / .668 .856 / .793 .650 / .657 .834 / .767 .646 / .682 .839 / .777 .629 / .641 .843 / .753 .628 / .648 .734 / .610 / / / / / / XGB .858 / .871 .961 / .895 .859 / .878 .967 / .933 .850 / .858 .964 / .939 .883 / .891 .964 / .939 .911 / .918 .949 / .898 .891 / .900 .961 / .902		7.83 / 7.89 .832 / 762 .778 / 787 .832 / 762 .778 / 787 .827 / 771 .783 / 789 .832 / .762 .783 / 787 .832 / .750 .819 / .824 .864 / .784 .792 / .798 .842 / .753 .792 / .802 .847 / .691 .797 / .798 .845 / .740 .787 / .793 .836 / .761 .625 / .642 .695 / .505 / / / /	3-NN .709 / 718 .879 / 817 .751 / 756 .883 / 824 .709 / 718 .879 / 817 .755 / 759 .887 / 826 .757 / 762 .895 / 826 .776 / 781 .892 / 830 .772 / 777 .885 / 814 .772 / 777 .885 / 814 .772 / 777 .886 / 820 .731 / 741 .878 / 817 .646 / .666 .736 / .557 /	7.16 / .724 .895 / .814 .732 / .740 .875 / .811 .716 / .724 .895 / .814 .760 / .765 .897 / .832 .771 / .775 .903 / .822 .752 / .759 .904 / .811 .744 / .755 .912 / .839 .770 / .779 .910 / .826 .746 / .754 .899 / .821 .614 / .635 .720 / .549 / / / 5-NN .810 / .822 .912 / .854 .810 / .822 .912 / .854 .810 / .822 .912 / .854 .810 / .822 .912 / .854 .810 / .822 .912 / .854 .810 / .822 .912 / .854 .810 / .822 .912 / .854 .810 / .822 .912 / .854 .810 / .822 .912 / .854	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517 .628 / .666 .696 / .541 .620 / .659 .716 / .570 .620 / .659 .706 / .566 .618 / .657 .683 / .554 .597 / .636 .646 / .514 .594 / .638 .724 / .597 //// /// .844 / .853 .930 / .783 .844 / .853 .930 / .783	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .848 / .716 .703 / .714 .851 / .743 .703 / .711 .849 / .774 .669 / .688 .857 / .788 .647 / .665 .747 / .669	731 / 742 915 / 866 771 / 782 915 / 866 771 / 782 914 / 866 760 / 776 904 / 858 778 / 787 907 / 843 805 / 810 921 / 875 768 / 775 913 / 870 772 / 774 908 / 855 771 / 773 892 / 834 745 / 751 919 / 861 670 / 682 744 / 607 / RF 886 / 895 979 / 962 886 / 895 970 / 922 891 / 900 982 / 970 926 / 932 974 / 946 906 / 913 953 / 917 926 / 932 989 / 939	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .781 / .676 .658 / .669 .821 / .733 .675 / .683 .802 / .709 .611 / .615 .798 / .719 .588 / .606 .741 / .632 /
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+V TOP+ ROSE TOP+V TOP+ ROSE TOP+ SMOTE	FI/GM AUROC/AUPRC FI/GM	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .676 .777 / .673 .748 / .751 .678 / .682 .746 / .611 .698 / .711 .784 / .650 .662 / .674 .723 / .556 .642 / .657 .748 / .646 .578 / .604 .643 / .478 .710 /777 / C4.5 .766 / .781 .907 / .805 .763 / .781 .852 / .624 .789 / .805 .882 / .721 .824 / .835 .939 / .822 .830 / .838 .830 / .838 .939 / .822 .830 / .838 .839 / .849 .902 / .766 .829 / .841	.679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .769 / .776 .899 / .834 .769 / .776 .899 / .834 .750 / .756 .902 / .845 .750 / .756 .902 / .845 .750 / .757 .760 / .767 .906 / .865 .567 / .582 .699 / .535	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .662 / .668 .856 / .793 .650 / .657 .834 / .767 .646 / .682 .839 / .777 .629 / .641 .843 / .753 .628 / .648 .734 / .610///////.		7.83 / 7.89 .832 / 762 .778 / 787 .832 / 762 .778 / 787 .827 / 771 .783 / 789 .832 / 762 .783 / 787 .832 / 750 .819 / 824 .864 / 784 .792 / 798 .842 / 753 .792 / 802 .847 / 691 .797 / 798 .845 / 740 .787 / 793 .836 / 761 .625 / .642 .695 / .505 /	3-NN .709 / 718 .879 / 817 .751 / .756 .883 / .824 .709 / .718 .879 / .817 .755 / .759 .887 / .826 .757 / .762 .895 / .826 .757 / .762 .895 / .826 .776 / .781 .885 / .814 .772 / .777 .885 / .814 .772 / .777 .888 / .820 .731 / .741 .878 / .817 .646 / .666 .736 / .557 /	7.16 / .724 .895 / .814 .732 / .740 .875 / .811 .716 / .724 .895 / .814 .716 / .724 .895 / .814 .716 / .724 .895 / .814 .760 / .765 .897 / .832 .771 / .775 .903 / .822 .752 / .759 .904 / .811 .744 / .755 .912 / .839 .770 / .779 .910 / .826 .746 / .754 .899 / .821 .614 / .635 .720 / .549///	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517 .628 / .666 .696 / .541 .620 / .659 .716 / .570 .620 / .659 .706 / .566 .618 / .657 .683 / .554 .597 / .636 .646 / .514 .594 / .638 .724 / .597 ///////.	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .813 .703 / .714 .851 / .743 .703 / .711 .849 / .774 .669 / .688 .857 / .788 .647 / .665 .747 / .669	731 / 742 915 / 866 771 / 782 915 / 866 771 / 782 914 / 866 760 / 776 904 / 858 778 / 787 907 / 843 805 / 810 921 / 875 913 / 875 768 / 775 913 / 870 772 / 774 908 / 855 771 / 773 892 / 834 745 / 751 919 / 861 670 / 682 744 / 607	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .781 / .676 .658 / .669 .821 / .733 .675 / .683 .802 / .709 .611 / .615 .798 / .719 .588 / .606 .741 / .632 /
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+V TOP+ ROSE TOP+V TOP+ ROSE TOP+V ROSE TOP+ ROSE TOP+ RSLS	F1/GM AUROC/AUPRC F1/GM	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .676 .777 / .673 .748 / .751 .829 / .745 .678 / .682 .746 / .611 .698 / .711 .784 / .650 .662 / .674 .723 / .556 .642 / .657 .748 / .646 .578 / .604 .578 / .605 .763 / .781 .852 / .624 .789 / .805 .882 / .721 .824 / .835 .939 / .822 .830 / .838 .934 / .775 .870 / .876 .829 / .841 .900 / .726 .797 / .805	6.79 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .899 / .834 .769 / .776 .899 / .829 .757 / .766 .903 / .854 .750 / .756 .902 / .845 .750 / .756 .902 / .845 .760 / .767 .906 / .865 .567 / .582 .699 / .535 / / / C5.0 .868 / .879 .933 / .896 .883 / .891 .958 / .918 .912 / .917 .953 / .928 .896 / .908 .965 / .927 .868 / .879 .933 / .896 .873 / .885 .945 / .915 .898 / .903 .953 / .904 .898 / .903 .953 / .904 .864 / .871	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .856 / .793 .650 / .657 .834 / .767 .646 / .682 .839 / .777 .629 / .641 .843 / .753 .628 / .648 .734 / .610//////		7.83 / 7.89 .832 / 762 .778 / 787 .832 / 762 .778 / 787 .827 / 771 .783 / 789 .832 / 762 .783 / 787 .832 / 750 .819 / 824 .864 / 784 .792 / 798 .842 / 753 .792 / 802 .847 / 691 .797 / 798 .845 / 740 .787 / 793 .836 / 761 .625 / 642 .695 / 505 /	3-NN .709 / 718 .879 / 817 .751 / 756 .883 / 824 .709 / 718 .879 / 817 .755 / 759 .887 / 826 .757 / 762 .895 / 826 .776 / 781 .892 / 830 .772 / 777 .885 / 814 .772 / 777 .885 / 814 .772 / 777 .885 / 814 .772 / 777 .886 / 814 .772 / 777 .887 / 817 .646 / 666 .736 / 557 /	7.16 / .724 .895 / .814 .732 / .740 .875 / .811 .716 / .724 .895 / .811 .716 / .724 .895 / .811 .716 / .724 .895 / .814 .760 / .765 .897 / .832 .771 / .775 .903 / .822 .752 / .759 .904 / .811 .744 / .755 .912 / .839 .770 / .779 .910 / .826 .746 / .754 .899 / .821 .614 / .635 .720 / .549 /	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517 .628 / .666 .696 / .541 .620 / .659 .716 / .570 .620 / .659 .706 / .566 .618 / .657 .683 / .554 .597 / .638 .724 / .597 / / /	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .748 .726 / .738 .848 / .716 .703 / .714 .851 / .743 .703 / .711 .8449 / .774 .669 / .688 .857 / .788 .647 / .665 .747 / .665 .747 / .669	731 / 742 915 / 866 771 / 782 915 / 866 771 / 782 914 / 866 760 / 776 904 / 858 778 / 787 907 / 843 805 / 810 921 / 875 768 / 775 913 / 870 772 / 774 908 / 855 771 / 773 892 / 834 745 / 751 919 / 861 670 / 682 744 / 607 / RF 886 / 895 979 / 992 891 / 900 982 / 970 926 / 932 989 / 939 926 / 932 989 / 939 926 / 932 969 / 937 872 / 884	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .781 / .676 .658 / .669 .821 / .733 .675 / .683 .802 / .703 .648 / .654 .802 / .709 .611 / .615 .798 / .719 .588 / .606 .741 / .632 /
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+V TOP+ ROSE TOP+V TOP+ ROSE TOP+ SMOTE TOP+ SMOTE TOP+ SMOTE TOP+ ROSE TOP+ SMOTE TOP+ ROSE OVUN	FI/GM AUROC/AUPRC	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .676 .777 / .673 .748 / .751 .829 / .745 .678 / .682 .746 / .611 .698 / .711 .784 / .650 .662 / .674 .723 / .556 .642 / .657 .748 / .646 .578 / .660 .642 / .657 .748 / .646 .578 / .604 .643 / .478 .710 /777 /777 /777 /777 /777 / .777 .7805 .789 / .805 .789 / .805 .781 / .876 .787 / .876 .787 / .876 .787 / .876 .787 / .876 .787 / .876 .787 / .876 .787 / .876 .787 / .876 .787 / .876 .787 / .876 .787 / .876 .797 / .805 .797 / .805 .799 / .841 .900 / .726 .797 / .805 .900 / .737	.679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .899 / .834 .769 / .776 .899 / .829 .757 / .766 .903 / .854 .750 / .756 .902 / .845 .760 / .767 .906 / .865 .567 / .582 .699 / .335 /	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .856 / .793 .650 / .657 .834 / .767 .646 / .682 .839 / .777 .629 / .641 .843 / .753 .628 / .648 .734 / .610 /		7.83 / 7.89 .832 / 762 .778 / 787 .832 / 762 .778 / 787 .827 / 771 .783 / 789 .832 / 762 .783 / 787 .832 / 750 .819 / 824 .864 / 784 .792 / 798 .842 / 753 .792 / 802 .847 / 691 .797 / 798 .845 / 740 .787 / 793 .836 / 761 .625 / .642 .695 / .505 /	3-NN .709 / 718 .879 / 817 .751 / 756 .883 / 824 .709 / 718 .879 / 817 .755 / 759 .887 / 826 .757 / 762 .885 / 826 .776 / 781 .892 / 830 .772 / 777 .885 / 814 .772 / 777 .885 / 814 .772 / 777 .885 / 814 .772 / 777 .885 / 814 .772 / 777 .885 / 814 .772 / 777 .885 / 819 .731 / 741 .878 / 817 .646 / .666 .736 / .557 / / glass6 .3-NN .805 / .819 .920 / .878 .819 .920 / .878 .820 / .826 .855 / .819 .915 / .828 .805 / .819 .920 / .878 .820 / .826 .915 / .828 .850 / .858 .859 / .850 .820 / .826 .915 / .828 .850 / .828 .850 / .828 .850 / .828 .850 / .828 .850 / .828 .850 / .828 .850 / .828 .850 / .828 .850 / .828 .850 / .828 .850 / .828 .850 / .828 .850 / .828	7.16 / .724 .895 / .814 .732 / .740 .875 / .811 .716 / .724 .895 / .814 .716 / .724 .895 / .814 .716 / .724 .895 / .814 .760 / .765 .897 / .832 .771 / .775 .903 / .822 .752 / .759 .904 / .811 .744 / .755 .912 / .839 .770 / .779 .910 / .826 .746 / .754 .899 / .821 .614 / .635 .720 / .549 / / /	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517 .628 / .666 .696 / .541 .620 / .659 .716 / .570 .620 / .659 .706 / .566 .618 / .657 .683 / .554 .597 / .636 .646 / .514 .594 / .638 .724 / .597 / / / / / / /	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .748 .703 / .714 .851 / .743 .703 / .711 .849 / .774 .669 / .688 .857 / .788 .647 / .665 .747 / .669	731 / 742 915 / 866 771 / 782 915 / 866 771 / 782 914 / 866 760 / 776 904 / 858 778 / 787 907 / 843 805 / 810 921 / 875 768 / 775 913 / 870 772 / 774 908 / 855 771 / 773 892 / 834 745 / 751 919 / 861 670 / 682 744 / 607 / RF 886 / 895 979 / 962 886 / 895 970 / 922 891 / 900 982 / 970 926 / 932 974 / 946 906 / 913 953 / 917 926 / 932 989 / 939 926 / 932 989 / 939	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .781 / .676 .658 / .669 .821 / .733 .675 / .683 .802 / .703 .648 / .654 .802 / .709 .611 / .615 .798 / .719 .588 / .606 .741 / .632 /
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+V TOP+ ROSE TOP+V TOP+ ROSE TOP+ ROSE TOP+ ROSE TOP+ ROSE	F1/GM AUROC/AUPRC	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .676 .777 / .673 .748 / .751 .829 / .745 .678 / .682 .746 / .611 .698 / .711 .784 / .650 .662 / .674 .723 / .556 .642 / .657 .748 / .646 .578 / .604 .602 / .602 .602 /	6.79 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .899 / .834 .769 / .776 .899 / .829 .757 / .766 .903 / .854 .750 / .756 .902 / .845 .750 / .756 .902 / .845 .750 / .756 .902 / .845 .750 / .756 .902 / .845 .750 / .756 .902 / .845 .750 / .759 .868 / .879 .933 / .896 .883 / .891 .958 / .918 .912 / .917 .953 / .928 .896 / .908 .965 / .927 .868 / .879 .933 / .896 .873 / .885 .945 / .915 .898 / .903 .953 / .904 .898 / .903 .953 / .904 .864 / .871 .921 / .854 .861 / .873 .974 / .955	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .662 / .668 .856 / .793 .650 / .657 .834 / .767 .646 / .682 .839 / .777 .629 / .641 .843 / .753 .628 / .648 .734 / .610		7.83 / 7.89 .832 / 762 .778 / 787 .832 / 762 .778 / 787 .827 / 771 .783 / 789 .832 / 762 .783 / 787 .832 / 750 .819 / 824 .864 / 784 .792 / 798 .842 / 753 .792 / 802 .847 / 691 .797 / 798 .845 / 740 .787 / 793 .836 / 761 .625 / .642 .695 / .505 /	3-NN .709 / 718 .879 / 817 .751 / 756 .883 / 824 .709 / 718 .879 / 817 .755 / 759 .887 / 826 .757 / 762 .895 / 826 .776 / 781 .892 / 830 .772 / 777 .885 / 814 .772 / 777 .885 / 814 .772 / 777 .885 / 814 .772 / 777 .887 / 817 .646 / 666 .736 / 557 /	7.16 / .724 .895 / .814 .732 / .740 .875 / .811 .716 / .724 .895 / .814 .760 / .765 .897 / .832 .771 / .775 .903 / .822 .752 / .759 .904 / .811 .744 / .755 .912 / .839 .770 / .779 .910 / .826 .746 / .754 .899 / .821 .614 / .635 .720 / .549	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .714 / .569 .617 / .654 .688 / .517 .628 / .666 .696 / .541 .620 / .659 .716 / .570 .620 / .659 .716 / .570 .620 / .659 .706 / .566 .618 / .657 .683 / .554 .597 / .636 .646 / .514 .594 / .638 .724 / .597/	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .743 .703 / .714 .851 / .743 .703 / .711 .8449 / .774 .669 / .688 .857 / .788 .647 / .665 .747 / .669	731 / 742 915 / 866 771 / 782 915 / 866 771 / 782 914 / 866 760 / 776 904 / 858 778 / 787 907 / 843 805 / 810 921 / 875 768 / 775 913 / 870 772 / 774 908 / 855 771 / 773 892 / 834 745 / 751 919 / 861 670 / 682 744 / 607 / / RF 886 / 895 979 / 962 886 / 895 979 / 962 886 / 895 970 / 922 891 / 900 982 / 970 982 / 970 926 / 932 984 / 936 986 / 932 989 / 939 926 / 932 989 / 937 872 / 884 993 / 959 848 / 858 972 / 954	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .796 / .695 .638 / .654 .781 / .676 .658 / .669 .821 / .733 .675 / .683 .802 / .703 .648 / .654 .802 / .709 .611 / .615 .798 / .719 .588 / .606 .741 / .632 /
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+V TOP+ ROSE TOP+V TOP+ ROSE TOP+ SMOTE TOP+ SMOTE TOP+ ROSE OVUN	FI/GM AUROC/AUPRC FI/GM	.608 / .629 .735 / .646 .621 / .628 .673 / .584 .571 / .578 .692 / .569 .673 / .676 .777 / .673 .748 / .751 .829 / .745 .678 / .682 .746 / .611 .698 / .711 .784 / .650 .662 / .674 .723 / .556 .642 / .657 .748 / .646 .578 / .604 .643 / .478 .710 /	.679 / .693 .860 / .754 .720 / .728 .889 / .841 .679 / .693 .860 / .754 .782 / .785 .896 / .833 .798 / .804 .899 / .834 .769 / .776 .899 / .829 .757 / .766 .902 / .845 .750 / .756 .902 / .845 .760 / .767 .906 / .865 .567 / .582 .699 / .535 /	.590 / .611 .828 / .746 .690 / .699 .848 / .786 .601 / .617 .827 / .745 .654 / .661 .839 / .761 .693 / .707 .802 / .648 .662 / .668 .856 / .793 .650 / .657 .644 / .662 .839 / .777 .629 / .641 .843 / .753 .628 / .648 .734 / .610 /		7.83 / 7.89 8.32 / 762 778 / 787 8.27 / 771 7.83 / 789 8.32 / 762 7.83 / 789 8.32 / 762 7.83 / 787 8.32 / 750 8.19 / 8.24 8.64 / 784 7.92 / 798 8.42 / 753 7.92 / 802 8.47 / 691 7.97 / 798 8.45 / 740 7.87 / 793 8.36 / 761 6.25 / 642 6.95 / 505 / 1-NN 8.64 / 875 9.17 / 813 8.86 / 896 9.39 / 838 8.64 / 875 9.17 / 813 8.64 / 875 9.17 / 813 8.64 / 875 9.17 / 813 8.64 / 875 9.17 / 813 8.64 / 875 9.17 / 813 8.64 / 875 9.17 / 813 8.64 / 875 9.17 / 813 8.64 / 875 9.17 / 813 8.64 / 875 9.17 / 813 8.64 / 875 9.17 / 813 8.64 / 875 9.17 / 813 8.64 / 875 9.17 / 813 8.64 / 875 9.17 / 813 8.64 / 875 9.17 / 813 8.64 / 875 9.17 / 813 8.64 / 875 9.17 / 813	3-NN .709 / 718 .879 / 817 .751 / .756 .883 / .824 .709 / .718 .879 / .817 .755 / .756 .883 / .824 .709 / .718 .879 / .817 .755 / .759 .887 / .826 .757 / .762 .895 / .826 .757 / .762 .895 / .826 .776 / .781 .882 / .830 .772 / .777 .885 / .814 .772 / .777 .885 / .814 .772 / .777 .887 / .817 .646 / .666 .336 / .557///	7.16 / .724 8.95 / .814 7.32 / .740 8.95 / .814 7.32 / .740 8.95 / .811 7.16 / .724 8.95 / .811 7.16 / .724 8.95 / .812 7.10 / .765 8.97 / .832 7.71 / .775 9.03 / .822 7.52 / .759 9.04 / .811 7.44 / .755 9.12 / .839 7.70 / .779 9.10 / .826 7.46 / .754 8.89 / .821 6.14 / .635 7.20 / .549	.612 / .645 .714 / .569 .606 / .646 .701 / .564 .612 / .645 .7114 / .569 .617 / .654 .618 / .659 .617 / .654 .628 / .666 .696 / .541 .620 / .659 .716 / .570 .620 / .659 .716 / .570 .633 / .554 .597 / .636 .646 / .514 .594 / .638 .724 / .597	.663 / .678 .852 / .755 .672 / .690 .842 / .761 .635 / .651 .859 / .786 .649 / .657 .842 / .748 .726 / .738 .864 / .813 .683 / .703 .848 / .716 .703 / .714 .849 / .774 .669 / .688 .857 / .788 .647 / .665 .747 / .609	731 / 742 915 / 866 771 / 782 915 / 866 771 / 782 914 / 866 760 / 776 904 / 858 778 / 787 907 / 843 805 / 810 921 / 875 913 / 875 913 / 870 772 / 774 908 / 855 771 / 773 892 / 834 745 / 751 919 / 861 670 / 682 744 / 607 / RF 886 / 895 979 / 962 886 / 895 979 / 962 886 / 895 970 / 922 891 / 900 970 / 942 891 / 900 970 / 942 891 / 900 970 / 942 891 / 900 970 / 942 891 / 900 970 / 942 891 / 900 970 / 942 891 / 900 970 / 942 891 / 895 970 / 952 974 / 946 906 / 913 953 / 917 926 / 932 969 / 937 872 / 884 993 / 939 986 / 932 969 / 937 872 / 884 993 / 959 848 / 858	.602 / .611 .789 / .699 .612 / .619 .812 / .739 .596 / .609 .793 / .721 .634 / .639 .796 / .695 .638 / .654 .802 / .703 .648 / .654 .802 / .709 .611 / .615 .798 / .719 .588 / .606 .741 / .632 /

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	Metrics	C4.5	C5.0	XGB	LR	1-NN	haberman 3-NN	5-NN	NB	NN	RF	SVM
BASE	F1 / GM AUROC / AUPRC	.170 / .172 .516 / .290	.190 / .193 .529 / .314	.341 / .360 .670 / .470	.242 / .295 .676 / .493	.410 / .415 .609 / .393	.344 / .357 .630 / .433	.308 / .325 .619 / .420	.289 / .336 .631 / .470	.337 / .358 .679 / .453	.287 / .289 .652 / .404	.223 / .265 .671 / .464
ROS	F1 / GM	.458 / .464	.466 / .470	.512 / .516	.447 / .452	.438 / .438	.459 / .470	.452 / .462	.385 / .403	.425 / .431	.355 / .358	.496 / .498
	AUROC / AUPRC F1 / GM	.627 / .407 .498 / .500	.698 / .438 .471 / .474	.703 / .474 .495 / .498	.667 / .488 .432 / .446	.613 / .401 .408 / .410	.632 / .414 .411 / .416	.627 / .407 .400 / .407	.622 / .468 .361 / .387	.646 / .484 .469 / .472	.642 / .392 .355 / .357	.694 / .486 .438 / .444
SMOTE	AUROC / AUPRC	.660 / .429	.627 / .370	.702 / .505	.678 / .495	.603 / .365 .399 / .401	.617 / .414	.632 / .433	.615 / .464 .351 / .379	.663 / .448	.665 / .420	.715 / .506
RSLS	F1 / GM AUROC / AUPRC	.466 / .472 .625 / .393	.456 / .466 .650 / .400	.460 / .463 .683 / .491	.424 / .438 .675 / .494	.600 / .375	.399 / .401 .619 / .400	.345 / .347 .607 / .384	.551 / .579	.389 / .390 .608 / .408	.337 / .337 .648 / .376	.446 / .452 .717 / .506
TOP+V	F1 / GM AUROC / AUPRC	.484 / .512 .609 / .350	.471 / .497 .607 / .347	.497 / .536 .662 / .435	.492 / .498 .652 / .449	.456 / .464 .640 / .375	.457 / .525 .555 / .304	.469 / .530 .548 / .296	.455 / .524 .563 / .338	.478 / .509 .658 / .441	.455 / .503 .604 / .324	.473 / .508 .618 / .377
TOP+	F1 / GM	.509 / .518	.502 / .512	.485 / .518	.462 / .503	.465 / .532	.481 / .494	.435 / .457	.437 / .447	.480 / .505	.474 / .510	.481 / .484
ROSE TOP+	AUROC / AUPRC F1 / GM	.635 / .361 .452 / .499	.643 / .385 .453 / .503	.696 / .518 .465 / .522	.672 / .496 .427 / .504	.594 / .321 .469 / .532	.653 / .446 .457 / .460	.621 / .391 .441 / .524	.616 / .465 .423 / .499	.671 / .456 .464 / .499	.636 / .366 .465 / .499	.714 / .508 .443 / .514
SMOTE	AUROC / AUPRC	.640 / .369	.677 / .434	.685 / .450	.633 / .433	.600 / .326	.651 / .455	.555 / .298	.593 / .421	.653 / .460	.639 / .376	.632 / .464
TOP+ RSLS	F1 / GM AUROC / AUPRC	.493 / .517 .652 / .402	.453 / .503 .677 / .434	.474 / .531 .680 / .470	.427 / .504 .633 / .433	.469 / .532 .600 / .326	.480 / .526 .638 / .350	.494 / .545 .641 / .354	.423 / .499 .593 / .421	.463 / .496 .665 / .437	.471 / .520 .638 / .397	.445 / .518 .630 / .459
OVUN	F1 / GM	.497 / .519	.500 / .519	.507 / .535	.457 / .507	.453 / .463	.466 / .485	.473 / .497	.431 / .479	.502 / .520	.483 / .497	.488 / .520
ROSE	AUROC / AUPRC F1 / GM	.668 / .413 .475 / .479	.674 / .454 .486 / .490	.702 / .471 .478 / .479	.623 / .447 .417 / .420	.614 / .364 .366 / .376	.664 / .436 .391 / .401	.661 / .439 .395 / .402	.584 / .415	.675 / .489 .433 / .438	.677 / .411 .430 / .440	.671 / .455 .396 / .399
KOSE	AUROC / AUPRC F1 / GM	.640 / .427 .467 /	.645 / .424	.648 / .439	.653 / .472	.542 / .296	.568 / .340	.592 / .377	.611 / .456	.648 / .454	.640 / .406	.645 / .456
DBSM*	AUROC / AUPRC	.622 /	/	/	/	/	/	/	/	/	/	/
	<u> </u>						Liver-disorders					
	Metrics	C4.5	C5.0	XGB	LR	1-NN	3-NN	5-NN	NB	NN	RF	SVM
BASE	F1 / GM AUROC / AUPRC	.700 / .703 .617 / .653	.746 / .749 .747 / .754	.739 / .741 .744 / .771	.696 / .701 .708 / .757	.664 / .668 .620 / .668	.678 / .680 .640 / .677	.703 / .704 .679 / .717	.352 / .399 .634 / .696	.686 / .688 .700 / .759	.763 / .766 .765 / .777	.657 / .659 .659 / .715
ROS	F1 / GM	.682 / .685	.740 / .742	.785 / .786	.692 / .696	.708 / .711	.680 / .683	.686 / .688	.412 / .448	.746 / .748	.774 / .778	.720 / .722
SMOTE	AUROC / AUPRC F1 / GM	.631 / .673 .746 / .750	.732 / .765 .746 / .748	.783 / .814 .774 / .780	.710 / .765 .733 / .735	.623 / .661 .681 / .684	.650 / .688 .692 / .694	.662 / .701 .735 / .738	.647 / .714 .501 / .525	.732 / .753 .729 / .731	.754 / .792 .759 / .762	.696 / .753 .721 / .724
	AUROC / AUPRC F1 / GM	.642 / .679 .736 / .740	.735 / .763 .746 / .748	.753 / .785 .772 / .777	.707 / .759 .733 / .735	.617 / .662 .681 / .684	.633 / .672 .692 / .694	.683 / .708 .735 / .738	.644 / .706 .501 / .525	.686 / .715 .672 / .674	.753 / .778 .784 / .785	.687 / .745 .725 / .728
RSLS	AUROC / AUPRC	.642 / .686	.735 / .763	.770 / .801	.707 / .759	.617 / .662	.633 / .672	.683 / .708	.644 / .706	.664 / .715	.759 / .778	.691 / .748
TOP+V	F1 / GM AUROC / AUPRC	.645 / .651 .676 / .576	.662 / .675 .723 / .613	.693 / .701 .772 / .716	.653 / .664 .738 / .700	.614 / .650 .575 / .464	.624 / .654 .625 / .505	.628 / .636 .689 / .625	.621 / .652 .636 / .546	.644 / .648 .719 / .635	.686 / .691 .766 / .742	.630 / .641 .700 / .665
TOP+	F1 / GM	.606 / .644	.663 / .667	.679 / .689	.631 / .642	.621 / .646	.618 / .645	.616 / .639	.608 / .622	.628 / .640	.678 / .687	.628 / .631
ROSE TOP+	AUROC / AUPRC F1 / GM	.577 / .472 .629 / .644	.762 / .727 .649 / .654	.765 / .727 .660 / .664	.714 / .666 .628 / .647	.601 / .485 .623 / .647	.669 / .573 .608 / .637	.678 / .598 .608 / .644	.636 / .547 .618 / .645	.704 / .648 .643 / .646	.771 / .740 .656 / .676	.729 / .718 .620 / .624
SMOTE	AUROC / AUPRC	.657 / .536	.735 / .699	.789 / .760	.700 / .642	.604 / .487	.665 / .563	.661 / .563	.643 / .551	.741 / .717	.739 / .700	.715 / .708
TOP+ RSLS	F1 / GM AUROC / AUPRC	.609 / .636 .593 / .482	.649 / .654 .735 / .699	.660 / .664 .789 / .760	.639 / .657 .707 / .650	.623 / .647 .604 / .487	.618 / .645 .679 / .573	.608 / .644 .661 / .563	.619 / .646 .650 / .552	.641 / .654 .703 / .625	.678 / .687 .771 / .740	.623 / .633 .709 / .680
OVUN	F1 / GM AUROC / AUPRC	.581 / .591 .594 / .490	.627 / .642 .700 / .624	.641 / .664 .704 / .651	.614 / .632 .696 / .644	.568 / .575 .602 / .493	.575 / .587 .620 / .532	.596 / .610 .633 / .542	.615 / .647 .624 / .536	.627 / .634 .699 / .638	.621 / .631 .733 / .671	.584 / .595 .653 / .611
ROSE	F1 / GM	.564 / .586	.552 / .573	.567 / .573	.556 / .560	.545 / .553	.538 / .546	.526 / .534	.584 / .606	.549 / .556	.543 / .545	.570 / .574
	AUROC / AUPRC F1 / GM	.541 / .457	.547 / .444	.673 / .613	.699 / .631	.565 / .470	.569 / .475	.550 / .482	.620 / .555	.620 / .546	.617 / .569	.656 / .592
DBSM*	AUROC / AUPRC											/
		/	/	/	/	/	/	/	/	/	/	/
	Matrics			/	/	/	new-thyroid1		/	/	/	
	Metrics F1/GM	C4.5	C5.0	XGB	LR	1-NN	new-thyroid1	5-NN	NB	NN	RF	SVM
BASE	F1 / GM AUROC / AUPRC	C4.5 .870 / .880 .944 / .827	C5.0 .920 / .926 .996 / .968	XGB .868 / .883 1.00 / 1.00	LR .940 / .944 .985 / .959	1-NN .930 / .939 .950 / .925	new-thyroid1 3-NN .871 / .886 .965 / .943	5-NN .849 / .867 .963 / .935	NB .898 / .906 .996 / .977	NN .989 / .989 1.00 / 1.00	RF .946 / .950 1.00 / 1.00	SVM .879 / .888 .994 / .974
BASE ROS	F1 / GM AUROC / AUPRC F1 / GM	C4.5 .870 / .880 .944 / .827 .909 / .915	C5.0 .920 / .926 .996 / .968 .920 / .926	XGB .868 / .883 1.00 / 1.00 .943 / .947	LR .940 / .944 .985 / .959 .940 / .944	1-NN .930 / .939 .950 / .925 .930 / .939	new-thyroid1 3-NN .871 / .886 .965 / .943 .890 / .902	5-NN .849 / .867 .963 / .935 .818 / .835	NB .898 / .906 .996 / .977 .868 / .879	NN .989 / .989 1.00 / 1.00 .989 / .989	RF .946 / .950 1.00 / 1.00 .923 / .929	SVM .879 / .888 .994 / .974 .926 / .930
ROS	F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .933	C5.0 .920 / .926 .996 / .968 .920 / .926 .965 / .937 .941 / .947	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .929 / .934	LR .940 / .944 .985 / .959 .940 / .944 .968 / .935 .960 / .963	1-NN .930 / .939 .950 / .925 .930 / .939 .950 / .925 .950 / .958	new-thyroid1 3-NN .871 / .886 .965 / .943 .890 / .902 .967 / .949 .905 / .915	5-NN .849 / .867 .963 / .935 .818 / .835 .967 / .949 .859 / .870	NB .898 / .906 .896 / .977 .868 / .879 .996 / .977 .888 / .897	NN .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .975 / .976	RF .946 / .950 .946 / .950 .923 / .929 1.00 / 1.00 .955 / .958	SVM .879 / .888 .879 / .888 .994 / .974 .996 / .930 .997 / .989 .922 / .927
ROS SMOTE	F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880	C5.0 .920 / .926 .996 / .968 .920 / .926 .965 / .937	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994	LR .940 / .944 .985 / .959 .940 / .944 .968 / .935	1-NN .930 / .939 .950 / .925 .930 / .939 .950 / .925	new-thyroid1 3-NN .871 / .886 .965 / .943 .890 / .902 .967 / .949	5-NN .849 / .867 .963 / .935 .818 / .835 .967 / .949	NB .898 / .906 .996 / .977 .868 / .879 .996 / .977	NN .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00	RF .946 / .950 1.00 / 1.00 .923 / .929 1.00 / 1.00	SVM .879 / .888 .994 / .974 .926 / .930 .997 / .989
ROS	F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .933 .937 / .905 .835 / .851 .872 / .780	C5.0 920 / 926 996 / 968 920 / 926 965 / 937 941 / 947 972 / 965 888 / 899 999 / 994	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .929 / .934 .999 / .994 .896 / .905 1.00 / 1.00	LR 940 / 944 985 / 959 940 / 944 968 / 935 960 / 963 984 / 984 940 / 944 985 / 959	1-NN 930 / 939 950 / 925 930 / 939 950 / 925 950 / 925 967 / 949 930 / 939 950 / 925	new-thyroid1 3-NN .871 / .886 .965 / .943 .890 / .902 .967 / .949 .905 / .915 .965 / .943 .857 / .873 .964 / .938	5-NN .849 / .867 .963 / .935 .818 / .835 .967 / .949 .859 / .870 .964 / .936 .877 / .891 .963 / .935	NB .898 / .906 .996 / .977 .868 / .879 .996 / .977 .888 / .897 .996 / .977 .887 / .896 .996 / .977	NN .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .975 / .976 1.00 / 1.00 .989 / .989 1.00 / 1.00	RF .946 / .950 1.00 / 1.00 .923 / .929 1.00 / 1.00 .955 / .958 1.00 / 1.00 .951 / .955 1.00 / 1.00	SVM 879 / 888 994 / 974 926 / 930 997 / 989 922 / 927 997 / 989 872 / 885 994 / 978
ROS SMOTE	F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .933 .957 / .905 .835 / .851 .872 / .780 .932 / .937 .973 / .900	C5.0 920 / 926 996 / 968 920 / 926 965 / 937 941 / 947 972 / 965 888 / 899 999 / 994 960 / 963 996 / 968	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .929 / .934 .999 / .994 .896 / .905 1.00 / 1.00 .966 / .968 1.00 / 1.00	LR 940 / 944 985 / 959 940 / 944 968 / 935 960 / 963 988 / 984 940 / 944 985 / 959 975 / 976 1.00 / 1.00	1-NN 930 / 939 950 / 925 930 / 939 950 / 925 950 / 958 967 / 949 930 / 939 950 / 955 950 / 958 967 / 949	new-thyroid1 3-NN .871 / .886 .965 / .943 .890 / .902 .967 / .949 .905 / .915 .965 / .943 .857 / .873 .964 / .938 .908 / .918 .964 / .929	5-NN 849 / 867 963 / 935 818 / 835 967 / 949 859 / 870 964 / 936 877 / 891 963 / 935 890 / 902 962 / 924	NB .898 / 906 .996 / .977 .868 / .879 .996 / .977 .888 / .897 .996 / .977 .887 / .896 .996 / .977 .898 / .906 .996 / .977	NN .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .975 / .976 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00	RF 946 / 950 1.00 / 1.00 923 / 929 1.00 / 1.00 955 / 958 1.00 / 1.00 951 / 955 1.00 / 1.00 986 / 987 1.00 / 1.00	SVM 879 / .888 .994 / .974 .926 / .930 .997 / .989 .922 / .927 .997 / .989 .872 / .885 .994 / .978 .916 / .922 .992 / .947
ROS SMOTE RSLS TOP+V TOP+	F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .935 .835 / .851 .872 / .780 .932 / .937 .973 / .900 .916 / .923	C5.0 920 / 926 996 / 968 920 / 926 965 / 937 941 / 947 972 / 965 888 / 899 999 / 994 960 / 963 996 / 968 949 / 952	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .929 / .934 .999 / .995 1.00 / 1.00 .966 / .968 1.00 / 1.00 .946 / .950	LR 940 / 944 985 / 959 940 / 944 968 / 935 960 / 963 988 / 984 940 / 944 985 / 959 975 / 976 1.00 / 1.00 975 / 976	1-NN 930 / 939 950 / 925 930 / 939 950 / 925 950 / 925 950 / 958 967 / 949 930 / 939 950 / 925 950 / 925 950 / 949	new-thyroid1 3-NN 871 / 886 9965 / 943 890 / 902 967 / 949 905 / 915 965 / 943 857 / 873 964 / 938 908 / 918 964 / 929 919 / 929	5-NN 849 / 867 963 / 935 818 / 835 967 / 949 859 / 870 964 / 936 877 / 891 963 / 935 890 / 902 962 / 924 906 / 918	NB .898 / .906 .996 / .977 .868 / .879 .996 / .977 .888 / .897 .996 / .977 .898 / .996 .996 / .977 .993 / .910	NN .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .975 / .976 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989	RF 946 / 950 1.00 / 1.00 923 / 929 1.00 / 1.00 955 / 958 1.00 / 1.00 951 / 955 1.00 / 1.00 986 / 987 1.00 / 1.00 969 / 971	SVM 879 / 888 .994 / .974 .926 / .930 .997 / .989 .922 / .927 .997 / .989 .872 / .885 .994 / .978 .916 / .922 .992 / .947 .955 / .958
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+	F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .933 .957 / .905 .835 / .851 .832 / .780 .932 / .780 .932 / .780 .946 / .923 .957 / .905 .835 / .851 .962 / .878 .963 / .965	C5.0 920 / 926 996 / 968 920 / 926 965 / 937 941 / 947 972 / 965 888 / 899 999 / 994 960 / 963 996 / 968 949 / 952 983 / 962 963 / 965	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .929 / .934 .999 / .994 .896 / .905 1.00 / 1.00 .966 / .968 1.00 / 1.00 .946 / .950 .999 / .994 .927 / .934	LR 940 / 944 985 / 959 940 / 944 968 / 935 960 / 963 988 / 984 940 / 944 985 / 959 975 / 976 1.00 / 1.00 975 / 976 988 / 984 949 / 952	1-NN 930 / 939 950 / 925 930 / 939 950 / 925 950 / 958 967 / 949 930 / 939 950 / 958 967 / 949 939 / 947 964 / 929 930 / 939	new-thyroid1 3-NN .871 / .886 .965 / .943 .890 / .902 .967 / .949 .905 / .915 .965 / .943 .857 / .873 .964 / .938 .908 / .918 .964 / .929 .919 / .929 .919 / .929	5-NN 849 / 867 963 / 935 818 / 835 967 / 949 859 / 870 964 / 936 877 / 891 963 / 935 890 / 902 962 / 924 906 / 918 964 / 938 854 / 869	NB .898 / 906 .996 / .977 .868 / .879 .996 / .977 .888 / .897 .996 / .977 .887 / .896 .996 / .977 .903 / .910 .996 / .977 .903 / .910 .996 / .977 .903 / .910	NN .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .975 / .976 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989	RF .946 / .950 1.00 / 1.00 .923 / .929 1.00 / 1.00 .955 / .958 1.00 / 1.00 .951 / .955 1.00 / 1.00 .986 / .987 1.00 / 1.00 .969 / .971 1.00 / 1.00 .955 / .958	SVM 879 / .888 .994 / .974 .926 / .930 .997 / .989 .922 / .927 .997 / .989 .872 / .885 .994 / .978 .916 / .922 .992 / .947 .955 / .958 .100 / 1.00 .921 / .925
ROS SMOTE RSLS TOP+V TOP+ ROSE	F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC F1/GM AUROC/AUPRC	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .933 .957 / .905 .835 / .851 .872 / .780 .932 / .937 .973 / .900 .916 / .923 .962 / .878	C5.0 920 / 926 996 / 968 920 / 926 965 / 937 941 / 947 972 / 965 888 / 899 999 / 994 960 / 963 996 / 968 949 / 952 983 / 962	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .929 / .934 .999 / .994 .896 / .905 1.00 / 1.00 .966 / .968 1.00 / 1.00 .946 / .950 .999 / .994	LR 940 / 944 985 / 959 940 / 944 968 / 935 960 / 963 988 / 984 940 / 944 985 / 959 975 / 976 1.00 / 1.00 975 / 976	1-NN 930 / 939 950 / 925 930 / 939 950 / 925 950 / 925 950 / 958 967 / 949 930 / 939 950 / 925 950 / 958 967 / 949 939 / 947 944 / 929	new-thyroid1 3-NN 871 / 886 965 / 943 890 / 992 967 / 949 905 / 915 965 / 943 857 / 873 964 / 938 908 / 918 964 / 929 919 / 929	5-NN .849 / .867 .963 / .935 .818 / .835 .967 / .949 .859 / .870 .964 / .936 .877 / .891 .963 / .935 .890 / .902 .962 / .924 .906 / .918 .964 / .938	NB .898 / .906 .996 / .977 .868 / .879 .996 / .977 .888 / .897 .996 / .977 .887 / .896 .996 / .977 .898 / .906 .996 / .977 .903 / .910 .996 / .977	NN .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .975 / .976 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00	RF .946 / .950 1.00 / 1.00 .923 / .929 1.00 / 1.00 .955 / .958 1.00 / 1.00 .951 / .955 1.00 / 1.00 .986 / .987 1.00 / 1.00 .969 / .971 1.00 / 1.00	SVM 879 / 888 994 / 974 926 / 930 997 / 989 922 / 927 997 / 989 872 / 885 994 / 978 916 / 922 992 / 947 955 / 958 1.00 / 1.00
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS	F1/GM AUROC/AUPRC	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .933 .957 / .905 .835 / .851 .872 / .780 .932 / .937 .973 / .900 .916 / .923 .962 / .878 .963 / .965 .982 / .944 .940 / .944 .940 / .944	C5.0 920 / 926 996 / 968 920 / 926 965 / 937 941 / 947 972 / 965 888 / 899 999 / 994 960 / 963 996 / 968 949 / 952 983 / 962 963 / 965 983 / 965 983 / 965 983 / 965	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .929 / .934 .999 / .994 .896 / .905 1.00 / 1.00 .946 / .968 1.00 / 1.00 .946 / .950 .999 / .994 .927 / .934 1.00 / 1.00 .927 / .934 1.00 / 1.00	LR 940 / 944 985 / 959 940 / 944 968 / 935 960 / 963 988 / 984 940 / 944 985 / 959 975 / 976 1.00 / 1.00 975 / 976 988 / 984 949 / 952 997 / 975	1-NN 930 / 939 950 / 925 930 / 939 950 / 925 950 / 925 950 / 958 967 / 949 930 / 939 950 / 925 950 / 925 967 / 949 939 / 947 964 / 929 939 / 939 950 / 925	new-thyroid1 3-NN 871 / 886 965 / 943 890 / 902 967 / 949 905 / 915 965 / 943 857 / 873 964 / 938 908 / 918 964 / 929 919 / 929 967 / 949 919 / 929 967 / 949	5-NN .849 / .867 .963 / .935 .818 / .835 .967 / .949 .859 / .870 .964 / .936 .877 / .891 .963 / .935 .890 / .902 .962 / .924 .906 / .918 .964 / .938 .854 / .869 .982 / .970 .854 / .870 .958 / .918	NB .898 / 906 .996 / 977 .868 / .879 .996 / .977 .888 / .897 .996 / .977 .887 / .896 .996 / .977 .898 / .906 .996 / .977 .903 / .910 .996 / .977 .923 / .929 .996 / .977 .923 / .929 .996 / .977	NN .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .975 / .976 1.00 / 1.00 .989 / .989 1.00 / 1.00	RF .946 / .950 1.00 / 1.00 .923 / .929 1.00 / 1.00 .955 / .958 1.00 / 1.00 .951 / .955 1.00 / 1.00 .986 / .987 1.00 / 1.00 .969 / .971 1.00 / 1.00 .955 / .958 .998 / .993 .966 / .968 1.00 / 1.00	SVM 879 / 888 994 / 974 926 / 930 997 / 989 922 / 927 997 / 989 872 / 885 994 / 978 916 / 922 992 / 947 955 / 958 1.00 / 1.00 921 / 925 997 / 987 912 / 915 996 / 982
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+	F1/GM AUROC/AUPRC	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .933 .957 / .905 .835 / .985 .872 / .780 .932 / .937 .973 / .903 .962 / .878 .963 / .965 .982 / .944 .940 / .944 .956 / .924 .862 / .872 .914 / .771	C5.0 920 / 926 996 / 968 920 / 926 965 / 937 941 / 947 972 / 965 888 / 899 999 / 994 960 / 963 996 / 968 949 / 952 983 / 962 963 / 965 983 / 965 983 / 966 971 / 966 901 / 963 974 / 966 901 / 993	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .929 / .934 .999 / .994 .896 / .905 1.00 / 1.00 .966 / .968 .1.00 / 1.00 .946 / .950 .999 / .994 .927 / .934 1.00 / 1.00 .927 / .934 1.00 / 1.00 .871 / .886 1.00 / 1.00	LR 940 / 944 985 / 959 940 / 944 968 / 935 960 / 963 988 / 984 940 / 944 985 / 959 975 / 976 988 / 984 949 / 952 997 / 975 949 / 952 997 / 975 940 / 944 968 / 935	1-NN 930 / 939 950 / 925 930 / 939 950 / 925 950 / 925 950 / 958 967 / 949 930 / 958 967 / 949 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 930 / 939 930 / 939 930 / 925	new-thyroid1 3-NN 871 / 886 965 / 943 890 / 902 967 / 949 905 / 915 965 / 943 857 / 873 994 / 938 908 / 918 908 / 919 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 905 / 915 965 / 939	5-NN .849 / .867 .963 / .935 .818 / .835 .967 / .949 .859 / .870 .964 / .936 .877 / .891 .963 / .935 .890 / .902 .962 / .924 .906 / .918 .964 / .938 .854 / .869 .982 / .970 .854 / .870 .958 / .918 .869 / .886 .965 / .943	NB .898 / .906 .996 / .977 .868 / .879 .996 / .977 .888 / .897 .996 / .977 .889 / .996 .996 / .977 .898 / .906 .996 / .977 .903 / .910 .996 / .977 .923 / .929 .996 / .977 .903 / .914 .996 / .977	NN -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00 -975 / 976 -1.00 / 1.00 -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00	RF .946 / .950 1.00 / 1.00 .923 / .929 1.00 / 1.00 .955 / .958 1.00 / 1.00 .951 / .955 1.00 / 1.00 .966 / .987 1.00 / 1.00 .969 / .971 1.00 / 1.00 .955 / .958 .998 / .993 .966 / .968 1.00 / 1.00 .966 / .968 1.00 / 1.00	SVM .879 / .888 .994 / .974 .926 / .930 .997 / .989 .922 / .927 .997 / .989 .872 / .885 .994 / .978 .916 / .922 .992 / .947 .955 / .958 .1.00 / 1.00 .921 / .925 .997 / .987 .912 / .915 .996 / .982 .873 / .882 .994 / .974
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS	F1/GM AUROC/AUPRC F1/GM	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .933 .957 / .905 .835 / .851 .872 / .780 .932 / .937 .973 / .900 .916 / .923 .962 / .878 .963 / .965 .982 / .944 .956 / .924 .862 / .872 .914 / .771 .870 / .877	C5.0 920 / 926 996 / 968 920 / 926 965 / 937 941 / 947 972 / 965 888 / 899 999 / 994 960 / 963 994 / 952 983 / 965 983 / 965 983 / 965 983 / 965 983 / 965 983 / 965 996 / 963 974 / 966 901 / 913	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .929 / .934 .999 / .994 .896 / .905 1.00 / 1.00 .966 / .968 1.00 / 1.00 .946 / .950 .991 / .994 .927 / .934 1.00 / 1.00 .927 / .934 1.00 / 1.00 .871 / .886	LR 940 / 944 985 / 959 940 / 944 968 / 959 960 / 963 988 / 984 940 / 944 985 / 959 975 / 976 1.00 / 1.00 975 / 976 988 / 984 949 / 952 997 / 975 940 / 944	1-NN 930 / 939 950 / 925 930 / 939 950 / 925 950 / 925 950 / 958 967 / 949 930 / 939 950 / 925 950 / 925 950 / 929 930 / 939 930 / 939 930 / 939 930 / 947 964 / 929 930 / 939 930 / 939	new-thyroid1 3-NN .871 / .886 .965 / .943 .890 / .902 .967 / .949 .905 / .915 .965 / .943 .857 / .873 .964 / .938 .908 / .918 .964 / .929 .919 / .929 .967 / .949 .919 / .929 .967 / .949 .919 / .929 .967 / .949 .919 / .929 .967 / .949 .905 / .915	5-NN .849 / .867 .963 / .935 .818 / .835 .967 / .949 .859 / .870 .964 / .936 .877 / .891 .963 / .935 .890 / .902 .962 / .924 .906 / .918 .964 / .938 .854 / .869 .982 / .970 .854 / .870 .958 / .918 .869 / .886 .965 / .943 .757 / .784	NB .898 / 906 .996 / .977 .868 / .879 .996 / .977 .888 / .897 .996 / .977 .887 / .896 .996 / .977 .898 / .906 .996 / .977 .903 / .910 .996 / .977 .923 / .929 .996 / .977 .923 / .929 .996 / .977 .923 / .929 .996 / .977 .927 / .914	NN .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .975 / .976 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989	RF .946 / .950 1.00 / 1.00 .923 / .929 .100 / 1.00 .955 / .958 1.00 / 1.00 .951 / .955 .100 / 1.00 .986 / .987 1.00 / 1.00 .969 / .971 1.00 / 1.00 .955 / .958 .998 / .993 .966 / .968 .100 / 1.00 .966 / .968	SVM .879 / .888 .994 / .974 .926 / .930 .997 / .989 .922 / .927 .997 / .989 .872 / .885 .994 / .978 .916 / .922 .992 / .947 .955 / .958 .1.00 / 1.00 .921 / .925 .997 / .987 .912 / .915 .996 / .982 .873 / .882
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN	F1/GM AUROC/AUPRC F1/GM	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .933 .957 / .905 .835 / .851 .872 / .780 .932 / .937 .973 / .900 .916 / .923 .962 / .878 .963 / .965 .982 / .944 .940 / .944 .940 / .944 .946 / .924 .862 / .872 .914 / .771 .870 / .877 .955 / .756 .913 /	C5.0 920 / 926 996 / 968 920 / 926 965 / 937 941 / 947 972 / 965 888 / 899 999 / 994 960 / 963 996 / 968 949 / 952 963 / 965 983 / 962 960 / 963 974 / 966 901 / 913 999 / 994 873 / 881 997 / 989	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .999 / .994 .999 / .994 .896 / .905 1.00 / 1.00 .966 / .968 1.00 / 1.00 .946 / .950 .999 / .994 1.00 / 1.00 .927 / .934 1.00 / 1.00 .871 / .886 1.00 / 1.00 .923 / .929 1.00 / 1.00 .923 / .929 .927 / .934	LR 940 / 944 985 / 959 940 / 944 968 / 959 960 / 963 988 / 984 940 / 944 985 / 959 975 / 976 1.00 / 1.00 975 / 976 988 / 984 949 / 952 997 / 975 949 / 952 997 / 975 940 / 944 968 / 935 920 / 926 1.00 / 1.00	1-NN 930 / 939 950 / 925 930 / 939 950 / 925 950 / 958 967 / 949 930 / 939 950 / 925 950 / 958 967 / 949 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 944 / 929 930 / 939 950 / 925 939 / 947 944 / 929 930 / 939 950 / 925 930 / 939 950 / 925 930 / 939 950 / 925	new-thyroid1 3-NN .871 / .886 .965 / .943 .890 / .902 .967 / .949 .905 / .915 .965 / .943 .857 / .873 .964 / .938 .908 / .918 .964 / .929 .919 / .929 .967 / .949 .919 / .929 .967 / .949 .919 / .929 .967 / .949 .919 / .929 .967 / .949 .919 / .929 .967 / .949 .919 / .929 .967 / .949 .968 / .968 .969 / .968 / .968	5-NN 849 / 867 963 / 935 818 / 835 967 / 949 859 / 870 964 / 936 877 / 891 963 / 935 890 / 902 962 / 924 906 / 918 964 / 938 854 / 869 982 / 970 854 / 870 958 / 918 869 / 886 965 / 943 757 / 784 973 / 862	NB .898 / 906 .996 / .977 .868 / .879 .996 / .977 .888 / .897 .996 / .977 .887 / .896 .996 / .977 .898 / .906 .996 / .977 .903 / .910 .996 / .977 .923 / .929 .996 / .977 .923 / .929 .996 / .977 .923 / .929 .996 / .977 .923 / .929 .996 / .977 .923 / .929 .996 / .977 .923 / .929 .996 / .977 .923 / .929 .996 / .977 .923 / .929 .996 / .977 .907 / .914 .996 / .977 .813 / .831 .995 / .965	NN .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .975 / .976 1.00 / 1.00 .989 / .989 1.00 / 1.00	RF .946 / .950 1.00 / 1.00 .923 / .929 1.00 / 1.00 .955 / .958 1.00 / 1.00 .951 / .955 1.00 / 1.00 .966 / .987 1.00 / 1.00 .969 / .971 1.00 / 1.00 .955 / .958 .998 / .993 .966 / .968 1.00 / 1.00 .966 / .968 1.00 / 1.00 .966 / .968 1.00 / 1.00 .923 / .929 .999 / .994 	SVM 879 / .888 .994 / .974 .926 / .930 .997 / .989 .922 / .927 .997 / .989 .872 / .885 .994 / .978 .916 / .922 .992 / .947 .955 / .958 .910 / 1.00 .921 / .925 .997 / .987 .912 / .915 .996 / .982 .873 / .882 .994 / .974 .896 / .900 .993 / .972
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE	F1/GM AUROC/AUPRC	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .933 .957 / .905 .835 / .851 .872 / .780 .932 / .937 .973 / .900 .916 / .923 .962 / .878 .963 / .965 .982 / .944 .940 / .944 .940 / .944 .956 / .924 .862 / .872 .914 / .771 .870 / .877 .955 / .756	C5.0 920 / 926 996 / 968 920 / 926 965 / 937 941 / 947 972 / 965 888 / 899 999 / 994 960 / 963 996 / 968 949 / 952 983 / 962 963 / 965 983 / 965 983 / 966 901 / 913 999 / 994 873 / 881 997 / 989	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .929 / .934 .999 / .994 .896 / .905 1.00 / 1.00 .946 / .968 1.00 / 1.00 .946 / .950 .999 / .994 .927 / .934 1.00 / 1.00 .871 / .886 1.00 / 1.00 .871 / .886 .100 / 1.00 .923 / .929 .927 / .934	LR 940 / 944 985 / 959 940 / 944 968 / 935 960 / 963 988 / 984 940 / 944 985 / 959 975 / 976 1.00 / 1.00 975 / 976 988 / 984 949 / 952 997 / 975 949 / 952 997 / 975 940 / 944 968 / 935 920 / 926 1.00 / 1.00	1-NN 930 / 939 950 / 925 930 / 939 950 / 925 950 / 925 950 / 958 967 / 949 930 / 939 950 / 925 950 / 925 930 / 939 930 / 939 930 / 939 930 / 939 930 / 939 930 / 939 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925	new-thyroid1 3-NN 871 / 886 965 / 943 890 / 902 967 / 949 905 / 915 965 / 943 857 / 873 964 / 929 919 / 929 967 / 949 919 / 929 967 / 949 905 / 915 905 / 915 906 / 945 919 / 929 967 / 949 919 / 929 967 / 949 905 / 915 905 / 915 905 / 915	5-NN .849 / .867 .963 / .935 .818 / .835 .967 / .949 .859 / .870 .964 / .936 .877 / .891 .963 / .935 .890 / .902 .962 / .924 .906 / .918 .964 / .938 .854 / .869 .982 / .970 .854 / .870 .958 / .918 .869 / .886 .965 / .943 .757 / .784 .973 / .862	NB .898 / .906 .996 / .977 .868 / .879 .996 / .977 .888 / .897 .996 / .977 .887 / .896 .996 / .977 .898 / .906 .996 / .977 .903 / .910 .996 / .977 .923 / .929 .996 / .977 .923 / .929 .996 / .977 .923 / .929 .996 / .977 .923 / .929 .996 / .977 .923 / .929 .996 / .977 .923 / .929 .996 / .977 .931 / .931 .935 / .965	NN .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .975 / .976 1.00 / 1.00 .989 / .989 1.00 / 1.00	RF .946 / .950 1.00 / 1.00 .923 / .929 1.00 / 1.00 .955 / .958 1.00 / 1.00 .951 / .955 1.00 / 1.00 .986 / .987 1.00 / 1.00 .969 / .971 1.00 / 1.00 .955 / .958 .998 / .993 .966 / .968 1.00 / 1.00 .966 / .968 1.00 / 1.00 .966 / .968 1.00 / 1.00 .923 / .929 .923 / .929 .929 / .999	SVM 879 / 888 994 / 974 926 / 930 997 / 989 922 / 927 997 / 989 872 / 885 994 / 978 916 / 922 992 / 947 955 / 958 1.00 / 1.00 921 / 925 997 / 987 912 / 915 996 / 982 873 / 882 994 / 974 886 / 900 993 / 972
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE	F1/GM AUROC/AUPRC F1/GM	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .933 .957 / .905 .835 / .851 .872 / .780 .932 / .937 .973 / .900 .916 / .923 .962 / .878 .963 / .965 .982 / .944 .940 / .944 .940 / .944 .956 / .924 .862 / .872 .914 / .771 .870 / .776 .913 /933 /	C5.0 920 / 926 996 / 968 920 / 926 965 / 937 941 / 947 972 / 965 888 / 899 999 / 994 960 / 963 996 / 968 949 / 952 983 / 962 960 / 963 974 / 966 901 / 913 999 / 994 873 / 881 997 / 989 / /	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .929 / .994 .896 / .905 1.00 / 1.00 .946 / .968 1.00 / 1.00 .946 / .950 .999 / .994 1.00 / 1.00 .927 / .934 1.00 / 1.00 .871 / .886 1.00 / 1.00 .923 / .929 1.00 / 1.00	LR 940 / 944 985 / 959 940 / 944 968 / 953 960 / 963 988 / 984 940 / 944 985 / 959 975 / 976 1.00 / 1.00 975 / 976 949 / 952 997 / 975 940 / 944 968 / 935 920 / 926 1.00 / 1.00 / /	1-NN 930 / 939 950 / 925 930 / 939 950 / 925 950 / 958 967 / 949 930 / 939 950 / 925 950 / 925 930 / 939 930 / 939 930 / 939 930 / 939 930 / 939 930 / 939 950 / 925 930 / 939 950 / 925	new-thyroid1 3-NN 871 / 886 965 / 943 890 / 902 967 / 949 905 / 915 965 / 943 857 / 873 964 / 938 908 / 918 964 / 929 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 97 919	5-NN .849 / .867 .963 / .935 .818 / .835 .967 / .949 .859 / .870 .964 / .936 .877 / .891 .963 / .992 .962 / .924 .906 / .918 .964 / .938 .854 / .869 .982 / .970 .854 / .870 .958 / .918 .869 / .886 .965 / .943 .757 / .784 .973 / .862	NB .898 / 906 .996 / .977 .868 / .879 .996 / .977 .888 / .897 .996 / .977 .887 / .896 .996 / .977 .898 / .906 .996 / .977 .903 / .910 .996 / .977 .923 / .929 .996 / .977 .923 / .929 .996 / .977 .913 / .939 .929 / .977 .931 / .939 .931 / .939 .932 / .939 .933 / .939 .934 / .935 .935 / .935 .936 / .937	NN .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .975 / .976 1.00 / 1.00 .989 / .989 1.00 / 1.00	RF .946 / .950 1.00 / 1.00 .923 / .929 1.00 / 1.00 .955 / .958 1.00 / 1.00 .951 / .955 1.00 / 1.00 .986 / .987 1.00 / 1.00 .969 / .971 1.00 / 1.00 .955 / .958 .998 / .993 .966 / .968 1.00 / 1.00 .966 / .968 1.00 / 1.00 .923 / .929 .999 / .994 /	SVM 879 / 888 994 / 974 926 / 930 997 / 989 922 / 927 997 / 989 872 / 885 994 / 978 916 / 922 992 / 947 955 / 958 1.00 / 1.00 921 / 925 997 / 987 912 / 915 996 / 982 873 / 882 994 / 974 896 / 900 993 / 972
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM*	F1/GM AUROC/AUPRC	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .933 .957 / .905 .835 / .851 .872 / .780 .932 / .937 .973 / .900 .916 / .923 .962 / .878 .963 / .965 .982 / .944 .956 / .924 .862 / .872 .914 / .771 .870 / .877 .933 /933 /933 /	C5.0 920 / 926 996 / 968 920 / 926 965 / 937 941 / 947 972 / 965 888 / 899 999 / 994 960 / 963 996 / 968 949 / 952 983 / 962 960 / 963 974 / 966 901 / 913 999 / 994 873 / 881 997 / 989 / C5.0	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .929 / .934 .999 / .994 .896 / .905 1.00 / 1.00 .966 / .968 1.00 / 1.00 .927 / .934 1.00 / 1.00 .927 / .934 1.00 / 1.00 .871 / .886 1.00 / 1.00 .923 / .929 1.00 / 1.00 .923 / .929 .924 .925 / .934 .927 / .934 .927 / .934 .927 / .934 .927 / .934 .927 / .934 .938 /	LR 940 / 944 985 / 959 940 / 944 968 / 935 960 / 963 988 / 984 940 / 944 985 / 959 975 / 976 1.00 / 1.00 987 / 975 949 / 952 997 / 975 940 / 944 968 / 935 920 / 926 1.00 / 1.00 LR 999 / 912	1-NN 930 / 939 950 / 925 930 / 939 950 / 925 950 / 925 950 / 958 967 / 949 930 / 939 950 / 925 950 / 925 950 / 925 930 / 939 930 / 939 930 / 939 930 / 939 930 / 939 950 / 925 930 / 939 930 / 939 950 / 925 930 / 939 930 / 939 950 / 925	new-thyroid1 3-NN 871 / 886 965 / 943 890 / 902 967 / 949 905 / 915 965 / 943 857 / 873 964 / 938 908 / 918 964 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 970 / 949	5-NN .849 / .867 .963 / .935 .818 / .835 .967 / .949 .859 / .870 .964 / .936 .877 / .991 .963 / .935 .890 / .902 .962 / .924 .906 / .918 .964 / .938 .854 / .869 .982 / .970 .854 / .870 .958 / .918 .869 / .886 .965 / .943 .757 / .784 .973 / .862	NB	NN	RF	SVM 879 / 888 994 / 974 926 / 930 997 / 989 922 / 927 997 / 989 872 / 885 994 / 978 916 / 922 992 / 947 955 / 958 1.00 / 1.00 921 / 925 997 / 987 912 / 915 996 / 982 873 / 882 994 / 974 896 / 900 993 / 972 / SVM 913 / 917
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM*	F1/GM AUROC / AUPRC	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .933 .957 / .995 .835 / .851 .872 / .780 .932 / .937 .973 / .903 .962 / .878 .963 / .965 .982 / .944 .940 / .944 .956 / .924 .862 / .872 .914 / .771 .870 / .877 .933 /933 /	C5.0 920 / 926 996 / 968 920 / 926 996 / 968 920 / 926 965 / 937 941 / 947 972 / 965 888 / 899 999 / 994 960 / 963 996 / 968 949 / 952 983 / 962 960 / 963 974 / 966 901 / 913 999 / 994 873 / 881 997 / 389 / C5.0	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .929 / .934 .999 / .994 .896 / .905 1.00 / 1.00 .966 / .968 1.00 / 1.00 .946 / .950 .999 / .994 .927 / .934 1.00 / 1.00 .871 / .886 1.00 / 1.00 .871 / .886 1.00 / 1.00 .923 / .929 1.00 / 1.00 /	LR 940 / 944 985 / 959 940 / 944 968 / 935 960 / 963 988 / 984 940 / 944 985 / 959 975 / 976 1.00 / 1.00 975 / 976 988 / 984 949 / 952 997 / 975 940 / 944 968 / 935 920 / 926 1.00 / 1.00 / LR	1-NN 930 / 939 950 / 925 930 / 939 950 / 925 950 / 958 967 / 949 930 / 939 950 / 925 950 / 925 950 / 939 930 / 925 930 / 939 930 / 939	new-thyroid1 3-NN 871 / 886 965 / 943 890 / 902 967 / 949 905 / 915 965 / 943 857 / 873 964 / 938 908 / 918 908 / 919 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 917 / 949 918 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 910 / 768 960 / 768 960 / 768 960 / 768	5-NN .849 / .867 .963 / .935 .818 / .835 .967 / .949 .859 / .870 .964 / .936 .877 / .891 .963 / .935 .890 / .902 .962 / .924 .906 / .918 .964 / .938 .854 / .869 .982 / .970 .854 / .870 .958 / .918 .869 / .886 .965 / .984 .757 / .784 .973 / .862 /	NB .898 / .906 .996 / .977 .868 / .879 .996 / .977 .888 / .897 .996 / .977 .887 / .896 .996 / .977 .898 / .906 .996 / .977 .923 / .929 .996 / .977 .923 / .929 .996 / .977 .903 / .910 .995 / .967 .971 .972 / .972 .973 / .972 .973 / .973 .974 / .975 .975 / .975 .977 / .975 .977 / .977 .977 / .977 .977 / .977 .977 / .977 .977 / .977 .977 / .977 .977 / .977 .977 / .977 .977 / .977 .977 / .977 .977 / .977 .977 / .977 .977 / .977 .977 / .977 .977 / .977	NN -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -975 / .976 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 / /	RF .946 / .950 1.00 / 1.00 .923 / .929 1.00 / 1.00 .955 / .958 1.00 / 1.00 .951 / .955 1.00 / 1.00 .986 / .987 1.00 / 1.00 .969 / .971 1.00 / 1.00 .955 / .958 .998 / .993 .966 / .968 1.00 / 1.00 .966 / .968 1.00 / 1.00 .923 / .929 .999 / .994 /	SVM 879 / 888 994 / 974 926 / 930 997 / 989 922 / 927 997 / 989 872 / 885 994 / 978 916 / 922 997 / 987 916 / 922 921 / 925 997 / 987 912 / 915 996 / 982 873 / 882 994 / 974 896 / 900 993 / 972 / SVM
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM*	F1/GM AUROC/AUPRC	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .933 .957 / .905 .835 / .851 .872 / .780 .932 / .937 .973 / .900 .916 / .923 .962 / .878 .963 / .965 .982 / .944 .940 / .944 .956 / .924 .862 / .877 .955 / .756 .913 /933 / C4.5 .848 / .854 .929 / .847 .852 / .866 .914 / .814	C5.0 920 / 926 996 / 968 920 / 926 996 / 968 920 / 926 965 / 937 941 / 947 972 / 965 888 / 899 999 / 994 960 / 963 996 / 963 974 / 966 901 / 913 999 / 994 873 / 881 997 / 989 ——————————————————————————————————	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .929 / .934 .999 / .994 .896 / .905 1.00 / 1.00 .966 / .968 1.00 / 1.00 .927 / .934 1.00 / 1.00 .927 / .934 1.00 / 1.00 .871 / .886 1.00 / 1.00 .923 / .929 1.00 / 1.00 .923 / .929 .924 .927 / .934 .927 / .934 .927 / .934 .927 / .934 .927 / .934 .927 / .934 .928 / .938 .866 / .872 .999 / .962	LR 940 / 944 985 / 959 940 / 944 968 / 935 960 / 963 988 / 988 940 / 944 985 / 959 975 / 976 1.00 / 1.00 975 / 976 988 / 984 949 / 952 997 / 975 940 / 944 968 / 935 920 / 926 1.00 / 1.00 LR 909 / 912 964 / 938	1-NN 930 / 939 950 / 925 930 / 939 950 / 925 950 / 958 967 / 949 930 / 939 950 / 925 950 / 925 950 / 925 950 / 925 950 / 925 950 / 925 930 / 939 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 949 / 888	new-thyroid1 3-NN 871 / 886 965 / 943 890 / 902 967 / 949 905 / 915 965 / 943 857 / 873 964 / 938 908 / 918 908 / 919 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 918 / 929 967 / 949 919 / 929 967 / 949 918 / 929 967 / 949 995 / 975 978 / 978 960 / 768 960 / 768 960 / 768 960 / 768 960 / 768 960 / 768 960 / 768 960 / 768 960 / 768 960 / 768 960 / 768 960 / 768 960 / 768 960 / 768 960 / 768	5-NN 849 / 867 963 / 935 818 / 835 967 / 949 859 / 870 964 / 936 877 / 891 963 / 935 890 / 902 962 / 924 906 / 918 964 / 938 854 / 869 982 / 970 854 / 870 958 / 918 869 / 886 973 / 862	NB	NN -989 / .989 1.00 / 1.00 -989 / .989 1.00 / 1.00 -975 / .976 1.00 / 1.00 -989 / .989 1.00 / 1.00 -989 / .989 1.00 / 1.00 -989 / .989 1.00 / 1.00 -989 / .989 1.00 / 1.00 -989 / .989 1.00 / 1.00 -989 / .989 1.00 / 1.00 -989 / .989 1.00 / 1.00 -989 / .989 1.00 / 1.00 -989 / .989	RF .946 / .950 1.00 / 1.00 .923 / .929 1.00 / 1.00 .955 / .958 1.00 / 1.00 .955 / .958 1.00 / 1.00 .951 / .955 1.00 / 1.00 .986 / .987 1.00 / 1.00 .955 / .958 1.00 / 1.00 .969 / .971 1.00 / 1.00 .966 / .968 1.00 / 1.00 .923 / .929 .999 / .994 / / / RF .916 / .926 .993 / .966 .916 / .926 .996 / .977	SVM 879 / 888 994 / 974 926 / 930 997 / 989 922 / 927 997 / 989 872 / 885 994 / 978 916 / 922 992 / 947 955 / 958 1.00 / 1.00 921 / 925 997 / 987 912 / 915 996 / 982 873 / 882 994 / 974 896 / 900 993 / 972 / SVM 913 / 917 990 / 949 891 / 901 994 / 968
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM*	F1/GM AUROC/AUPRC	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .933 .957 / .905 .835 / .851 .872 / .780 .932 / .937 .973 / .900 .916 / .923 .962 / .878 .963 / .965 .982 / .944 .940 / .944 .940 / .944 .956 / .924 .862 / .872 .914 / .771 .870 / .776 .913 /933 / C4.5 .848 / .854 .929 / .847 .852 / .866	C5.0 920 / 926 996 / 968 920 / 926 965 / 937 941 / 947 972 / 965 888 / 899 999 / 994 960 / 963 996 / 968 949 / 952 983 / 962 963 / 965 983 / 962 960 / 963 974 / 966 901 / 913 999 / 994 873 / 881 997 / 989 / C5.0 847 / 852 968 / 889 849 / 863	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .929 / .994 .896 / .905 1.00 / 1.00 .946 / .968 1.00 / 1.00 .946 / .950 .999 / .994 1.00 / 1.00 .927 / .934 1.00 / 1.00 .871 / .886 1.00 / 1.00 .923 / .929 1.00 / 1.00 /	LR 940 / 944 985 / 959 940 / 944 968 / 959 940 / 943 968 / 963 988 / 984 940 / 944 985 / 959 975 / 976 1.00 / 1.00 975 / 976 988 / 984 949 / 952 997 / 975 940 / 944 968 / 935 920 / 926 1.00 / 1.00 LR 909 / 912 964 / 938	1-NN 930 / 939 950 / 925 930 / 939 950 / 925 930 / 939 950 / 925 950 / 958 967 / 949 930 / 939 950 / 925 950 / 958 967 / 949 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925	new-thyroid1 3-NN 871 / 886 965 / 943 890 / 902 967 / 949 905 / 915 965 / 943 857 / 873 964 / 938 908 / 918 964 / 929 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 910 / 97 910 / 97 910 / 97 910 / 97 910 / 97 910 / 97 910 / 97 910 / 97 910 / 97 910 / 97 910 / 97 911 / 97 912 / 97 913 / 97 914 / 922	5-NN .849 / .867 .963 / .935 .818 / .835 .967 / .949 .859 / .870 .964 / .936 .877 / .891 .963 / .992 .962 / .924 .906 / .918 .864 / .938 .854 / .869 .982 / .970 .854 / .870 .958 / .918 .869 / .886 .965 / .943 .757 / .784 .973 / .862	NB .898 / 906 .996 / .977 .868 / .879 .996 / .977 .888 / .887 .896 / .977 .887 / .896 .996 / .977 .898 / .906 .996 / .977 .903 / .910 .996 / .977 .923 / .929 .996 / .977 .913 / .929 .996 / .977 .913 / .929 .996 / .977 .914 .996 / .977 .915 / .965	NN -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00 -989 / 989 -1.00 / 1.00	RF .946 / .950 1.00 / 1.00 .923 / .929 1.00 / 1.00 .955 / .958 1.00 / 1.00 .955 / .958 1.00 / 1.00 .966 / .987 1.00 / 1.00 .969 / .971 1.00 / 1.00 .955 / .958 .998 / .993 .966 / .968 1.00 / 1.00 .923 / .929 .999 / .994 /	SVM 879 / .888 .994 / .974 .926 / .930 .997 / .989 .922 / .927 .997 / .989 .872 / .885 .994 / .978 .916 / .922 .992 / .947 .955 / .958 .1.00 / 1.00 .921 / .925 .997 / .987 .912 / .915 .996 / .982 .873 / .882 .994 / .974 .896 / .900 .993 / .972 /
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM*	F1/GM AUROC/AUPRC F1/GM	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .933 .957 / .995 .835 / .851 .872 / .780 .932 / .937 .973 / .900 .916 / .923 .962 / .878 .963 / .965 .982 / .944 .940 / .944 .956 / .924 .862 / .872 .914 / .771 .870 / .877 .955 / .756 .913 /933 /933 /948 / .868 .944 / .848 .949 / .848 / .854 .929 / .847 .852 / .866 .914 / .814 .863 / .877 .920 / .836 .840 / .845	C5.0 920 / 926 996 / 968 920 / 926 996 / 968 920 / 926 965 / 937 941 / 947 972 / 965 888 / 899 999 / 994 960 / 963 996 / 968 983 / 962 960 / 963 974 / 966 901 / 913 999 / 994 873 / 881 997 / 989 / C5.0 847 / 852 968 / 889 849 / 863 945 / 863 945 / 863 863 / 877 942 / 854 882 / 897	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .929 / .934 .999 / .994 .896 / .968 1.00 / 1.00 .946 / .950 .999 / .994 .927 / .934 1.00 / 1.00 .927 / .934 1.00 / 1.00 .871 / .886 1.00 / 1.00 .923 / .929 1.00 / 1.00 / / / XGB .844 / .853 .993 / .966 .866 / .872 .990 / .962 .905 / .907 .984 / .925 .902 / .904	LR 940 / 944 985 / 959 940 / 944 968 / 935 960 / 963 988 / 984 940 / 944 985 / 959 975 / 976 1.00 / 1.00 975 / 976 988 / 984 949 / 952 997 / 975 949 / 952 997 / 975 940 / 944 968 / 935 920 / 926 1.00 / 1.00 LR 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912	1-NN 930 / 939 950 / 925 930 / 939 950 / 925 950 / 958 967 / 949 930 / 958 967 / 949 930 / 958 967 / 949 930 / 958 967 / 949 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 961 / 920 949 / 888 925 / 934 961 / 994 961 / 994	new-thyroid1 3-NN 871 / 886 965 / 943 890 / 902 967 / 949 905 / 915 965 / 943 857 / 873 9964 / 938 908 / 918 908 / 919 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 910 / 7.768 960 / 7.768 960 / 7.768 960 / 7.768 960 / 7.768 960 / 7.768 97. / 949 9888 / 9889 / 999 / 995 / 9	5-NN .849 / .867 .963 / .935 .818 / .835 .967 / .949 .859 / .870 .964 / .936 .877 / .891 .963 / .935 .890 / .902 .962 / .924 .906 / .918 .964 / .938 .854 / .869 .982 / .970 .854 / .870 .958 / .918 .869 / .886 .965 / .943 .757 / .784 .973 / .862 /	NB .898 / 906 .996 / .977 .868 / .879 .996 / .977 .888 / .897 .996 / .977 .887 / .896 .996 / .977 .898 / .906 .996 / .977 .903 / .910 .996 / .977 .923 / .929 .996 / .977 .903 / .910 .996 / .977 .923 / .929 .996 / .977 .923 / .929 .996 / .977 .972 / .933 .995 / .965 /	NN -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -975 / .976 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00	RF .946 / .950 1.00 / 1.00 .923 / .929 1.00 / 1.00 .955 / .958 1.00 / 1.00 .951 / .955 1.00 / 1.00 .986 / .987 1.00 / 1.00 .969 / .971 1.00 / 1.00 .955 / .958 .908 / .993 .966 / .968 1.00 / 1.00 .923 / .929 .999 / .994 / / / /	SVM 879 / 888 994 / 974 926 / 930 997 / 989 922 / 927 997 / 989 872 / 885 994 / 978 916 / 922 992 / 947 955 / 958 1.00 / 1.00 921 / 925 997 / 987 912 / 915 996 / 982 873 / 882 994 / 974 896 / 990 993 / 972 / SVM 913 / 917 990 / 949 891 / 901 994 / 968 911 / 901 994 / 968 911 / 919 988 / 955 998 / 957 / 911
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS	F1/GM AUROC/AUPRC F1/GM	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .933 .957 / .905 .835 / .851 .872 / .780 .932 / .937 .973 / .900 .916 / .923 .962 / .944 .940 / .944 .940 / .944 .940 / .944 .956 / .924 .862 / .872 .914 / .771 .870 / .877 .933 / C4.5 .848 / .854 .929 / .847 .852 / .866 .914 / .814 .863 / .877 .920 / .836 .840 / .845 .875 / .777 .902 / .906	C5.0 920 / 926 996 / 968 920 / 926 965 / 937 941 / 947 972 / 965 888 / 899 999 / 994 960 / 963 996 / 968 949 / 952 983 / 962 963 / 965 983 / 965 983 / 965 981 / 962 960 / 963 974 / 966 901 / 913 997 / 989 / C5.0 847 / 852 968 / 889 849 / 863 863 / 877 942 / 854 882 / 897 995 / 978 941 / 944	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .929 / .934 .999 / .994 .896 / .905 1.00 / 1.00 .946 / .950 .999 / .994 .927 / .934 1.00 / 1.00 .871 / .886 1.00 / 1.00 .871 / .886 .100 / 1.00 .871 / .886 .844 / .853 .993 / .966 .866 / .872 .905 / .907 .984 / .925 .902 / .904 .988 / .931 .920 / .992	LR 940 / 944 985 / 959 940 / 944 968 / 935 960 / 963 988 / 984 940 / 944 985 / 959 975 / 976 1.00 / 1.00 975 / 976 988 / 984 949 / 952 997 / 975 940 / 944 985 / 959 1.00 / 1.00 LR 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912	1-NN 930 / 939 950 / 925 930 / 939 950 / 925 930 / 939 950 / 925 950 / 958 967 / 949 930 / 939 950 / 925 950 / 958 967 / 949 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 698 / 736 903 / 557 / 1-NN 910 / 920 949 / 888 910 / 920 949 / 888 925 / 934 961 / 904 910 / 920 949 / 888	new-thyroid1 3-NN 871 / 886 965 / 943 890 / 902 967 / 949 905 / 915 965 / 943 857 / 873 964 / 938 908 / 918 964 / 929 919 / 929 967 / 949 919 / 929 967 / 949 905 / 915 965 / 933 737 / 768 960 / 768 / new-thyroid2 3-NN 876 / 889 995 / 975 914 / 922 914 / 922 918 / 929 928 / 938 /	5-NN .849 / .867 .963 / .935 .818 / .835 .967 / .949 .859 / .870 .964 / .936 .877 / .891 .963 / .935 .890 / .902 .962 / .924 .906 / .918 .964 / .938 .854 / .869 .982 / .970 .854 / .870 .958 / .918 .869 / .886 .965 / .943 .757 / .784 .973 / .862	NB .898 / 906 .996 / 977 .868 / 879 .996 / 977 .888 / 897 .996 / 977 .887 / 896 .996 / 977 .898 / 906 .996 / 977 .903 / 910 .996 / 977 .903 / 929 .996 / 977 .903 / 929 .996 / 977 .903 / 929 .996 / 977 .907 / 914 .907 / 914 .907 / 914 .908 / 977 .909 / 977 .909 / 977 .909 / 977 .909 / 977 .909 / 977 .909 / 979 .909 / 979 .909 / 979 .909 / 979 .909 / 979 .909 / 979 .909 / 979 .909 / 979 .909 / 979 .909 / 979 .909 / 979 .909 / 979 .909 / 979 .909 / 979 .909 / 979 .909 / 979 .909 / 979 .909 / 979	NN .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .975 / .976 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .975 / .976 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989	RF	SVM 879 / 888 994 / 974 926 / 930 997 / 989 922 / 927 997 / 989 872 / 885 994 / 978 916 / 922 992 / 947 955 / 958 1.00 / 1.00 921 / 925 997 / 987 912 / 915 996 / 982 873 / 882 994 / 974 896 / 900 993 / 972 / SVM 913 / 917 990 / 949 891 / 901 998 / 949 891 / 991 988 / 945 907 / 911 998 / 946 994 / 966 994 / 966
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS TOP+V	FI/GM AUROC/AUPRC	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .933 .957 / .905 .835 / .851 .872 / .780 .932 / .937 .973 / .903 .962 / .878 .963 / .965 .982 / .944 .940 / .944 .956 / .924 .860 / .872 .914 / .771 .870 / .877 .955 / .756 .913 /933 /933 /933 /934 / .854 .863 / .877 .959 / .866 .914 / .814 .863 / .877 .920 / .836 .840 / .845 .875 / .777 .902 / .836 .840 / .845 .875 / .777 .902 / .936	C5.0 920 / 926 996 / 968 920 / 926 996 / 968 920 / 926 965 / 937 941 / 947 972 / 965 888 / 889 999 / 994 960 / 963 960 / 963 949 / 952 983 / 962 960 / 963 974 / 966 901 / 913 999 / 994 873 / 881 997 / 989 / C5.0 847 / 852 968 / 889 849 / 863 945 / 863 945 / 863 945 / 863 945 / 863 945 / 863 945 / 863 945 / 863 945 / 863 945 / 863 945 / 863 945 / 863 945 / 863 945 / 863	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .929 / .994 .929 / .934 .999 / .994 .896 / .905 .1.00 / 1.00 .966 / .968 .1.00 / 1.00 .946 / .950 .999 / .994 .927 / .934 .1.00 / 1.00 .927 / .934 .1.00 / 1.00 .871 / .886 .1.00 / 1.00 .923 / .929 .1.00 / 1.00 /	LR 940 / 944 985 / 959 940 / 944 968 / 935 960 / 963 988 / 988 940 / 944 985 / 959 975 / 976 988 / 988 949 / 952 997 / 975 949 / 952 997 / 975 940 / 944 968 / 935 920 / 926 LNO / 1.00 LR 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938	1-NN 930 / 939 950 / 925 930 / 939 950 / 925 950 / 925 950 / 958 967 / 949 930 / 959 950 / 925 950 / 958 967 / 949 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 955 950 / 925 950 / 925 950 / 925 950 / 925 950 / 925 950 / 925 950 / 925 950 / 925 950 / 925 950 / 925 950 / 925 950 / 925 949 / 888 910 / 920 949 / 888 910 / 920 949 / 888 910 / 920 949 / 888	new-thyroid1 3-NN 871 / 886 965 / 943 890 / 902 967 / 949 905 / 915 965 / 943 857 / 873 994 / 938 908 / 918 906 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 910 / 929 967 / 949 910 / 929 967 / 949 910 / 929 967 / 949 910 / 929 967 / 949 910 / 929 957 / 949 958 / 975	5-NN .849 / .867 .963 / .935 .818 / .835 .967 / .949 .859 / .870 .964 / .936 .877 / .891 .963 / .935 .890 / .902 .962 / .924 .906 / .918 .964 / .938 .854 / .869 .982 / .970 .854 / .870 .958 / .918 .869 / .943 .757 / .784 .973 / .862 / / 5-NN .820 / .837 .994 / .952 .891 / .988 .991 / .946 .822 / .833 .994 / .952 .891 / .988 .865 / .833 .994 / .952 .891 / .988 .891 / .988 .891 / .988 .891 / .988	NB .898 / .906 .996 / .977 .868 / .879 .996 / .977 .888 / .897 .996 / .977 .889 / .906 .996 / .977 .898 / .906 .996 / .977 .903 / .910 .996 / .977 .923 / .929 .996 / .977 .923 / .929 .996 / .977 .923 / .929 .996 / .977 .923 / .929 .996 / .977 .933 / .938 .996 / .971 .875 / .888 .996 / .971 .875 / .888 .996 / .971 .971 / .993 .996 / .971 .972 / .933 .996 / .971 .927 / .933 .996 / .971 .927 / .933 .996 / .971 .927 / .933 .996 / .971 .927 / .933 .996 / .971	NN .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .975 / .976 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .985 / .971 1.00 / 1.00 .975 / .976 1.00 / 1.00 .975 / .976 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00	RF .946 / .950 1.00 / 1.00 .923 / .929 1.00 / 1.00 .955 / .958 1.00 / 1.00 .955 / .958 1.00 / 1.00 .969 / .971 1.00 / 1.00 .955 / .958 .908 / .993 .966 / .968 1.00 / 1.00 .923 / .929 .999 / .994 / / RF .916 / .926 .993 / .966 .916 / .926 .993 / .966 .916 / .926 .993 / .968 .998 / .993 .999 / .994 /	SVM 879 / 888 994 / 974 926 / 930 997 / 989 922 / 927 997 / 989 872 / 885 994 / 978 916 / 922 992 / 947 955 / 958 1.00 / 1.00 921 / 925 997 / 987 912 / 915 996 / 982 873 / 882 994 / 974 896 / 990 993 / 972 / SVM 913 / 917 919 / 949 891 / 901 994 / 968 911 / 919 988 / 945 907 / 911 992 / 960 944 / 964
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS TOP+V TOP+ ROSE	F1/GM AUROC/AUPRC	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .933 .957 / .905 .835 / .851 .872 / .780 .932 / .937 .973 / .900 .916 / .923 .962 / .878 .963 / .965 .982 / .944 .956 / .924 .862 / .872 .914 / .771 .870 / .877 .955 / .756 .913 /933 /933 /948 / .854 .929 / .847 .852 / .866 .914 / .814 .863 / .877 .920 / .836 .840 / .845 .875 / .777 .902 / .906 .964 / .840 .871 / .886 .927 / .833	C5.0 920 / 926 996 / 968 920 / 926 965 / 937 941 / 947 972 / 965 888 / 899 999 / 994 960 / 963 996 / 968 949 / 952 983 / 962 963 / 965 974 / 966 901 / 913 997 / 989 / C5.0 847 / 852 968 / 889 849 / 863 845 / 877 942 / 854 882 / 897 995 / 978 941 / 944 999 / 997 897 / 910 991 / 961	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .929 / .934 .999 / .994 .896 / .905 1.00 / 1.00 .966 / .968 1.00 / 1.00 .946 / .950 .999 / .994 .927 / .934 1.00 / 1.00 .871 / .886 1.00 / 1.00 .871 / .886 1.00 / 1.00 .871 / .886 .864 / .853 .993 / .966 .866 / .872 .990 / .962 .905 / .907 .984 / .925 .902 / .904 .988 / .931 .920 / .992 .991 / .993 .907 / .907 .991 / .993	LR 940 / 944 985 / 959 940 / 944 968 / 935 960 / 963 988 / 984 940 / 944 985 / 959 975 / 976 1.00 / 1.00 975 / 976 988 / 984 949 / 952 997 / 975 940 / 944 968 / 935 920 / 926 1.00 / 1.00 LR 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938	1-NN 930 / 939 950 / 925 930 / 939 950 / 925 950 / 925 950 / 958 967 / 949 930 / 939 950 / 925 950 / 958 967 / 949 939 / 947 964 / 929 930 / 939 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 959 / 935 950 / 925 969 / 736 903 / 557 /	new-thyroid1 3-NN 871 / 886 965 / 943 890 / 902 967 / 949 905 / 915 965 / 943 857 / 873 964 / 929 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 910 / 920 968 / 975 914 / 922 992 / 946 896 / 900 990 / 930 882 / 887 992 / 954 910 / 920 995 / 975 911 / 922 999 / 930	5-NN .849 / .867 .963 / .935 .818 / .835 .967 / .949 .859 / .870 .964 / .936 .877 / .891 .963 / .935 .890 / .902 .962 / .924 .906 / .918 .964 / .938 .854 / .869 .982 / .970 .854 / .870 .958 / .918 .869 / .886 .965 / .943 .757 / .784 .973 / .862	NB .898 / 906 .996 / 977 .868 / 879 .996 / 977 .888 / 897 .996 / 977 .887 / 896 .996 / 977 .898 / 906 .996 / 977 .923 / 929 .996 / 977 .923 / 929 .996 / 977 .923 / 929 .996 / 977 .923 / 929 .996 / 977 .923 / 929 .996 / 977 .923 / 929 .996 / 977 .933 / 929 .996 / 971 .875 / 888 .996 / 971 .878 / 891 .996 / 971 .913 / 920 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .997 / 987	NN .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .975 / .976 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .975 / .976 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00	RF .946 / .950 1.00 / 1.00 .923 / .929 1.00 / 1.00 .955 / .958 1.00 / 1.00 .951 / .955 1.00 / 1.00 .986 / .987 1.00 / 1.00 .986 / .987 1.00 / 1.00 .969 / .971 .00 / 1.00 .998 / .998 / .998 .00 / 1.00 .923 / .929 .999 / .994	SVM 879 / 888 994 / 974 926 / 930 997 / 989 922 / 927 997 / 989 872 / 885 994 / 978 916 / 922 992 / 947 955 / 958 1.00 / 1.00 921 / 925 997 / 989 873 / 882 994 / 974 896 / 900 993 / 972 / SVM 913 / 917 990 / 949 891 / 901 994 / 968 911 / 919 988 / 945 907 / 911 992 / 960 944 / 946 990 / 949 941 / 946 990 / 949 941 / 946
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+V TOP+ ROSE TOP+	F1/GM AUROC/AUPRC F1/GM	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .933 .957 / .905 .835 / .851 .872 / .780 .932 / .937 .973 / .900 .916 / .923 .962 / .878 .963 / .965 .982 / .944 .940 / .944 .940 / .944 .940 / .944 .956 / .924 .862 / .872 .914 / .771 .870 / .877 .955 / .756 .913 /933 / C4.5 .848 / .854 .929 / .847 .852 / .866 .914 / .814 .863 / .877 .920 / .836 .840 / .845 .871 / .886 .927 / .833 .886 / .900	C5.0 920 / 926 996 / 968 920 / 926 965 / 937 941 / 947 972 / 965 888 / 899 999 / 994 960 / 963 996 / 968 949 / 952 983 / 962 960 / 963 974 / 966 901 / 913 997 / 989 / C5.0 847 / 852 968 / 889 849 / 863 863 / 877 942 / 854 882 / 897 941 / 944 999 / 997 897 / 910 897 / 910	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .929 / .934 .999 / .994 .896 / .905 1.00 / 1.00 .946 / .958 1.00 / 1.00 .946 / .950 .999 / .994 .927 / .934 1.00 / 1.00 .871 / .886 1.00 / 1.00 .871 / .886 1.00 / 1.00 .871 / .886 .804 / .853 .993 / .966 .866 / .872 .990 / .962 .990 / .962 .990 / .962 .990 / .962 .990 / .962 .990 / .962 .991 / .943 .920 / .922 .991 / .943 .920 / .922 .991 / .943 .920 / .922 .991 / .945 .991 / .956 .913 / .915	LR 940 / 944 985 / 959 940 / 944 968 / 935 960 / 963 988 / 984 940 / 944 985 / 959 975 / 976 1.00 / 1.00 975 / 976 988 / 984 949 / 952 997 / 975 940 / 944 968 / 935 960 / 968 LR 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912	1-NN 930 / 939 950 / 925 930 / 939 950 / 925 930 / 939 950 / 925 950 / 958 967 / 949 930 / 939 950 / 925 950 / 958 967 / 949 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 949 / 888 910 / 920 949 / 888 910 / 920 949 / 888 910 / 920 949 / 888 910 / 920 949 / 888 910 / 920 949 / 888 910 / 920 949 / 888 910 / 920 949 / 888 910 / 920 949 / 888 910 / 920	new-thyroid1 3-NN 871 / 886 965 / 943 890 / 902 967 / 949 905 / 915 965 / 943 857 / 873 964 / 928 998 / 918 964 / 929 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 905 / 915 905 / 915 906 / 768	5-NN .849 / .867 .963 / .935 .818 / .835 .967 / .949 .859 / .870 .964 / .936 .877 / .891 .963 / .935 .890 / .902 .962 / .924 .906 / .918 .864 / .870 .958 / .918 .869 / .886 .965 / .943 .757 / .784 .973 / .862	NB .898 / 906 .996 / 977 .868 / 879 .996 / 977 .888 / 897 .996 / 977 .887 / 896 .996 / 977 .898 / 906 .996 / 977 .903 / 910 .996 / 977 .923 / 929 .996 / 977 .923 / 929 .996 / 977 .923 / 929 .996 / 977 .923 / 929 .996 / 977 .931 / 831 .935 / 935 /	NN .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .975 / .976 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .975 / .976 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989 1.00 / 1.00 .989 / .989	RF	SVM 879 / 888 994 / 974 926 / 930 997 / 989 922 / 927 997 / 989 872 / 885 994 / 978 916 / 922 992 / 947 955 / 958 1.00 / 1.00 921 / 925 997 / 987 912 / 915 996 / 982 873 / 882 994 / 974 896 / 900 993 / 972 / SVM 913 / 917 990 / 949 891 / 901 994 / 968 991 / 991 998 / 945 907 / 911 992 / 960 944 / 946 990 / 949 941 / 943 993 / 966 933 / 935
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ ROSE TOP+ ROSE TOP+ ROSE TOP+ ROSE TOP+ SMOTE	F1/GM AUROC/AUPRC F1/GM	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .933 .957 / .905 .835 / .851 .872 / .780 .932 / .937 .973 / .900 .916 / .923 .962 / .878 .963 / .965 .982 / .944 .956 / .924 .862 / .872 .914 / .771 .870 / .877 .955 / .756 .913 /933 / C4.5 .848 / .854 .929 / .847 .852 / .866 .914 / .814 .863 / .877 .920 / .836 .840 / .845 .857 / .777 .900 / .906 .964 / .845 .871 / .886 .927 / .833 .886 / .900 .930 / .858 .886 / .900 .930 / .858 .886 / .900	C5.0 920 / 926 996 / 968 920 / 926 996 / 968 920 / 926 965 / 937 941 / 947 972 / 965 888 / 899 999 / 994 960 / 963 996 / 963 994 / 952 983 / 962 960 / 963 974 / 966 901 / 913 997 / 989	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .929 / .934 .999 / .994 .896 / .905 1.00 / 1.00 .966 / .968 1.00 / 1.00 .927 / .934 1.00 / 1.00 .927 / .934 1.00 / 1.00 .927 / .934 .937 / .936 .946 / .950 .959 / .994 .927 / .934 .927 / .934 .937 / .936 .938 / .939 .938 / .939 .938 / .939 .948 / .932 .959 / .962 .959 / .962 .960 / .962 .960 / .962 .961 / .962 .962 / .964 .963 / .966 .966 / .972 .967 / .970 .971 / .975 .	LR 940 / 944 985 / 959 940 / 944 968 / 935 960 / 963 988 / 984 940 / 944 985 / 959 975 / 976 1.00 / 1.00 975 / 976 988 / 984 949 / 952 997 / 975 940 / 944 968 / 935 920 / 926 1.00 / 1.00 LR 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938	1-NN 930 / 939 950 / 925 930 / 939 950 / 925 950 / 925 950 / 925 950 / 925 950 / 925 950 / 925 950 / 925 950 / 925 950 / 925 950 / 925 950 / 925 930 / 939 930 / 939 950 / 925 930 / 939 950 / 925 930 / 939 950 / 925 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 969 / 736 903 / .557	new-thyroid1 3-NN 871 / 886 965 / 943 890 / 902 967 / 949 905 / 915 965 / 943 857 / 873 964 / 938 908 / 918 964 / 929 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 995 / 915 965 / 939 737 / 768 960 / 768 960 / 768 991 / 920 992 / 946 896 / 900 990 / 930 882 / 887 992 / 946 991 / 920 995 / 975 911 / 922 993 / 945 991 / 920 993 / 945 991 / 920 993 / 945 991 / 997 991 / 992	5-NN 849 / 867 963 / 935 818 / 885 967 / 949 859 / 870 964 / 936 877 / 891 963 / 935 890 / 902 962 / 924 906 / 918 964 / 938 854 / 869 982 / 970 854 / 870 958 / 918 869 / 886 965 / 943 757 / 784 973 / 862 / 5-NN 820 / 837 994 / 977 883 / 893 994 / 952 891 / 898 991 / 946 822 / 833 994 / 952 865 / 878 997 / 986 910 / 917 997 / 983 866 / 875 986 / 952 867 / 875	NB .898 / 906 .996 / 977 .868 / 879 .996 / 977 .888 / 897 .996 / 977 .887 / 896 .996 / 977 .898 / 906 .996 / 977 .923 / 929 .996 / 977 .923 / 929 .996 / 977 .923 / 929 .996 / 977 .923 / 929 .996 / 977 .923 / 929 .996 / 977 .923 / 929 .996 / 977 .923 / 929 .996 / 977 .923 / 929 .996 / 977 .923 / 929 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .997 / 987 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933 .996 / 971 .927 / 933	NN -989 / .989 1.00 / 1.00 -989 / .989 1.00 / 1.00 -989 / .989 1.00 / 1.00 -989 / .989 1.00 / 1.00 -989 / .989 1.00 / 1.00 -989 / .989 1.00 / 1.00 -989 / .989 1.00 / 1.00 -989 / .989 1.00 / 1.00 -989 / .989 1.00 / 1.00 -989 / .989 1.00 / 1.00 -989 / .989 1.00 / 1.00	RF .946 / .950 1.00 / 1.00 .923 / .929 1.00 / 1.00 .955 / .958 1.00 / 1.00 .951 / .955 1.00 / 1.00 .986 / .987 1.00 / 1.00 .986 / .987 1.00 / 1.00 .955 / .958 1.00 / 1.00 .969 / .971 1.00 / 1.00 .966 / .968 1.00 / 1.00 .923 / .929 .999 / .994	SVM 879 / 888 994 / 974 926 / 930 997 / 989 922 / 927 997 / 989 872 / 885 994 / 978 916 / 922 992 / 947 955 / 958 1.00 / 1.00 921 / 925 997 / 987 912 / 915 996 / 982 873 / 882 994 / 974 896 / 900 993 / 972
ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+V TOP+ ROSE	F1/GM AUROC/AUPRC	C4.5 .870 / .880 .944 / .827 .909 / .915 .936 / .880 .927 / .933 .957 / .905 .835 / .850 .932 / .937 .973 / .900 .936 / .878 .963 / .965 .982 / .878 .963 / .965 .982 / .944 .940 / .944 .956 / .924 .862 / .872 .914 / .771 .870 / .877 .955 / .756 .913 /933 /933 /948 / .848 / .854 .929 / .847 .852 / .866 .914 / .814 .863 / .877 .900 / .906 .840 / .845 .875 / .777 .902 / .906 .964 / .840 .871 / .886 .927 / .833 .886 / .900 .930 / .858	C5.0 920 / 926 996 / 968 920 / 926 996 / 968 920 / 926 965 / 937 941 / 947 972 / 965 888 / 889 999 / 994 960 / 963 949 / 952 983 / 962 960 / 963 974 / 966 901 / 913 999 / 994 873 / 881 997 / 989 / C5.0 847 / 852 968 / 889 849 / 863 945 / 863 945 / 863 849 / 863 945 / 863 945 / 863 945 / 863 945 / 863 945 / 863 947 / 999 942 / 854 882 / 897 995 / 978 941 / 944 999 / 997 897 / 910 991 / 961	XGB .868 / .883 1.00 / 1.00 .943 / .947 .999 / .994 .929 / .934 .999 / .994 .896 / .968 1.00 / 1.00 .966 / .968 1.00 / 1.00 .946 / .950 .999 / .994 .927 / .934 1.00 / 1.00 .927 / .934 1.00 / 1.00 .871 / .886 1.00 / 1.00 .871 / .886 .1.00 / 1.00 .923 / .929 1.00 / 1.00 /	LR 940 / 944 985 / 959 940 / 944 968 / 935 960 / 963 988 / 988 940 / 944 985 / 959 975 / 976 1.00 / 1.00 975 / 976 988 / 984 949 / 952 997 / 975 949 / 952 997 / 975 940 / 944 968 / 935 920 / 926 1.00 / 1.00 / LR 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938 909 / 912 964 / 938	1-NN 930 / 939 950 / 925 930 / 939 950 / 925 950 / 958 967 / 949 930 / 958 967 / 949 930 / 958 967 / 949 930 / 958 967 / 949 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 964 / 929 930 / 939 950 / 925 939 / 947 961 / 949 961 / 990 949 / 888 925 / 934 961 / 990 949 / 888 925 / 934 961 / 904 963 / 965 992 / 935	new-thyroid1 3-NN 871 / 886 965 / 943 890 / 902 967 / 949 905 / 915 965 / 943 857 / 873 964 / 938 908 / 918 908 / 919 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 919 / 929 967 / 949 910 / 929 967 / 949 910 / 929 910 / 929 92 / 946 896 / 900 990 / 930 882 / 887 992 / 954 910 / 920 995 / 975 921 / 924 993 / 945 901 / 992	5-NN .849 / .867 .963 / .935 .818 / .835 .967 / .949 .859 / .870 .964 / .936 .877 / .891 .963 / .935 .890 / .902 .962 / .924 .906 / .918 .964 / .938 .854 / .869 .982 / .970 .854 / .870 .958 / .918 .869 / .886 .965 / .943 .757 / .784 .973 / .862 /	NB .898 / 906 .996 / .977 .868 / .879 .996 / .977 .888 / .897 .996 / .977 .887 / .896 .996 / .977 .898 / .906 .996 / .977 .903 / .910 .996 / .977 .923 / .929 .996 / .977 .923 / .929 .996 / .977 .972 / .933 .996 / .971 .875 / .888 .996 / .971 .875 / .888 .996 / .971 .875 / .888 .996 / .971 .971 / .972 .972 / .933 .996 / .971 .927 / .933 .996 / .971 .927 / .933 .996 / .971 .927 / .933 .996 / .971 .927 / .933 .996 / .971 .927 / .933 .996 / .971	NN -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -975 / .976 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00 -989 / .989 -1.00 / 1.00	RF .946 / .950 1.00 / 1.00 .923 / .929 1.00 / 1.00 .955 / .958 1.00 / 1.00 .951 / .955 1.00 / 1.00 .956 / .967 1.00 / 1.00 .957 / .958 .908 / .993 .966 / .968 1.00 / 1.00 .923 / .929 .999 / .994 / / / RF .916 / .926 .996 / .977 .925 / .934 .997 / .988 .930 / .939 .996 / .977 .929 / .999 / .994 /	SVM 879 / 888 994 / 974 926 / 930 997 / 989 922 / 927 997 / 989 872 / 885 994 / 978 916 / 922 997 / 987 916 / 922 921 / 925 996 / 982 873 / 882 994 / 974 896 / 900 933 / 972 / SVM 913 / 917 990 / 949 981 / 901 994 / 968 911 / 919 988 / 945 997 / 960 944 / 946 990 / 949 941 / 943 993 / 966 933 / 935 990 / 949

AUROC / AUPRO F1 / GM

AUROC / AUPRC

F1/GM

AUROC / AUPRO

ROSE

DBSM*

.903 / .782 .838 / .845 .937 / .745

.951 / -----

.974 / --

.801 / .823

.986 / .943

.897 / .899

.989 / .933

.981 / .962 .900 / .902

.993 / .966

.949 / .888 .696 / .722

.894 / .548

.990 / .944 .743 / .767

.974 / .863

.994 / .973 .771 / .794

.981 / .893

.847 / .863

.994 / .974

1.00 / 1.00 .850 / .865

1.00 / 1.00

.866 / .873

.990 / .955

.876 / .882

.993 / .966

	Metrics			,			age-blocks-1-3_vs					
	F1 / GM	C4.5 .769 / .784	C5.0 .811 / .822	XGB .602 / .619	LR .594 / .620	1-NN .667 / .688	3-NN .618 / .642	5-NN .611 / .636	NB .468 / .485	NN .802 / .823	RF .860 / .870	SVM .739 / .763
BASE	AUROC / AUPRC	.955 / .659	.989 / .928	.991 / .864	.976 / .715	.905 / .514	.960 / .681	.975 / .776	.931 / .598	.983 / .835	.996 / .949	.987 / .858
ROS	F1 / GM AUROC / AUPRC	.967 / .971 .998 / .950	.910 / .915 .996 / .935	.967 / .971 1.00 / 1.00	.627 / .677	.798 / .811 .903 / .709	.701 / .733 .957 / .774	.612 / .659 .957 / .773	.575 / .599 .948 / .658	.867 / .880 .997 / .947	.950 / .958 1.00 / 1.00	.907 / .916 .997 / .979
CMOTE	F1 / GM	.967 / .971	.932 / .939	.967 / .971	.920 / .526 .549 / .596	.867 / .873	.778 / .801	.686 / .725	.675 / .701	.932 / .939	.917 / .928	.907 / .916
SMOTE	AUROC / AUPRC	.998 / .950	.998 / .950	1.00 / 1.00	.821 / .459	.953 / .793	.993 / .837	.992 / .820	.948 / .689	.992 / .951	1.00 / 1.00	1.00 / 1.00
RSLS	F1 / GM AUROC / AUPRC	.967 / .971 .998 / .950	.967 / .971 .998 / .950	.553 / .583 .988 / .901	.645 / .666 .930 / .732	.798 / .811 .903 / .709	.754 / .770 .957 / .831	.666 / .672 .947 / .755	.496 / .514 .947 / .664	.799 / .806 .996 / .928	.933 / .941 1.00 / 1.00	.797 / .806 .996 / .931
TOP+V	F1 / GM	.967 / .971	.986 / .987	.834 / .845	.745 / .751	.837 / .850	.786 / .801	.725 / .752	.518 / .542	.932 / .935	1.00 / 1.00	.921 / .923
TOP+	AUROC / AUPRC F1 / GM	.998 / .950 .967 / .971	.999 / .975 .967 / .971	.993 / .914 . 967 / .971	.977 / .850 .713 / .727	.957 / .754 .812 / .830	.960 / .853 .786 / .801	.965 / .771 .730 / .742	.949 / .628 .559 / .582	.997 / .958 .907 / .916	1.00 / 1.00 1.00 / 1.00	.998 / .970 .936 / .937
ROSE	AUROC / AUPRC	.998 / .950	.998 / .950	1.00 / 1.00	.915 / .602	.941 / .729	.959 / .852	.955 / .820	.947 / .711	.997 / .938	1.00 / 1.00	.998 / .970
TOP+ SMOTE	F1 / GM AUROC / AUPRC	.967 / .971 .998 / .950	.967 / .971 .998 / .950	.967 / .971 1.00 / 1.00	.713 / .727 .915 / .602	.856 / .864 .952 / .778	.786 / .801 .959 / .852	.728 / .739 .954 / .801	.496 / .514 .945 / .598	.881 / .887 .997 / .967	.967 / .971 1.00 / 1.00	.936 / .937 .998 / .970
TOP+ RSLS	F1 / GM AUROC / AUPRC	.967 / .971 .998 / .950	.967 / .971 .998 / .950	.967 / .971 1.00 / 1.00	.713 / .727 .915 / .602	.819 / .826 .918 / .728	.786 / .801 .959 / .852	.728 / .739 .954 / .801	.496 / .514 .945 / .598	.907 / .916 .997 / .938	.980 / .982 .999 / .990	.936 / .937 .998 / .970
OVUN	F1 / GM	.908 / .919	.967 / .971	.540 / .569	.583 / .616	.798 / .811	.764 / .783	.666 / .672	.496 / .514	.865 / .878	.919 / .928	.917 / .917
	AUROC / AUPRC F1 / GM	.990 / .875 .318 / .428	.998 / .950 .328 / .426	.992 / .916 .401 / .490	.947 / .785 .544 / .584	.903 / .709 .528 / .544	.958 / .825 .418 / .429	.945 / .748 .441 / .455	.943 / .643 .573 / .609	.994 / .907 .423 / .516	.999 / .990 .438 / .516	.997 / .951 .690 / .725
ROSE	AUROC / AUPRC	.847 / .192	.925 / .526	.943 / .670	.960 / .640	.753 / .405	.746 / .456	.742 / .455	.956 / .699	.954 / .555	.977 / .731	.984 / .832
DBSM*	F1 / GM AUROC / AUPRC	/	/	/	/	/	/	/	/	/	/	/
	1	, 			<u>'</u>	,		,	,	,	,	,
	Metrics	C4.5	C5.0	XGB	LR	1-NN	pima 3-NN	5-NN	NB	NN	RF	SVM
BASE	F1 / GM	.578 / .601	.568 / .600	.559 / .593	.636 / .651	.515 / .545	.513 / .543	.519 / .547	.606 / .621	.503 / .530	.569 / .600	.619 / .644
	AUROC / AUPRC F1 / GM	.627 / .434 .634 / .637	.685 / .515 .588 / .593	.687 / .570 .680 / .685	.775 / .635 .661 / .663	.566 / .388	.592 / .412 .557 / .563	.596 / .418 .573 / .579	.713 / .524 .652 / .654	.581 / .439 .560 / .564	.692 / .515 .645 / .648	.755 / .629 .654 / .658
ROS	AUROC / AUPRC	.712 / .549	.801 / .659	.828 / .694	.834 / .729	.652 / .494	.684 / .523	.707 / .550	.814 / .676	.702 / .533	.820 / .695	.827 / .704
SMOTE	F1 / GM AUROC / AUPRC	.599 / .607 .715 / .567	.643 / .647 .817 / .691	.633 / .637 .832 / .734	.637 / .644 .833 / .731	.545 / .546 .651 / .487	.530 / .531 .704 / .563	.546 / .550 .734 / .624	.623 / .627 .816 / .677	.536 / .538 .695 / .545	.641 / .643 .819 / .691	.634 / .637 .830 / .723
RSLS	F1 / GM AUROC / AUPRC	.600 / .608 .725 / .595	.643 / .647 .817 / .691	.621 / .626 .826 / .723	.637 / .644 .833 / .731	.545 / .546	.530 / .531 .704 / .563	.546 / .550 .734 / .624	.623 / .627	.476 / .481 .688 / .511	.632 / .636 .825 / .721	.631 / .634 .831 / .724
TOP+V	F1 / GM	.672 / .675	.670 / .674	.670 / .672	.674 / .677	.651 / .487 .578 / .587	.584 / .589	.601 / .605	.816 / .677 .660 / .665	.583 / .586	.670 / .674	.664 / .668
TOP+V	AUROC / AUPRC F1 / GM	.753 / .583 .656 / .658	.821 / .697 .669 / .670	.833 / .714 .686 / .695	.817 / .691 .672 / .686	.656 / .470 .593 / .597	.704 / .520 .594 / .603	.728 / .542 .621 / .631	.778 / .612 .656 / .658	.692 / .491 .579 / .590	.821 / .694 .661 / .669	.822 / .718 .665 / .674
ROSE	AUROC / AUPRC	.747 / .604	.816 / .702	.837 / .728	.832 / .724	.678 / .498	.712 / .536	.747 / .573	.816 / .682	.694 / .508	.800 / .653	.829 / .710
TOP+ SMOTE	F1 / GM AUROC / AUPRC	.658 / .658 .741 / .585	.653 / .662 .787 / .634	.684 / .694 .828 / .708	.668 / .677 .833 / .730	.592 / .597 .675 / .497	.593 / .603 .710 / .534	.619 / .630 .743 / .569	.660 / .663 .815 / .681	.579 / .584 .703 / .537	.670 / .675 .815 / .694	.677 / .688 .830 / .709
TOP+	F1 / GM	.658 / .658	.655 / .664	.686 / .696	.670 / .674	.593 / .597	.594 / .603	.621 / .631	.656 / .659	.579 / .598	.666 / .669	.666 / .677
RSLS	AUROC / AUPRC F1 / GM	.741 / .585 .620 / .622	.788 / .639 .634 / .638	.830 / .713 .660 / .661	.823 / .706 .665 / .666	.676 / .497 .559 / .560	.712 / .536 .563 / .564	.746 / .572 .576 / .578	.815 / .682 .626 / .629	.687 / .508 .533 / .535	.810 / .672 .641 / .644	.829 / .713 .655 / .657
OVUN	AUROC / AUPRC	.732 / .571	.814 / .704	.818 / .706	.829 / .722	.656 / .486	.705 / .547	.733 / .594	.801 / .661	.680 / .496	.812 / .698	.826 / .711
ROSE	F1 / GM AUROC / AUPRC	.611 / .619 .744 / .582	.627 / .630 .792 / .674	.642 / .644 .812 / .697	.640 / .642 .829 / .715	.559 / .561 .655 / .486	.564 / .566 .705 / .545	.569 / .570 .727 / .578	.627 / .629 .802 / .663	.476 / .482 .605 / .453	.642 / .645 .807 / .685	.629 / .632 .815 / .707
DBSM*	F1 / GM AUROC / AUPRC	/	/	/	/	/	/	/	/	/	/	/
	AUROC/AUTRC	/	/	/	/	/		/	/	/	/	/
	Metrics	C4.5	C5.0	XGB	LR	1-NN	vehicle1 3-NN	5-NN	NB	NN	RF	SVM
BASE	F1 / GM	.405 / .441	.522 / .530	.440 / .471	.587 / .591	.423 / .424	.438 / .441	.454 / .457	.513 / .523	.528 / .533	.501 / .507	.464 / .487
	AUROC / AUPRC F1 / GM	.647 / .451 .492 / .494	.854 / .651 .580 / .584	.822 / .627 .619 / .632	.875 / .695 .664 / .676	.613 / .358 .415 / .417	.704 / .427 .501 / .515	.757 / .498 .514 / .534	.709 / .532 .517 / .537	.837 / .622 .597 / .615	.850 / .645 .595 / .596	.845 / .652 .627 / .646
ROS	AUROC / AUPRC	.653 / .379	.857 / .661	.847 / .625	.875 / .688	.609 / .356	.692 / .399	.721 / .416	.709 / .529	.829 / .606	.865 / .644	.864 / .658
SMOTE	F1 / GM AUROC / AUPRC	.561 / .565 .708 / .454	.609 / .613 .876 / .674	.586 / .589 .847 / .631	.644 / .648 .874 / .692	.437 / .439 .619 / .357	.505 / .513 .719 / .421	.522 / .533 .749 / .450	.520 / .536 .709 / .532	.601 / .608 .827 / .581	.561 / .564 .861 / .654	.605 / .610 .856 / .639
RSLS	F1 / GM	.605 / .610	.596 / .599	.589 / .591	.660 / .664	.436 / .438	.498 / .503	.510 / .518	.514 / .528			
	AUROC / AUPRC	762 / 527				/				.622 / .625	.547 / .549	.596 / .599
$T \cap D \perp V$	F1 / GM	.762 / .527 .599 / .605	.863 / .657 .619 / .633	.844 / .634 .582 / .587	.875 / .694 .639 / .653	.620 / .360 .551 / .567	.722 / .423 .554 / .582	.747 / .438 .540 / .556	.514 / .528 .705 / .532 .513 / .523	.622 / .625 .842 / .617 .624 / .634		.596 / .599 .857 / .649 .580 / .587
TOP+V	AUROC / AUPRC	.599 / .605 .760 / .502	.863 / .657 .619 / .633 .841 / .610	.844 / .634 .582 / .587 .808 / .589	.875 / .694 .639 / .653 .856 / .653	.620 / .360 .551 / .567 .706 / .415	.722 / .423 .554 / .582 .740 / .424	.747 / .438 .540 / .556 .761 / .452	.705 / .532 .513 / .523 .709 / .532	.842 / .617 .624 / .634 .838 / .570	.547 / .549 .860 / .650 .624 / .634 .844 / .586	.857 / .649 .580 / .587 .816 / .576
TOP+ ROSE		.599 / .605 .760 / .502 .560 / .589 .717 / .404	.863 / .657 .619 / .633	.844 / .634 .582 / .587 .808 / .589 .589 / .606 .815 / .565	.875 / .694 .639 / .653	.620 / .360 .551 / .567	.722 / .423 .554 / .582 .740 / .424 .542 / .596 .739 / .422	.747 / .438 .540 / .556 .761 / .452 .536 / .549 .756 / .447	.705 / .532 .513 / .523 .709 / .532 .532 / .551 .729 / .535	.842 / .617 .624 / .634	.547 / .549 .860 / .650 .624 / .634 .844 / .586 .642 / .652 .845 / .592	.857 / .649 .580 / .587
TOP+ ROSE TOP+	AUROC / AUPRC F1 / GM AUROC / AUPRC F1 / GM	.599 / .605 .760 / .502 .560 / .589 .717 / .404 .567 / .617	.863 / .657 .619 / .633 .841 / .610 .640 / .649 .854 / .602 .619 / .629	.844 / .634 .582 / .587 .808 / .589 .589 / .606 .815 / .565 .553 / .555	.875 / .694 .639 / .653 .856 / .653 .653 / .664 .864 / .653 .637 / .646	.620 / .360 .551 / .567 .706 / .415 .527 / .558 .685 / .380 .535 / .585	.722 / .423 .554 / .582 .740 / .424 .542 / .596 .739 / .422 .534 / .542	.747 / .438 .540 / .556 .761 / .452 .536 / .549 .756 / .447 .536 / .549	.705 / .532 .513 / .523 .709 / .532 .532 / .551 .729 / .535 .517 / .530	.842 / .617 .624 / .634 .838 / .570 .642 / .648 .834 / .606 .640 / .645	.547 / .549 .860 / .650 .624 / .634 .844 / .586 .642 / .652 .845 / .592 .612 / .630	.857 / .649 .580 / .587 .816 / .576 .631 / .665 .844 / .606 .651 / .664
TOP+ ROSE TOP+ SMOTE TOP+	AUROC / AUPRC F1 / GM AUROC / AUPRC F1 / GM AUROC / AUPRC F1 / GM	.599 / .605 .760 / .502 .560 / .589 .717 / .404 .567 / .617 .749 / .437 .576 / .614	.863 / .657 .619 / .633 .841 / .610 .640 / .649 .854 / .602 .619 / .629 .856 / .611 .619 / .629	.844 / .634 .582 / .587 .808 / .589 .589 / .606 .815 / .565 .553 / .555 .804 / .560 .540 / .549	.875 / .694 .639 / .653 .856 / .653 .653 / .664 .864 / .653 .637 / .646 .866 / .667	.620 / .360 .551 / .567 .706 / .415 .527 / .558 .685 / .380 .535 / .585 .696 / .374 .540 / .582	.722 / .423 .554 / .582 .740 / .424 .542 / .596 .739 / .422 .534 / .542 .734 / .432 .538 / .581	.747 / .438 .540 / .556 .761 / .452 .536 / .549 .756 / .447 .536 / .549 .755 / .447 .536 / .549	.705 / .532 .513 / .523 .709 / .532 .532 / .551 .729 / .535 .517 / .530 .710 / .544 .517 / .530	.842 / .617 .624 / .634 .838 / .570 .642 / .648 .834 / .606 .640 / .645 .858 / .655 .613 / .620	.547 / .549 .860 / .650 .624 / .634 .844 / .586 .642 / .652 .845 / .592 .612 / .630 .842 / .604 .620 / .628	.857 / .649 .580 / .587 .816 / .576 .631 / .665 .844 / .606 .651 / .664 .877 / .645
TOP+ ROSE TOP+ SMOTE TOP+ RSLS	AUROC / AUPRC F1 / GM AUROC / AUPRC F1 / GM AUROC / AUPRC	.599 / .605 .760 / .502 .560 / .589 .717 / .404 .567 / .617 .749 / .437	.863 / .657 .619 / .633 .841 / .610 .640 / .649 .854 / .602 .619 / .629 .856 / .611	.844 / .634 .582 / .587 .808 / .589 .589 / .606 .815 / .565 .553 / .555 .804 / .560	.875 / .694 .639 / .653 .856 / .653 .653 / .664 .864 / .653 .637 / .646 .866 / .667	.620 / .360 .551 / .567 .706 / .415 .527 / .558 .685 / .380 .535 / .585 .696 / .374	.722 / .423 .554 / .582 .740 / .424 .542 / .596 .739 / .422 .534 / .542 .734 / .432	.747 / .438 .540 / .556 .761 / .452 .536 / .549 .756 / .447 .536 / .549 .755 / .447	.705 / .532 .513 / .523 .709 / .532 .532 / .551 .729 / .535 .517 / .530 .710 / .544	.842 / .617 .624 / .634 .838 / .570 .642 / .648 .834 / .606 .640 / .645 .858 / .655	.547 / .549 .860 / .650 .624 / .634 .844 / .586 .642 / .652 .845 / .592 .612 / .630 .842 / .604	.857 / .649 .580 / .587 .816 / .576 .631 / .665 .844 / .606 .651 / .664 .877 / .645
TOP+ ROSE TOP+ SMOTE TOP+	AUROC / AUPRC F1 / GM AUROC / AUPRC	.599 / .605 .760 / .502 .560 / .589 .717 / .404 .567 / .617 .749 / .437 .576 / .614 .752 / .428 .452 / .478 .654 / .433	.863 / .657 .619 / .633 .841 / .610 .640 / .649 .854 / .602 .619 / .629 .856 / .611 .619 / .629 .856 / .611 .576 / .582 .863 / .664	.844 / .634 .582 / .587 .808 / .589 .589 / .606 .815 / .565 .553 / .555 .804 / .560 .540 / .549 .799 / .550 .501 / .519 .826 / .612	.875 / .694 .639 / .653 .856 / .653 .653 / .664 .864 / .653 .637 / .646 .866 / .667 .592 / .595 .876 / .701	.620 / .360 .551 / .567 .706 / .415 .527 / .558 .685 / .380 .535 / .585 .696 / .374 .540 / .582 .700 / .384 .428 / .429 .616 / .360	.722 / .423 .554 / .582 .740 / .424 .542 / .596 .739 / .422 .534 / .542 .734 / .432 .538 / .581 .690 / .370 .462 / .466 .716 / .447	747 / 438 540 / .556 761 / .452 .536 / .549 .756 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .484 / .487 .761 / .511	.705 / .532 .513 / .523 .709 / .532 .532 / .551 .729 / .535 .517 / .530 .710 / .544 .517 / .530 .710 / .544 .510 / .522 .710 / .537	.842 / .617 .624 / .634 .838 / .570 .642 / .648 .834 / .606 .640 / .645 .858 / .655 .613 / .620 .841 / .620 .605 / .608 .851 / .659	.547 / .549 .860 / .650 .624 / .634 .844 / .586 .642 / .652 .845 / .592 .612 / .630 .842 / .604 .620 / .628 .847 / .592 .551 / .560 .863 / .656	.857 / .649 .580 / .587 .816 / .576 .631 / .665 .844 / .606 .651 / .664 .877 / .645 .659 / .675 .513 / .525 .850 / .640
TOP+ ROSE TOP+ SMOTE TOP+ RSLS	AUROC / AUPRC F1 / GM AUROC / AUPRC	.599 / .605 .760 / .502 .560 / .589 .717 / .404 .567 / .617 .749 / .437 .576 / .614 .752 / .428 .452 / .478	.863 / .657 .619 / .633 .841 / .610 .640 / .649 .854 / .602 .619 / .629 .856 / .611 .576 / .582	.844 / .634 .582 / .587 .808 / .589 .589 / .606 .815 / .565 .553 / .555 .804 / .560 .540 / .549 .799 / .550 .501 / .519	.875 / .694 .639 / .653 .856 / .653 .653 / .664 .864 / .653 .637 / .646 .866 / .667 .637 / .646 .866 / .667	.620 / .360 .551 / .567 .706 / .415 .527 / .558 .685 / .380 .535 / .585 .696 / .374 .540 / .582 .700 / .384	.722 / .423 .554 / .582 .740 / .424 .542 / .596 .739 / .422 .534 / .542 .734 / .432 .538 / .581 .690 / .370 .462 / .466	747 / 438 540 / .556 761 / .452 .536 / .549 .756 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .484 / .487	.705 / .532 .513 / .523 .709 / .532 .532 / .551 .729 / .535 .517 / .530 .710 / .544 .517 / .530	.842 / .617 .624 / .634 .838 / .570 .642 / .648 .834 / .606 .640 / .645 .858 / .655 .613 / .620 .841 / .620	.547 / .549 .860 / .650 .624 / .634 .844 / .586 .642 / .652 .845 / .592 .612 / .630 .842 / .604 .620 / .628 .847 / .592 .551 / .560	.857 / .649 .580 / .587 .816 / .576 .631 / .665 .844 / .606 .651 / .664 .877 / .645 .659 / .675 .871 / .634 .513 / .525
TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN	AUROC / AUPRC F1 / GM	.599 / .605 .760 / .502 .560 / .589 .717 / .404 .567 / .617 .749 / .437 .576 / .614 .752 / .428 .452 / .478 .654 / .433 .492 / .534 .721 / .428	.863 / .657 .619 / .633 .841 / .610 .640 / .649 .854 / .602 .619 / .629 .856 / .611 .576 / .582 .863 / .664 .565 / .596 .784 / .538	.844 / .634 .582 / .587 .808 / .589 .589 / .606 .815 / .565 .553 / .555 .804 / .560 .540 / .549 .799 / .550 .501 / .519 .826 / .612 .589 / .605 .799 / .575	875 / .694 .639 / .653 .856 / .653 .653 / .664 .864 / .653 .637 / .646 .866 / .667 .592 / .595 .876 / .701 .529 / .544 .757 / .530	.620 / .360 .551 / .567 .706 / .415 .527 / .558 .685 / .380 .535 / .585 .696 / .374 .540 / .582 .700 / .384 .428 / .429 .616 / .360 .426 / .448 .589 / .311	.722 / .423 .554 / .582 .740 / .424 .542 / .596 .739 / .422 .534 / .542 .734 / .432 .538 / .581 .690 / .370 .462 / .466 .716 / .447 .468 / .486 .651 / .373	747 / 438 540 / .556 761 / .452 .536 / .549 .756 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .484 / .487 .761 / .511 .500 / .519 .680 / .405	.705 / .532 .513 / .523 .709 / .532 .532 / .551 .729 / .535 .517 / .530 .710 / .544 .517 / .530 .710 / .544 .510 / .522 .710 / .537 .509 / .536 .707 / .512	.842 / .617 .624 / .634 .838 / .570 .642 / .648 .834 / .606 .640 / .645 .858 / .655 .613 / .620 .841 / .620 .605 / .608 .851 / .659 .518 / .535 .725 / .450	.547 / .549 .860 / .650 .624 / .634 .844 / .586 .642 / .652 .845 / .592 .612 / .630 .842 / .604 .620 / .628 .847 / .592 .551 / .560 .863 / .656 .573 / .592 .798 / .561	.857 / .649 .580 / .587 .816 / .576 .631 / .665 .844 / .606 .651 / .664 .877 / .645 .659 / .675 .871 / .634 .513 / .525 .850 / .640 .559 / .575 .786 / .548
TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN	AUROC / AUPRC F1 / GM AUROC / AUPRC AUROC / AUPRC	.599 / .605 .760 / .502 .560 / .589 .717 / .404 .567 / .617 .749 / .437 .576 / .614 .752 / .428 .452 / .478 .654 / .433 .492 / .534 .721 / .428	.863 / .657 .619 / .633 .841 / .610 .640 / .649 .854 / .602 .619 / .629 .856 / .611 .576 / .582 .863 / .664 .565 / .596 .784 / .538	.844 / .634 .582 / .587 .808 / .589 .589 / .606 .815 / .565 .553 / .555 .804 / .560 .540 / .549 .799 / .550 .501 / .519 .826 / .612 .589 / .605 .799 / .575	.875 / .694 .639 / .653 .856 / .653 .653 / .664 .864 / .653 .637 / .646 .866 / .667 .592 / .595 .876 / .701 .529 / .544 .757 / .530	.620 / .360 .551 / .567 .706 / .415 .527 / .558 .685 / .380 .535 / .585 .696 / .374 .540 / .582 .700 / .384 .428 / .429 .616 / .360 .426 / .448 .589 / .311	722 / .423 .554 / .582 .740 / .424 .542 / .596 .739 / .422 .534 / .542 .538 / .581 .690 / .370 .462 / .466 .716 / .447 .468 / .486 .651 / .373	747 / 438 540 / 556 761 / 452 536 / 549 756 / 447 536 / 549 755 / 447 484 / 487 761 / 511 500 / 519 680 / 405	.705 / .532 .513 / .523 .709 / .532 .532 / .551 .729 / .535 .517 / .530 .710 / .544 .517 / .530 .710 / .544 .510 / .522 .710 / .537 .509 / .536 .707 / .512	.842 / .617 .624 / .634 .838 / .570 .642 / .648 .834 / .606 .640 / .645 .858 / .655 .613 / .620 .841 / .620 .605 / .608 .851 / .659 .518 / .535 .725 / .450	.547 / .549 .860 / .650 .624 / .634 .844 / .886 .642 / .652 .845 / .592 .612 / .630 .842 / .604 .620 / .628 .847 / .592 .551 / .560 .863 / .656 .573 / .592 .798 / .561	.857 / .649 .580 / .587 .816 / .576 .631 / .665 .844 / .606 .651 / .664 .877 / .645 .659 / .675 .871 / .634 .513 / .525 .850 / .640 .559 / .575 .786 / .548
TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN	AUROC / AUPRC F1 / GM	.599 / .605 .760 / .502 .560 / .589 .717 / .404 .567 / .617 .749 / .437 .576 / .614 .752 / .428 .452 / .478 .654 / .433 .492 / .534 .721 / .428 .581 /	.863 / .657 .619 / .633 .841 / .610 .640 / .649 .854 / .602 .619 / .629 .856 / .611 .576 / .582 .863 / .664 .565 / .596 .784 / .538	.844 / .634 .582 / .587 .808 / .589 .589 / .606 .815 / .565 .553 / .555 .804 / .560 .540 / .549 .799 / .550 .501 / .519 .826 / .612 .589 / .605 .799 / .575	.875 / .694 .639 / .653 .856 / .653 .856 / .653 .637 / .646 .866 / .667 .637 / .646 .866 / .667 .592 / .595 .876 / .701 .529 / .544 .757 / .530	.620 / .360 .551 / .567 .706 / .415 .527 / .558 .685 / .380 .535 / .585 .696 / .374 .540 / .582 .700 / .384 .428 / .429 .616 / .360 .426 / .448 .589 / .311	722 / .423 554 / .582 740 / .424 542 / .596 739 / .422 534 / .542 734 / .432 538 / .581 .690 / .370 .462 / .466 .716 / .447 .468 / .486 .651 / .373	747 / 438 540 / 556 761 / 452 536 / 549 756 / 447 536 / 549 755 / 447 536 / 549 755 / 447 484 / 487 761 / 511 500 / 519 680 / 405	.705 / .532 .513 / .523 .709 / .532 .532 / .551 .729 / .535 .517 / .530 .710 / .544 .517 / .530 .710 / .544 .510 / .522 .710 / .537 .509 / .536 .707 / .512	.842 / .617 .624 / .634 .838 / .570 .642 / .648 .834 / .606 .640 / .645 .858 / .655 .613 / .620 .841 / .620 .605 / .608 .851 / .659 .518 / .335 .725 / .450	.547 / .549 .860 / .650 .624 / .634 .844 / .586 .642 / .652 .845 / .592 .612 / .630 .842 / .604 .620 / .628 .847 / .592 .551 / .560 .863 / .656 .573 / .592 .798 / .561	.857 / .649 .580 / .587 .816 / .576 .631 / .665 .844 / .606 .651 / .664 .877 / .645 .659 / .675 .871 / .634 .513 / .525 .850 / .640 .559 / .575 .786 / .548
TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM*	AUROC / AUPRC F1 / GM AUROC / AUPRC	.599 / .605 .760 / .502 .560 / .589 .717 / .404 .567 / .617 .576 / .614 .752 / .428 .452 / .478 .654 / .433 .492 / .534 .721 / .428 .581 / .730 /	.863 / .657 .619 / .633 .841 / .610 .640 / .649 .854 / .602 .619 / .629 .856 / .611 .576 / .582 .863 / .664 .565 / .596 .784 / .538 /	.844 / .634 .582 / .587 .808 / .589 .589 / .606 .815 / .565 .553 / .555 .804 / .560 .540 / .549 .799 / .550 .501 / .519 .826 / .612 .589 / .605 .799 / .575 /	875 / .694 639 / .653 856 / .653 653 / .664 864 / .653 637 / .646 866 / .667 637 / .646 866 / .667 592 / .592 876 / .701 529 / .544 7.57 / .530 / LR 941 / .941	.620 / .360 .551 / .567 .706 / .415 .527 / .558 .685 / .380 .535 / .585 .696 / .374 .540 / .582 .700 / .384 .428 / .429 .616 / .360 .426 / .448 .589 / .311/	722 / 423 .554 / 582 .740 / 424 .542 / 596 .739 / 422 .534 / 542 .538 / 581 .690 / 370 .462 / 466 .716 / 447 .468 / 486 .651 / 373 / vehicle2 3-NN .839 / 840	747 / .438 5.40 / .556 761 / .452 5.36 / .549 7.56 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.55 / .447 5.30 / .519 6.80 / .405	705 / .532 .513 / .523 .513 / .523 .709 / .532 .532 / .551 .729 / .535 .517 / .530 .710 / .544 .517 / .530 .710 / .544 .510 / .522 .710 / .537 .509 / .536 .707 / .512/	.842 / .617 .624 / .634 .838 / .570 .642 / .648 .834 / .606 .640 / .645 .858 / .655 .613 / .620 .841 / .620 .841 / .620 .518 / .535 .725 / .450 ///////	.547 / .549 .860 / .650 .624 / .634 .844 / .586 .642 / .652 .845 / .592 .612 / .630 .842 / .604 .620 / .628 .847 / .592 .551 / .560 .863 / .656 .573 / .592 .798 / .561	.857 / .649 .580 / .587 .816 / .576 .631 / .665 .844 / .606 .651 / .664 .877 / .645 .659 / .675 .871 / .634 .513 / .525 .850 / .640 .559 / .575 .786 / .548
TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM*	AUROC / AUPRC F1 / GM AUROC / AUPRC MURCOC / AUPRC MURCOC / AUPRC Metrics	.599 / .605 .760 / .502 .560 / .589 .717 / .404 .567 / .617 .749 / .437 .576 / .614 .752 / .428 .452 / .478 .654 / .433 .492 / .534 .721 / .428 .581 /	.863 / .657 .619 / .633 .841 / .610 .640 / .649 .854 / .602 .619 / .629 .856 / .611 .576 / .582 .863 / .664 .565 / .596 .784 / .538	8.844 / .634 5.82 / .587 8.08 / .589 5.89 / .606 8.15 / .565 5.553 / .555 8.04 / .560 5.40 / .549 7.99 / .550 5.01 / .519 8.26 / .612 5.89 / .605 7.99 / .575 /	875 / .694 639 / .653 856 / .653 .653 / .664 864 / .653 .637 / .646 .866 / .667 .637 / .646 .866 / .667 .592 / .595 .876 / .701 .529 / .544 .757 / .530 /	.620 / .360 .551 / .567 .706 / .415 .527 / .558 .685 / .380 .535 / .585 .696 / .374 .540 / .582 .700 / .384 .428 / .429 .616 / .360 .426 / .448 .589 / .311	722 / 423 .554 / 582 740 / 424 .542 / 596 .739 / 422 .534 / 542 .734 / 432 .538 / 581 .690 / 370 .462 / 466 .716 / 447 .468 / 486 .651 / 373 / vehicle2 3-NN	747 / .438 5.40 / .556 761 / .452 5.36 / .549 7.56 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.55 / .447 4.84 / .487 7.61 / .511 5.00 / .519 6.80 / .405	705 / 532 513 / 523 513 / 523 709 / 532 532 / 551 729 / 535 517 / 530 710 / 544 517 / 530 710 / 544 510 / 522 710 / 537 509 / 536 707 / 512	.842 / .617 .624 / .634 .838 / .570 .642 / .648 .834 / .606 .640 / .645 .858 / .655 .613 / .620 .841 / .620 .841 / .620 .518 / .535 .725 / .450	.547 / .549 .860 / .650 .624 / .634 .844 / .586 .642 / .652 .845 / .592 .612 / .630 .842 / .604 .620 / .628 .847 / .592 .551 / .560 .863 / .656 .573 / .592 .798 / .561	857 / .649 .580 / .587 .816 / .576 .631 / .665 .844 / .606 .651 / .664 .877 / .645 .659 / .675 .871 / .634 .513 / .525 .850 / .640 .559 / .575 .786 / .548
TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM*	AUROC / AUPRC F1 / GM AUROC / AUPRC	.599 / .605 .760 / .502 .560 / .589 .717 / .404 .567 / .617 .749 / .437 .576 / .614 .752 / .428 .452 / .478 .654 / .433 .492 / .534 .721 / .428 .581 / .730 /	.863 / .657 .619 / .633 .841 / .610 .640 / .649 .854 / .602 .856 / .611 .619 / .629 .856 / .611 .576 / .582 .863 / .664 .565 / .596 .784 / .538 / /	844 / .634 .582 / .587 .808 / .589 .589 / .606 .815 / .565 .553 / .555 .804 / .560 .540 / .549 .799 / .550 .501 / .519 .826 / .612 .589 / .605 .799 / .575 / / XGB .936 / .937 .991 / .980 .888 / .891 .988 / .966	875 / .694 639 / .653 856 / .653 653 / .664 864 / .653 637 / .646 866 / .667 637 / .646 866 / .667 592 / .595 876 / .701 529 / .544 .757 / .530 / LR 941 / .941 992 / .982 935 / .936 991 / .979	.620 / .360 .551 / .567 .706 / .415 .527 / .558 .685 / .380 .535 / .585 .696 / .374 .540 / .582 .700 / .384 .428 / .429 .616 / .360 .426 / .448 .589 / .311//	722 / 423 .554 / 582 .740 / 424 .542 / 596 .739 / 422 .534 / 542 .538 / 581 .690 / 370 .462 / 466 .716 / 447 .468 / 486 .651 / 373 / vehicle2 3-NN .839 / 840 .952 / 892 .815 / 822 .943 / 833	747 / .438 5.40 / .556 761 / .452 5.36 / .549 7.56 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.55 / .447 6.36 / .549 7.55 / .447 6.30 / .511 5.00 / .519 6.80 / .405 6.80 / .	705 / 532 513 / 523 513 / 523 519 / 532 532 / 551 729 / 535 517 / 530 710 / 544 517 / 530 710 / 544 510 / 522 710 / 537 509 / 536 707 / 512 / NB 593 / 598 854 / 673 651 / 669	.842 / .617 .624 / .634 .838 / .570 .642 / .648 .834 / .606 .640 / .645 .858 / .655 .613 / .620 .841 / .620 .841 / .620 .518 / .535 .725 / .450 ///////	.547 / .549 .860 / .650 .624 / .634 .844 / .586 .642 / .652 .845 / .592 .612 / .630 .842 / .604 .620 / .628 .847 / .592 .551 / .560 .573 / .592 .798 / .561 / / / RF .977 / .977 .998 / .996 .981 / .982 .999 / .997	.857 / .649 .580 / .587 .816 / .576 .631 / .665 .844 / .606 .651 / .664 .877 / .645 .659 / .675 .871 / .634 .513 / .525 .850 / .640 .559 / .575 .786 / .548 ///
TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM*	AUROC / AUPRC F1 / GM AUROC / AUPRC	.599 / .605 .760 / .502 .560 / .589 .717 / .404 .567 / .617 .749 / .437 .576 / .614 .752 / .428 .452 / .478 .654 / .433 .492 / .534 .721 / .428 .581 / .730 /	.863 / .657 .619 / .633 .841 / .610 .640 / .649 .854 / .602 .619 / .629 .856 / .611 .576 / .582 .863 / .664 .565 / .596 .784 / .538 /	8.844 / .634 5.82 / .587 8.08 / .589 5.89 / .606 8.15 / .565 5.53 / .555 8.04 / .560 5.40 / .549 7.99 / .550 5.90 / .612 5.89 / .605 7.99 / .575 / XGB 9.36 / .937 9.91 / .980 8.88 / .891	875 / .694 639 / .653 856 / .653 .653 / .664 864 / .653 .637 / .646 866 / .667 637 / .646 866 / .667 .592 / .595 .876 / .701 .529 / .544 .757 / .530 / LR .941 / .941 .992 / .982 .935 / .936	.620 / .360 .551 / .567 .706 / .415 .527 / .558 .685 / .380 .535 / .585 .696 / .374 .540 / .582 .700 / .384 .428 / .429 .616 / .360 .426 / .448 .589 / .311 /	722 / .423 .554 / .582 740 / .424 .542 / .596 .739 / .422 .534 / .542 .734 / .432 .538 / .581 .690 / .370 .462 / .466 .716 / .447 .468 / .486 .651 / .373 / vehicle2 3-NN .839 / .840 .952 / .892 .815 / .822	747 / 438 540 / 556 761 / 452 536 / 549 756 / 447 536 / 549 755 / 447 484 / 487 761 / 511 500 / 519 680 / 405 / 5-NN 815 / 819 958 / 911 790 / 799	.705 / .532 .513 / .523 .709 / .532 .532 / .551 .729 / .535 .517 / .530 .710 / .544 .517 / .530 .710 / .544 .510 / .522 .710 / .537 .509 / .536 .707 / .512	842 / .617 624 / .634 838 / .570 642 / .648 834 / .606 640 / .645 .858 / .655 613 / .620 .841 / .620 .851 / .659 .518 / .535 .725 / .450/	.547 / .549 .860 / .650 .624 / .634 .844 / .586 .642 / .652 .845 / .592 .612 / .630 .842 / .604 .620 / .628 .845 / .592 .551 / .560 .863 / .656 .573 / .592 .798 / .561 / /	.857 / .649 .580 / .587 .816 / .576 .631 / .665 .844 / .606 .651 / .664 .877 / .645 .659 / .675 .871 / .634 .513 / .525 .850 / .640 .559 / .575 .786 / .548 /
TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM*	AUROC / AUPRC F1 / GM	.599 / .605 .760 / .502 .560 / .589 .717 / .404 .567 / .617 .749 / .437 .576 / .614 .752 / .428 .452 / .478 .654 / .433 .492 / .534 .721 / .428 .581 / .730 / 	.863 / .657 .619 / .633 .841 / .610 .640 / .649 .854 / .602 .619 / .629 .856 / .611 .576 / .582 .863 / .664 .565 / .596 .784 / .538 /	8.844 / .634 5.82 / .587 8.08 / .589 5.89 / .606 8.15 / .565 5.53 / .555 8.04 / .560 5.40 / .549 7.99 / .550 5.01 / .519 8.26 / .612 5.89 / .605 7.99 / .575 / / XGB 9.36 / .937 9.91 / .980 8.88 / .891 9.88 / .966 8.94 / .895 8.94 / .958 8.92 / .894	875 / .694 .639 / .653 .856 / .653 .653 / .664 .864 / .653 .637 / .646 .866 / .667 .637 / .646 .866 / .667 .592 / .595 .876 / .701 .529 / .544 .757 / .530 / LR .941 / .941 .992 / .982 .935 / .936 .991 / .979 .938 / .939 .992 / .981 .942 / .942	.620 / .360 .551 / .567 .706 / .415 .527 / .558 .685 / .380 .535 / .585 .696 / .374 .540 / .582 .700 / .384 .428 / .429 .616 / .360 .426 / .448 .589 / .311 / / 1-NN .854 / .856 .854 / .852 .903 / .789 .850 / .852 .903 / .786 .860 / .862 .918 / .786	722 / 423 554 / 582 740 / 424 542 / 596 739 / 422 534 / 542 538 / 581 690 / 370 462 / 466 716 / 447 468 / 486 651 / 373 / vehicle2 3-NN 839 / 840 952 / 892 815 / 822 943 / 833 845 / 849 956 / 891	747 / .438 540 / .556 761 / .452 .536 / .549 .756 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .536 / .549 .757 / .484 / .487 .761 / .511 .500 / .519 .680 / .405 / 5-NN .815 / .819 .958 / .911 .790 / .799 .949 / .859 .825 / .829 .960 / .894 .828 / .830	705 / 532 513 / 523 513 / 523 513 / 523 52 / 551 729 / 535 517 / 530 710 / 544 510 / 522 710 / 537 509 / 536 707 / 512 / NB 593 / 598 854 / 673 651 / 658 867 / 699 632 / 636 850 / 683 621 / 626	842 / .617 624 / .634 838 / .570 642 / .648 834 / .606 640 / .645 .858 / .655 613 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .851 / .659 .518 / .535 .725 / .450 / NN .964 / .964 .964 / .964 .952 / .953 .994 / .984 .937 / .938	.547 / .549 .860 / .650 .624 / .634 .844 / .586 .642 / .652 .845 / .592 .612 / .630 .842 / .604 .620 / .628 .847 / .592 .551 / .560 .863 / .656 .573 / .592 .798 / .561 /	857 / 649 .580 / .587 .816 / .576 .631 / .665 .844 / .606 .651 / .664 .877 / .645 .659 / .675 .871 / .634 .513 / .525 .850 / .640 .559 / .575 .786 / .548 / / SVM .936 / .938 .949 / .949 .995 / .987 .950 / .950 .956 / .957
TOP+ ROSE TOP+ SMOTE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS	AUROC / AUPRC F1 / GM AUROC / AUPRC	.599 / .605 .760 / .502 .560 / .589 .717 / .404 .567 / .617 .749 / .437 .576 / .614 .752 / .428 .452 / .478 .654 / .433 .492 / .534 .721 / .428 .581 / .730 / .730 /	.863 / .657 .619 / .633 .841 / .610 .640 / .649 .854 / .602 .619 / .629 .856 / .611 .576 / .582 .863 / .664 .565 / .596 .784 / .538 / .	.844 / .634 .582 / .587 .808 / .589 .589 / .606 .815 / .565 .553 / .555 .804 / .560 .540 / .549 .799 / .550 .501 / .519 .826 / .612 .589 / .605 .799 / .575 /	875 / .694 639 / .653 856 / .653 653 / .664 864 / .653 637 / .646 866 / .667 637 / .646 866 / .667 592 / .595 876 / .701 529 / .544 7.57 / .530 / LR 941 / .941 992 / .982 935 / .936 991 / .979 938 / .939 .992 / .981	.620 / .360 .551 / .567 .706 / .415 .527 / .558 .685 / .380 .535 / .585 .696 / .374 .540 / .582 .700 / .384 .428 / .429 .616 / .360 .426 / .448 .589 / .311///////////// .854 / .856 .907 / .789 .850 / .852 .903 / .786 .860 / .862 .918 / .786	722 / .423 .554 / .582 .740 / .424 .542 / .596 .739 / .422 .534 / .542 .538 / .542 .538 / .581 .690 / .370 .462 / .466 .716 / .447 .468 / .486 .651 / .373/// .	747 / .438 540 / .556 761 / .452 536 / .549 756 / .447 536 / .549 755 / .447 536 / .549 755 / .447 636 / .549 755 / .447 636 / .549 755 / .447 636 / .549 755 / .447 637 / .519 680 / .405	.705 / .532 .513 / .523 .709 / .532 .532 / .551 .729 / .535 .517 / .530 .710 / .544 .517 / .530 .710 / .544 .510 / .522 .710 / .537 .509 / .536 .707 / .512 /////////////	.842 / .617 .624 / .634 .838 / .570 .642 / .648 .834 / .606 .640 / .645 .851 / .620 .841 / .620 .841 / .620 .851 / .659 .518 / .535 .725 / .450//	.547 / .549 .860 / .650 .624 / .634 .844 / .586 .642 / .652 .845 / .592 .612 / .630 .842 / .604 .620 / .628 .847 / .592 .551 / .560 .863 / .656 .573 / .592 .798 / .561 /	.857 / .649 .580 / .587 .816 / .576 .631 / .665 .844 / .606 .651 / .664 .877 / .645 .659 / .675 .871 / .634 .513 / .525 .850 / .640 .559 / .575 .786 / .548 / / / SVM .936 / .938 .949 / .949 .995 / .987 .950 / .950 .995 / .986
TOP+ ROSE TOP+ SMOTE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS TOP+V	AUROC / AUPRC F1 / GM AUROC / AUPRC	.599 / .605 .760 / .502 .560 / .589 .717 / .404 .567 / .617 .749 / .437 .576 / .614 .752 / .428 .452 / .478 .654 / .433 .492 / .534 .721 / .428 .581 / .730 / .730 / .922 / .923 .946 / .878 .940 / .941 .964 / .893 .922 / .923 .942 / .872 .941 / .942 .962 / .903 .938 / .939 .970 / .898	.863 / .657 .619 / .633 .841 / .610 .640 / .649 .854 / .602 .619 / .629 .856 / .611 .576 / .582 .863 / .664 .565 / .596 .784 / .538 / / C5.0 .963 / .963 .998 / .994 .973 / .973 .999 / .996 .975 / .975 .996 / .966 .998 / .998 .979 / .998	8.844 / .634 5.82 / .587 8.08 / .589 5.89 / .606 8.15 / .565 5.53 / .555 8.04 / .560 5.40 / .549 7.99 / .550 5.01 / .519 8.26 / .612 5.89 / .605 7.99 / .575 / XGB 9.36 / .937 9.91 / .980 8.88 / .891 9.88 / .966 8.94 / .952 9.84 / .958 8.92 / .894 9.84 / .952 9.40 / .941 9.991 / .981	875 / 694 639 / 653 856 / 653 653 / 664 864 / 653 637 / 646 866 / 667 637 / 646 866 / 667 592 / 595 876 / 701 529 / 544 757 / 530 / LR 941 / 941 992 / 982 935 / 936 991 / 979 938 / 939 992 / 981 942 / 942 992 / 981	.620 / .360 .551 / .567 .706 / .415 .527 / .558 .685 / .380 .535 / .585 .696 / .374 .540 / .582 .700 / .384 .428 / .429 .616 / .360 .426 / .448 .589 / .311/ 1-NN .854 / .856 .907 / .789 .850 / .852 .903 / .786 .860 / .862 .918 / .786 .857 / .859 .913 / .785 .854 / .856 .917 / .789	722 / .423 .554 / .582 740 / .424 .542 / .596 .739 / .422 .534 / .542 .538 / .542 .538 / .581 .690 / .370 .462 / .466 .716 / .447 .468 / .486 .651 / .373 / vehicle2 3-NN .839 / .840 .952 / .892 .815 / .822 .943 / .833 .845 / .849 .956 / .891 .845 / .847 .958 / .894 .841 / .843 .955 / .895	747 / .438 540 / .556 761 / .452 .536 / .549 .756 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .536 / .549 .550 / .519 .680 / .405 / 5-NN .815 / .819 .958 / .911 .790 / .799 .949 / .859 .825 / .829 .960 / .894 .828 / .830 .960 / .896 .815 / .819 .958 / .911	705 / 532 513 / 523 513 / 523 513 / 523 709 / 532 532 / 551 729 / 535 517 / 530 710 / 544 517 / 530 710 / 544 510 / 522 710 / 537 509 / 536 707 / 512 / NB S93 / 598 854 / 673 651 / 658 867 / 699 632 / 636 850 / 683 621 / 626 851 / 696 699 / 700 870 / 753	842 / .617 624 / .634 838 / .570 642 / .648 834 / .606 640 / .645 .858 / .655 .613 / .620 .841 / .620 .851 / .659 .518 / .535 .725 / .450/ NN .964 / .964 .991 / .980 .908 / .909 .981 / .946 .952 / .953 .994 / .984 .937 / .938 .982 / .955 .964 / .964 .991 / .980	.547 / .549 .860 / .650 .624 / .634 .844 / .586 .642 / .652 .845 / .592 .612 / .630 .842 / .604 .620 / .628 .847 / .592 .551 / .560 .863 / .656 .573 / .592 .798 / .561 / .	857 / .649 .580 / .587 .816 / .576 .631 / .665 .844 / .606 .651 / .664 .877 / .645 .659 / .675 .871 / .634 .513 / .525 .850 / .640 .559 / .575 .786 / .548 / / / SVM .936 / .938 .949 / .949 .995 / .987 .950 / .950 .995 / .986 .956 / .957 .995 / .985 .944 / .945 .992 / .981
TOP+ ROSE TOP+ SMOTE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS	AUROC / AUPRC F1 / GM AUROC / AUPRC	.599 / .605 .760 / .502 .560 / .589 .717 / .404 .567 / .617 .749 / .437 .576 / .614 .752 / .428 .452 / .478 .654 / .433 .492 / .534 .721 / .428 .581 / .730 / .730 / .946 / .878 .940 / .941 .964 / .893 .922 / .923 .944 / .872 .941 / .942 .962 / .903 .938 / .939 .970 / .898 .935 / .935 .935 / .935 .962 / .900	.863 / .657 .619 / .633 .841 / .610 .640 / .649 .854 / .602 .619 / .629 .856 / .611 .576 / .582 .863 / .664 .565 / .596 .784 / .538 /	844 / .634 .582 / .587 .808 / .589 .589 / .606 .815 / .565 .553 / .555 .804 / .560 .540 / .549 .799 / .550 .501 / .519 .826 / .612 .589 / .605 .799 / .575 / / XGB .936 / .937 .991 / .980 .888 / .984 .984 / .958 .892 / .894 .984 / .952 .940 / .941 .991 / .981 .936 / .937 .991 / .983	875 / .694 639 / .653 856 / .653 653 / .664 864 / .653 637 / .646 866 / .667 637 / .646 866 / .667 592 / .595 876 / .701 529 / .544 7.57 / .530 / LR 941 / .941 992 / .982 935 / .936 991 / .979 938 / .939 992 / .981 942 / .942 992 / .981 944 / .942 992 / .981	.620 / .360 .551 / .567 .706 / .415 .527 / .558 .685 / .380 .535 / .585 .696 / .374 .540 / .582 .700 / .384 .428 / .429 .616 / .360 .426 / .448 .589 / .311/ 1-NN .854 / .856 .907 / .789 .850 / .852 .918 / .786 .867 / .859 .913 / .785 .854 / .856 .907 / .789 .854 / .856 .907 / .789	722 / 423 .554 / 582 .740 / 424 .542 / 596 .739 / 422 .534 / 542 .538 / 542 .538 / 581 .690 / 370 .462 / 466 .716 / 447 .468 / 486 .651 / 373 / vehicle2 3-NN .839 / 840 .952 / 892 .815 / 822 .943 / 833 .845 / 849 .956 / 891 .845 / 847 .958 / 894 .841 / 843 .955 / 895 .852 / 8895 .852 / 8895	747 / .438 540 / .556 761 / .452 .536 / .549 .756 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .580 / .405	705 / 532 513 / 523 513 / 523 519 / 532 532 / 551 729 / 535 517 / 530 710 / 544 517 / 530 710 / 544 510 / 522 710 / 537 509 / 536 707 / 512	.842 / .617 .624 / .634 .838 / .570 .642 / .648 .834 / .606 .640 / .645 .858 / .655 .613 / .620 .841 / .620 .841 / .620 .851 / .659 .518 / .535 .725 / .450/	.547 / .549 .860 / .650 .624 / .634 .844 / .586 .642 / .652 .845 / .592 .612 / .630 .842 / .604 .620 / .628 .847 / .592 .551 / .560 .863 / .656 .573 / .592 .798 / .561 /	.857 / .649 .580 / .587 .816 / .576 .631 / .665 .844 / .606 .651 / .664 .877 / .645 .659 / .675 .871 / .634 .513 / .525 .850 / .640 .559 / .575 .786 / .548
TOP+ ROSE TOP+ SMOTE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+	AUROC / AUPRC F1 / GM	.599 / .605 .760 / .502 .560 / .589 .717 / .404 .567 / .617 .749 / .437 .576 / .614 .752 / .428 .452 / .478 .654 / .433 .492 / .534 .721 / .428 .581 / .730 / .730 / .922 / .923 .946 / .878 .940 / .941 .941 / .942 .962 / .903 .938 / .939 .970 / .898 .935 / .935 .962 / .900 .939 / .939	863 / .657 619 / .633 841 / .610 640 / .649 854 / .602 619 / .629 856 / .611 576 / .582 863 / .664 565 / .596 784 / .538 / C5.0 963 / .963 998 / .994 973 / .973 999 / .996 975 / .975 996 / .966 998 / .996 979 / .980 979 / .980 979 / .980 979 / .977	.844 / .634 .582 / .587 .808 / .589 .589 / .606 .815 / .565 .553 / .555 .804 / .569 .540 / .549 .799 / .550 .501 / .519 .826 / .612 .589 / .605 .799 / .575 /	8.75 / .694 6.39 / .653 8.56 / .653 6.53 / .664 8.64 / .653 6.37 / .646 8.66 / .667 6.37 / .646 8.66 / .667 5.92 / .595 8.76 / .701 5.29 / .544 7.57 / .530 / LR 941 / .941 992 / .982 935 / .936 991 / .979 938 / .939 992 / .981 942 / .942 992 / .981 948 / .948 992 / .981 944 / .942 992 / .981 944 / .942	.620 / .360 .551 / .567 .706 / .415 .527 / .558 .685 / .380 .535 / .585 .696 / .374 .540 / .582 .700 / .384 .428 / .429 .616 / .360 .426 / .448 .589 / .311/////	.722 / .423 .554 / .582 .740 / .424 .542 / .596 .739 / .422 .534 / .542 .538 / .541 .538 / .581 .690 / .370 .462 / .466 .716 / .447 .468 / .486 .651 / .373 / / vehicle2 3-NN .839 / .840 .952 / .892 .815 / .822 .943 / .833 .845 / .849 .956 / .891 .845 / .847 .958 / .894 .841 / .843 .955 / .895 .852 / .853 .955 / .898 .842 / .843	747 / .438 540 / .556 761 / .452 .536 / .549 .756 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .536 / .549 .751 / .511 .500 / .519 .680 / .405 / 5-NN .815 / .819 .958 / .911 .790 / .799 .949 / .859 .825 / .829 .960 / .894 .828 / .830 .960 / .896 .815 / .819 .958 / .911 .838 / .840 .962 / .920 .815 / .819	.705 / .532 .513 / .523 .513 / .523 .709 / .532 .532 / .551 .729 / .535 .517 / .530 .710 / .544 .517 / .530 .710 / .544 .510 / .522 .710 / .537 .509 / .536 .707 / .512///	.842 / .617 .624 / .634 .838 / .570 .642 / .648 .834 / .606 .640 / .645 .858 / .655 .613 / .620 .841 / .620 .841 / .620 .851 / .659 .518 / .535 .725 / .450//////////////////////	.547 / .549 .860 / .650 .624 / .634 .844 / .586 .642 / .652 .845 / .592 .612 / .630 .842 / .604 .620 / .628 .847 / .592 .551 / .560 .863 / .656 .573 / .592 .798 / .561 /	.857 / .649 .580 / .587 .816 / .576 .631 / .665 .844 / .606 .651 / .664 .877 / .645 .659 / .675 .871 / .634 .513 / .525 .850 / .640 .559 / .575 .786 / .548 / .593 / .938 .993 / .938 .993 / .939 .949 / .949 .950 / .950 .956 / .957 .995 / .985 .944 / .945 .992 / .981 .942 / .942 .994 / .983 .955 / .956
TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE	AUROC / AUPRC F1 / GM	.599 / .605 .760 / .502 .560 / .502 .560 / .589 .717 / .404 .567 / .617 .749 / .437 .576 / .614 .752 / .428 .452 / .478 .654 / .433 .492 / .534 .721 / .428 .581 / .730 / .730 / .740 / .923 .946 / .878 .940 / .941 .964 / .893 .922 / .923 .942 / .872 .941 / .942 .962 / .903 .938 / .939 .935 / .935 .962 / .900 .939 / .939 .933 / .939 .933 / .933 .932 / .933	.863 / .657 .619 / .633 .841 / .610 .640 / .649 .854 / .602 .619 / .629 .856 / .611 .576 / .582 .863 / .664 .565 / .596 .784 / .538 / .	844 / .634 .582 / .587 .808 / .589 .589 / .606 .815 / .565 .553 / .555 .804 / .560 .540 / .549 .799 / .550 .501 / .519 .826 / .612 .589 / .605 .799 / .575 /	875 / .694 .639 / .653 .856 / .653 .653 / .664 .864 / .653 .637 / .646 .866 / .667 .637 / .646 .866 / .667 .592 / .595 .876 / .701 .529 / .544 .757 / .530///////	.620 / .360 .551 / .567 .706 / .415 .527 / .558 .685 / .380 .535 / .585 .696 / .374 .540 / .582 .700 / .384 .428 / .429 .616 / .360 .426 / .448 .589 / .311//////	722 / 423 .554 / 582 .740 / 424 .542 / 596 .739 / 422 .534 / 542 .538 / 581 .690 / 370 .462 / 466 .716 / 447 .468 / 486 .651 / 373///////	747 / .438 540 / .556 761 / .452 .536 / .549 .756 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .536 / .549 .755 / .447 .536 / .549 .536 / .549 .536 / .549 .536 / .549 .596 / .5819 .958 / .911 .598 / .5819 .598 / .5819 .598 / .5819 .5838 / .5840 .584 / .5849 .585 / .5819 .585 / .5819 .585 / .5819 .585 / .5819 .585 / .5819 .585 / .5819 .585 / .5819 .585 / .5819 .586 / .5819 .586 / .5819 .586 / .5819 .587 / .5819 .588 / .5819 .588 / .5819 .588 / .5819	705 / 532 513 / 523 513 / 523 513 / 523 52 / 551 729 / 535 517 / 530 710 / 544 517 / 530 710 / 544 510 / 522 710 / 537 509 / 536 707 / 512	.842 / .617 .624 / .634 .838 / .570 .642 / .648 .834 / .606 .640 / .645 .858 / .655 .613 / .620 .841 / .620 .841 / .620 .851 / .659 .518 / .535 .725 / .450////////////////	.547 / .549 .860 / .650 .624 / .634 .844 / .586 .642 / .652 .845 / .592 .612 / .630 .842 / .604 .620 / .628 .847 / .592 .551 / .560 .863 / .656 .573 / .592 .798 / .561 / RF .977 / .977 .998 / .996 .981 / .982 .999 / .997 .966 / .966 .999 / .998 .981 / .982 .999 / .997 .997 / .977 .999 / .997 .979 / .979	857 / 649 580 / 587 816 / 576 631 / 665 844 / 606 651 / 664 877 / 645 659 / 675 871 / 634 513 / 525 850 / 640 559 / 575 786 / 548 / SVM 936 / 938 993 / 983 949 / 949 995 / 986 956 / 957 995 / 985 944 / 945 992 / 981 942 / 942 994 / 983 955 / 956
TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ ROSE TOP+ RSLS	AUROC / AUPRC F1 / GM AUROC / AUPRC	.599 / .605 .760 / .502 .560 / .589 .717 / .404 .567 / .617 .749 / .437 .576 / .614 .752 / .428 .452 / .478 .654 / .433 .492 / .534 .721 / .428 .581 / .730 / .730 / .730 / .942 / .923 .946 / .878 .940 / .941 .964 / .893 .922 / .923 .942 / .872 .941 / .942 .962 / .903 .938 / .939 .970 / .898 .935 / .935 .963 / .923 .932 / .993 .963 / .923 .932 / .933 .933 / .933	.863 / .657 .619 / .633 .841 / .610 .640 / .649 .854 / .602 .619 / .629 .856 / .611 .576 / .582 .863 / .664 .565 / .596 .784 / .538 /	.844 / .634 .582 / .587 .808 / .589 .589 / .606 .815 / .565 .553 / .555 .804 / .560 .540 / .549 .799 / .550 .501 / .519 .826 / .612 .589 / .605 .799 / .575 /	875 / .694 .639 / .653 .856 / .653 .653 / .664 .864 / .653 .637 / .646 .866 / .667 .592 / .595 .876 / .701 .529 / .544 .757 / .530////////	.620 / .360 .551 / .567 .706 / .415 .527 / .558 .685 / .380 .535 / .585 .696 / .374 .540 / .582 .700 / .384 .428 / .429 .616 / .360 .426 / .448 .589 / .311/	722 / .423 .554 / .582 .740 / .424 .542 / .596 .739 / .422 .534 / .542 .734 / .432 .538 / .581 .690 / .370 .462 / .466 .716 / .447 .468 / .486 .651 / .373/ vehicle2 3-NN .839 / .840 .952 / .892 .815 / .822 .943 / .833 .845 / .849 .956 / .891 .845 / .847 .958 / .894 .841 / .843 .955 / .895 .852 / .893 .845 / .847 .958 / .894 .841 / .843 .955 / .898 .842 / .843 .955 / .898 .842 / .843 .955 / .898 .845 / .848 .955 / .898	7.47 / .438 5.40 / .556 7.61 / .452 5.36 / .549 7.55 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.57 / .484 / .487 7.61 / .511 5.00 / .519 6.80 / .405	705 / 532 513 / 523 513 / 523 519 / 532 532 / 551 729 / 535 517 / 530 710 / 544 517 / 530 710 / 544 510 / 522 710 / 537 509 / 536 707 / 512	.842 / .617 .624 / .634 .838 / .570 .642 / .648 .834 / .606 .640 / .645 .858 / .655 .613 / .620 .841 / .620 .841 / .620 .841 / .620 .851 / .659 .518 / .535 .725 / .450/	.547 / .549 .860 / .650 .624 / .634 .844 / .586 .642 / .652 .845 / .592 .612 / .630 .842 / .604 .620 / .628 .847 / .592 .551 / .560 .863 / .656 .573 / .592 .798 / .561 /	.857 / .649 .580 / .587 .816 / .576 .631 / .665 .844 / .606 .651 / .664 .877 / .645 .659 / .675 .871 / .634 .513 / .525 .850 / .640 .559 / .575 .786 / .548/
TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE	AUROC / AUPRC F1 / GM AUROC / AUPRC	.599 / .605 .760 / .502 .560 / .502 .560 / .589 .717 / .404 .567 / .617 .749 / .437 .576 / .614 .752 / .428 .452 / .478 .654 / .433 .492 / .534 .721 / .428 .581 /	863 / .657 .619 / .633 .841 / .610 .640 / .649 .854 / .602 .619 / .629 .856 / .611 .576 / .582 .863 / .664 .565 / .596 .784 / .538 / .	8.844 / .634 5.82 / .587 8.08 / .589 5.89 / .606 8.15 / .565 5.53 / .555 8.04 / .560 5.40 / .549 7.99 / .550 5.01 / .519 8.26 / .612 5.89 / .606 7.99 / .575 / / XGB 9.36 / .937 9.91 / .980 8.88 / .891 9.88 / .966 8.94 / .895 8.92 / .894 9.84 / .952 9.40 / .941 9.91 / .981 9.36 / .937 9.91 / .983 9.37 / .938 9.91 / .980 9.37 / .938 9.91 / .980 9.38 / .938 9.91 / .980 9.38 / .938 9.991 / .980 9.38 / .938 9.991 / .980 9.398 / .938 9.991 / .980 9.991 / .980 9.991 / .980	875 / .694 .639 / .653 .856 / .653 .653 / .664 .864 / .653 .637 / .646 .866 / .667 .637 / .646 .866 / .667 .592 / .595 .876 / .701 .529 / .544 .757 / .530 / .	.620 / .360 .551 / .567 .706 / .415 .527 / .558 .685 / .380 .535 / .585 .696 / .374 .540 / .582 .700 / .384 .428 / .429 .616 / .360 .426 / .448 .589 / .311/// .	.722 / .423 .554 / .582 .740 / .424 .542 / .596 .739 / .422 .534 / .542 .538 / .581 .690 / .370 .462 / .466 .716 / .447 .468 / .486 .651 / .373 / vehicle2 3-NN .839 / .840 .952 / .892 .815 / .822 .943 / .833 .845 / .849 .956 / .891 .845 / .847 .958 / .894 .841 / .843 .955 / .895 .852 / .853 .955 / .898 .842 / .843 .953 / .893 .845 / .848 .955 / .893 .845 / .848 .955 / .893	7.47 / .438 5.40 / .556 7.61 / .452 5.36 / .549 7.56 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.57 / .484 / .487 7.61 / .511 5.00 / .519 6.80 / .405 / 5-NN 8.15 / .819 9.58 / .911 7.90 / .799 9.49 / .859 8.25 / .829 9.60 / .896 8.15 / .819 9.58 / .911 8.38 / .840 9.62 / .920 8.15 / .819 9.58 / .911 8.15 / .819 9.58 / .911 8.15 / .819 9.58 / .911 8.15 / .819 9.58 / .911	705 / 532 513 / 523 513 / 523 513 / 523 52 / 551 729 / 535 517 / 530 710 / 544 510 / 522 710 / 544 510 / 522 710 / 537 509 / 536 707 / 512 / NB 593 / 598 854 / 673 651 / 658 867 / 699 632 / 636 851 / 696 699 / 700 870 / 753 595 / 601 795 / 627 593 / 598 854 / 673 593 / 598 854 / 673 593 / 598 854 / 673	.842 / .617 .624 / .634 .838 / .570 .642 / .648 .834 / .606 .640 / .645 .858 / .655 .613 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .851 / .659 .518 / .535 .725 / .450//	.547 / .549 .860 / .650 .624 / .634 .844 / .586 .642 / .652 .845 / .592 .612 / .630 .842 / .604 .620 / .628 .847 / .592 .551 / .560 .863 / .656 .573 / .592 .798 / .561 / / / RF .977 / .977 .998 / .961 .981 / .982 .999 / .997 .966 / .966 .999 / .998 .981 / .982 .999 / .997 .977 / .977 .999 / .999 .977 / .977 .999 / .997 .979 / .979 .979 / .979 .979 / .979 .979 / .979 .979 / .979 .999 / .997 .977 / .977 .999 / .997 .999 / .997 .999 / .997 .999 / .997 .999 / .997 .999 / .997 .999 / .997 .999 / .997 .999 / .997 .999 / .997 .999 / .997 .999 / .997 .999 / .997 .999 / .997	857 / 649 .580 / .587 .816 / .576 .631 / .665 .844 / .606 .651 / .664 .877 / .645 .659 / .675 .871 / .634 .513 / .525 .850 / .640 .559 / .575 .786 / .548// .
TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ ROSE TOP+ RSLS	AUROC / AUPRC F1 / GM	.599 / .605 .760 / .502 .560 / .569 .717 / .404 .567 / .617 .749 / .437 .576 / .614 .752 / .428 .452 / .478 .654 / .433 .492 / .534 .721 / .428 .581 / .730 / .730 / .730 / .946 / .878 .940 / .941 .964 / .893 .922 / .923 .945 / .903 .938 / .939 .970 / .898 .935 / .935 .935 / .935 .932 / .932 .933 / .939 .933 / .939 .933 / .939 .933 / .939 .933 / .939 .933 / .938 .935 / .935 .935 / .935 .937 / .895 .746 / .762	863 / .657 .619 / .633 .841 / .610 .640 / .649 .854 / .602 .619 / .629 .856 / .611 .576 / .582 .863 / .664 .565 / .596 .784 / .538 /	844 / .634 .582 / .587 .808 / .589 .589 / .606 .815 / .565 .553 / .555 .804 / .560 .540 / .549 .799 / .550 .501 / .519 .826 / .612 .589 / .605 .799 / .575 / / XGB .936 / .937 .991 / .980 .888 / .894 .984 / .952 .940 / .941 .991 / .981 .936 / .937 .991 / .983 .937 / .938 .937 / .938 .937 / .938 .991 / .980 .886 / .873 .979 / .938 .979 / .933 .847 / .851	875 / 694 639 / 653 856 / 653 653 / 664 864 / 653 653 / 666 866 / 667 637 / 646 866 / 667 592 / 595 876 / 701 529 / 544 757 / 530 / LR 941 / 941 992 / 982 935 / 936 991 / 979 938 / 939 992 / 981 942 / 942 992 / 981 944 / 942 992 / 981 944 / 942 992 / 981 944 / 942 992 / 981 943 / 944 992 / 981 944 / 942 992 / 981 943 / 944 992 / 981 944 / 942 992 / 981 943 / 944 992 / 981	.620 / .360 .551 / .567 .706 / .415 .527 / .558 .685 / .380 .535 / .585 .696 / .374 .540 / .582 .700 / .384 .428 / .429 .616 / .360 .426 / .448 .589 / .311//////	722 / 423 .554 / 582 .740 / 424 .542 / 596 .739 / 422 .534 / 542 .538 / 581 .690 / 370 .462 / 466 .716 / 447 .468 / 486 .651 / 373 / .	7.47 / .438 5.40 / .556 7.61 / .452 5.36 / .549 7.55 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.57 / .484 / .487 7.61 / .511 5.00 / .519 6.80 / .405 5.NN 8.15 / .819 9.58 / .911 7.90 / .799 9.49 / .859 8.25 / .829 9.60 / .894 8.28 / .830 9.60 / .896 8.15 / .819 9.58 / .911 8.38 / .840 9.62 / .920 8.15 / .819 9.58 / .911 6.40 / .679 9.900 / .690 5.46 / .556	705 / 532 513 / 523 513 / 523 519 / 532 532 / 551 729 / 535 517 / 530 710 / 544 517 / 530 710 / 544 510 / 522 710 / 537 509 / 536 707 / 512 / NB 593 / 598 854 / 673 651 / 658 867 / 699 632 / 636 850 / 683 621 / 626 851 / 696 699 / 700 870 / 753 595 / 661 795 / 6627 593 / 598 854 / 673 593 / 598 854 / 673 593 / 598 854 / 673 593 / 598 854 / 673 593 / 598 854 / 673 593 / 598	.842 / .617 .624 / .634 .838 / .570 .642 / .648 .834 / .606 .640 / .645 .858 / .655 .613 / .620 .841 / .620 .841 / .620 .851 / .659 .518 / .535 .725 / .450///////	.547 / .549 .860 / .650 .624 / .634 .844 / .586 .642 / .652 .845 / .592 .612 / .630 .842 / .604 .620 / .628 .847 / .592 .551 / .560 .863 / .656 .573 / .592 .798 / .561 /// /// /// .998 / .996 .981 / .982 .999 / .997 .966 / .966 .977 / .977 .999 / .997 .977 / .977 .999 / .997 .964 / .964 .984 / .964 .998 / .994 .847 / .853	.857 / .649 .580 / .587 .816 / .576 .631 / .665 .844 / .606 .651 / .664 .877 / .645 .659 / .675 .871 / .634 .513 / .525 .850 / .640 .559 / .575 .786 / .548///////
TOP+ ROSE TOP+ SMOTE TOP+ RSLS OVUN ROSE DBSM* BASE ROS SMOTE RSLS TOP+V TOP+ ROSE TOP+ SMOTE TOP+ ROSE TOP+ SMOTE OVUN	AUROC / AUPRC F1 / GM AUROC / AUPRC	.599 / .605 .760 / .502 .560 / .502 .560 / .589 .717 / .404 .567 / .617 .749 / .437 .576 / .614 .752 / .428 .452 / .478 .654 / .433 .492 / .534 .721 / .428 .581 /	863 / .657 .619 / .633 .841 / .610 .640 / .649 .854 / .602 .619 / .629 .856 / .611 .576 / .582 .863 / .664 .565 / .596 .784 / .538 / .	8.844 / .634 5.82 / .587 8.08 / .589 5.89 / .606 8.15 / .565 5.53 / .555 8.04 / .560 5.40 / .549 7.99 / .550 5.01 / .519 8.26 / .612 5.89 / .606 7.99 / .575 / / XGB 9.36 / .937 9.91 / .980 8.88 / .891 9.88 / .966 8.94 / .895 8.92 / .894 9.84 / .952 9.40 / .941 9.91 / .981 9.36 / .937 9.91 / .983 9.37 / .938 9.91 / .980 9.37 / .938 9.91 / .980 9.38 / .938 9.91 / .980 9.38 / .938 9.991 / .980 9.38 / .938 9.991 / .980 9.398 / .938 9.991 / .980 9.991 / .980 9.991 / .980	875 / .694 .639 / .653 .856 / .653 .653 / .664 .864 / .653 .637 / .646 .866 / .667 .637 / .646 .866 / .667 .592 / .595 .876 / .701 .529 / .544 .757 / .530 / .	.620 / .360 .551 / .567 .706 / .415 .527 / .558 .685 / .380 .535 / .585 .696 / .374 .540 / .582 .700 / .384 .428 / .429 .616 / .360 .426 / .448 .589 / .311/// .	.722 / .423 .554 / .582 .740 / .424 .542 / .596 .739 / .422 .534 / .542 .538 / .581 .690 / .370 .462 / .466 .716 / .447 .468 / .486 .651 / .373 / vehicle2 3-NN .839 / .840 .952 / .892 .815 / .822 .943 / .833 .845 / .849 .956 / .891 .845 / .847 .958 / .894 .841 / .843 .955 / .895 .852 / .853 .955 / .898 .842 / .843 .953 / .893 .845 / .848 .955 / .893 .845 / .848 .955 / .893	7.47 / .438 5.40 / .556 7.61 / .452 5.36 / .549 7.56 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.55 / .447 5.36 / .549 7.57 / .484 / .487 7.61 / .511 5.00 / .519 6.80 / .405 / 5-NN 8.15 / .819 9.58 / .911 7.90 / .799 9.49 / .859 8.25 / .829 9.60 / .896 8.15 / .819 9.58 / .911 8.38 / .840 9.62 / .920 8.15 / .819 9.58 / .911 8.15 / .819 9.58 / .911 8.15 / .819 9.58 / .911 8.15 / .819 9.58 / .911	705 / 532 513 / 523 513 / 523 513 / 523 52 / 551 729 / 535 517 / 530 710 / 544 510 / 522 710 / 544 510 / 522 710 / 537 509 / 536 707 / 512 / NB 593 / 598 854 / 673 651 / 658 867 / 699 632 / 636 851 / 696 699 / 700 870 / 753 595 / 601 795 / 627 593 / 598 854 / 673 593 / 598 854 / 673 593 / 598 854 / 673	.842 / .617 .624 / .634 .838 / .570 .642 / .648 .834 / .606 .640 / .645 .858 / .655 .613 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .841 / .620 .851 / .659 .518 / .535 .725 / .450//	.547 / .549 .860 / .650 .624 / .634 .844 / .586 .642 / .652 .845 / .592 .612 / .630 .842 / .604 .620 / .628 .847 / .592 .551 / .560 .863 / .656 .573 / .592 .798 / .561 / / RF .977 / .977 .998 / .961 .981 / .982 .999 / .997 .966 / .966 .999 / .998 .981 / .982 .999 / .997 .977 / .977 .999 / .997 .977 / .977 .999 / .997 .977 / .977 .999 / .997 .977 / .977 .999 / .997 .977 / .977 .999 / .997 .977 / .977 .999 / .997 .977 / .977 .999 / .997 .964 / .964 .998 / .994	857 / 649 .580 / .587 .816 / .576 .631 / .665 .844 / .606 .651 / .664 .877 / .645 .659 / .675 .871 / .634 .513 / .525 .850 / .640 .559 / .575 .786 / .548// .

	35		wisconsin									
	Metrics	C4.5	C5.0	XGB	LR	1-NN	3-NN	5-NN	NB	NN	RF	SVM
DACE	F1 / GM	.945 / .946	.954 / .955	.952 / .953	.954 / .954	.942 / .943	.956 / .956	.960 / .960	.945 / .946	.947 / .948	.963 / .963	.942 / .943
BASE	AUROC / AUPRC	.959 / .949	.995 / .990	.991 / .979	.994 / .989	.955 / .930	.986 / .962	.992 / .979	.985 / .950	.992 / .983	.994 / .987	.987 / .964
ROS	F1 / GM	.943 / .944	.954 / .955	.946 / .947	.956 / .956	.938 / .938	.957 / .957	.958 / .959	.948 / .948	.947 / .947	.953 / .953	.946 / .947
ROS	AUROC / AUPRC	.952 / .933	.994 / .990	.989 / .974	.995 / .991	.952 / .930	.983 / .958	.987 / .960	.985 / .950	.993 / .984	.991 / .981	.987 / .956
SMOTE	F1 / GM	.945 / .945	.954 / .955	.948 / .948	.954 / .954	.942 / .943	.956 / .956	.960 / .960	.945 / .946	.948 / .949	.959 / .959	.942 / .943
SMOTE	AUROC / AUPRC	.962 / .951	.995 / .990	.990 / .977	.994 / .989	.955 / .930	.986 / .962	.992 / .979	.985 / .950	.991 / .980	.990 / .980	.988 / .964
RSLS	F1 / GM	.931 / .932	.950 / .950	.946 / .947	.961 / .961	.947 / .947	.963 / .963	.963 / .963	.948 / .948	.954 / .954	.961 / .961	.950 / .951
KSLS	AUROC / AUPRC	.953 / .907	.993 / .983	.989 / .971	.995 / .989	.960 / .932	.986 / .957	.987 / .961	.985 / .950	.992 / .983	.992 / .980	.988 / .960
TOP+V	F1 / GM	.951 / .951	.957 / .957	.960 / .960	.961 / .961	.945 / .945	.958 / .958	.962 / .962	.952 / .953	.954 / .954	.965 / .965	.945 / .946
TOP+V	AUROC / AUPRC	.967 / .916	.992 / .988	.988 / .967	.995 / .990	.957 / .932	.986 / .962	.992 / .980	.988 / .960	.993 / .983	.993 / .986	.988 / .966
TOP+	F1 / GM	.945 / .946	.963 / .964	.959 / .959	.959 / .960	.962 / .963	.964 / .964	.964 / .964	.950 / .951	.963 / .964	.965 / .965	.948 / .949
ROSE	AUROC / AUPRC	.959 / .949	.993 / .982	.991 / .978	.994 / .988	.979 / .933	.980 / .943	.986 / .957	.985 / .951	.993 / .982	.994 / .988	.983 / .936
TOP+	F1 / GM	.945 / .946	.956 / .956	.953 / .953	.956 / .956	.957 / .957	.962 / .963	.962 / .962	.958 / .958	.953 / .954	.963 / .963	.951 / .952
SMOTE	AUROC / AUPRC	.959 / .949	.993 / .983	.990 / .978	.995 / .989	.970 / .930	.980 / .937	.990 / .971	.992 / .979	.992 / .982	.993 / .985	.977 / .913
TOP+	F1 / GM	.945 / .946	.958 / .958	.953 / .953	.956 / .956	.958 / .959	.966 / .966	.962 / .962	.958 / .958	.955 / .956	.965 / .965	.953 / .954
RSLS	AUROC / AUPRC	.959 / .949	.989 / .962	.990 / .978	.995 / .989	.975 / .922	.981 / .940	.990 / .971	.992 / .979	.991 / .977	.994 / .988	.981 / .924
OVUN	F1 / GM	.932 / .933	.961 / .962	.953 / .954	.959 / .959	.943 / .943	.955 / .955	.957 / .958	.944 / .944	.942 / .943	.953 / .954	.944 / .945
OVUN	AUROC / AUPRC	.950 / .911	.993 / .988	.989 / .970	.995 / .989	.955 / .925	.982 / .950	.988 / .967	.987 / .960	.991 / .981	.992 / .980	.987 / .955
ROSE	F1 / GM	.936 / .936	.943 / .943	.957 / .958	.954 / .954	.929 / .930	.949 / .950	.945 / .945	.942 / .942	.950 / .950	.951 / .952	.945 / .946
KOSE	AUROC / AUPRC	.952 / .913	.990 / .974	.991 / .977	.995 / .989	.943 / .913	.978 / .952	.985 / .968	.988 / .964	.992 / .985	.989 / .969	.989 / .961
DBSM*	F1 / GM	.931 /	/	/	/	/	/	/	/	/	/	/
DBSM.	AUROC / AUPRC	.952 /	/	/	/	/	/	/	/	/	/	/

	Metrics						yeast1					
	Metrics	C4.5	C5.0	XGB	LR	1-NN	3-NN	5-NN	NB	NN	RF	SVM
BASE	F1 / GM	.504 / .510	.551 / .556	.533 / .547	.446 / .470	.492 / .493	.535 / .539	.499 / .505	.496 / .569	.521 / .536	.553 / .559	.471 / .495
BASE	AUROC / AUPRC	.734 / .497	.788 / .595	.783 / .615	.791 / .595	.643 / .426	.737 / .530	.757 / .556	.762 / .533	.804 / .620	.799 / .629	.781 / .612
ROS	F1 / GM	.528 / .530	.563 / .567	.597 / .605	.582 / .591	.490 / .492	.569 / .578	.562 / .571	.486 / .562	.597 / .610	.563 / .564	.584 / .592
ROS	AUROC / AUPRC	.645 / .433	.775 / .602	.794 / .616	.790 / .596	.642 / .429	.726 / .491	.751 / .529	.758 / .528	.805 / .623	.798 / .628	.785 / .579
SMOTE	F1 / GM	.595 / .598	.596 / .602	.608 / .610	.584 / .587	.505 / .505	.589 / .595	.573 / .578	.490 / .565	.612 / .616	.615 / .616	.580 / .583
SMOTE	AUROC / AUPRC	.734 / .502	.791 / .586	.789 / .605	.791 / .598	.650 / .423	.738 / .516	.754 / .527	.760 / .532	.806 / .623	.807 / .636	.789 / .594
RSLS	F1 / GM	.571 / .574	.581 / .584	.612 / .614	.579 / .581	.509 / .510	.562 / .566	.546 / .549	.493 / .567	.603 / .605	.589 / .590	.584 / .585
KSLS	AUROC / AUPRC	.716 / .481	.780 / .585	.798 / .623	.790 / .596	.653 / .432	.731 / .501	.751 / .533	.760 / .534	.807 / .619	.799 / .620	.791 / .600
TODIN	F1 / GM	.585 / .598	.595 / .610	.601 / .605	.591 / .603	.539 / .579	.564 / .581	.560 / .588	.496 / .569	.600 / .616	.592 / .598	.586 / .589
TOP+V	AUROC / AUPRC	.741 / .478	.778 / .568	.782 / .610	.781 / .585	.659 / .386	.731 / .497	.702 / .418	.762 / .533	.789 / .605	.784 / .577	.763 / .584
TOP+	F1 / GM	.573 / .575	.605 / .606	.606 / .609	.592 / .595	.520 / .560	.566 / .578	.554 / .558	.503 / .574	.605 / .608	.592 / .593	.591 / .594
ROSE	AUROC / AUPRC	.726 / .500	.798 / .613	.799 / .619	.792 / .598	.638 / .372	.731 / .503	.753 / .536	.760 / .507	.805 / .624	.792 / .617	.788 / .598
TOP+	F1 / GM	.579 / .580	.586 / .588	.593 / .594	.559 / .591	.539 / .549	.561 / .581	.559 / .582	.496 / .569	.597 / .598	.592 / .598	.583 / .585
SMOTE	AUROC / AUPRC	.718 / .487	.794 / .610	.794 / .603	.748 / .522	.669 / .420	.717 / .464	.729 / .469	.762 / .533	.805 / .618	.794 / .603	.789 / .603
TOP+	F1 / GM	.579 / .580	.587 / .599	.593 / .594	.559 / .591	.536 / .540	.561 / .577	.567 / .583	.496 / .569	.598 / .599	.598 / .601	.583 / .585
RSLS	AUROC / AUPRC	.718 / .487	.777 / .577	.794 / .603	.748 / .522	.668 / .432	.721 / .472	.737 / .490	.762 / .533	.805 / .618	.793 / .608	.789 / .603
OVUN	F1 / GM	.501 / .574	.495 / .569	.475 / .554	.476 / .555	.500 / .570	.492 / .568	.487 / .565	.457 / .540	.482 / .560	.508 / .577	.511 / .577
OVUN	AUROC / AUPRC	.614 / .337	.683 / .406	.646 / .370	.724 / .496	.597 / .337	.603 / .340	.606 / .342	.645 / .381	.690 / .424	.665 / .386	.646 / .376
DOCE	F1 / GM	.452 / .540	.452 / .540	.452 / .540	.583 / .592	.524 / .546	.555 / .577	.568 / .590	.464 / .547	.584 / .612	.453 / .541	.575 / .597
ROSE	AUROC / AUPRC	.507 / .292	.507 / .292	.507 / .292	.786 / .589	.651 / .391	.716 / .453	.743 / .492	.759 / .535	.794 / .610	.715 / .439	.783 / .594
DBSM*	F1 / GM	.573 /	/	/	/	/	/	/	/	/	/	/
DBSM.	AUROC / AUPRC	.698 /	/	/	/	/	/	/	/	/	/	/

	1											
	Metrics	C4.5	C5.0	XGB	LR	1-NN	yeast3 3-NN	5-NN	NB	NN	RF	SVM
D + 65	F1 / GM	.768 / .772	.759 / .763	.765 / .770	.738 / .742	.649 / .656	.696 / .700	.749 / .753	.429 / .518	.697 / .705	.746 / .750	.749 / .755
BASE	AUROC / AUPRC	.934 / .704	.971 / .804	.968 / .848	.962 / .794	.801 / .515	.887 / .689	.929 / .757	.953 / .671	.972 / .819	.961 / .826	.973 / .840
D.O.C.	F1 / GM	.700 / .703	.776 / .780	.773 / .784	.655 / .676	.649 / .656	.664 / .678	.647 / .676	.301 / .419	.752 / .767	.784 / .787	.727 / .739
ROS	AUROC / AUPRC	.854 / .539	.970 / .797	.974 / .828	.962 / .796	.801 / .515	.880 / .597	.919 / .639	.952 / .670	.976 / .838	.968 / .819	.969 / .809
SMOTE	F1 / GM	.766 / .772	.759 / .764	.781 / .789	.676 / .693	.659 / .664	.674 / .683	.686 / .698	.361 / .464	.753 / .764	.779 / .783	.737 / .745
SMOTE	AUROC / AUPRC	.918 / .641	.970 / .794	.968 / .825	.963 / .795	.826 / .510	.906 / .608	.938 / .676	.945 / .659	.975 / .831	.969 / .811	.969 / .802
RSLS	F1 / GM	.765 / .770	.776 / .778	.784 / .787	.756 / .758	.651 / .658	.722 / .724	.752 / .755	.447 / .530	.785 / .787	.755 / .759	.769 / .773
KSLS	AUROC / AUPRC	.899 / .683	.968 / .816	.963 / .842	.963 / .796	.803 / .514	.892 / .705	.931 / .756	.947 / .665	.976 / .835	.967 / .829	.973 / .829
TOP+V	F1 / GM	.798 / .801	.784 / .791	.808 / .813	.769 / .771	.671 / .677	.739 / .741	.756 / .758	.429 / .518	.813 / .815	.783 / .788	.796 / .799
TOFTV	AUROC / AUPRC	.918 / .668	.971 / .821	.970 / .832	.961 / .796	.832 / .525	.910 / .706	.930 / .741	.953 / .671	.968 / .807	.973 / .833	.967 / .817
TOP+	F1 / GM	.786 / .790	.777 / .781	.796 / .799	.775 / .776	.671 / .677	.702 / .705	.749 / .753	.431 / .521	.788 / .789	.780 / .783	.790 / .793
ROSE	AUROC / AUPRC	.932 / .681	.964 / .804	.969 / .851	.962 / .797	.845 / .520	.901 / .665	.929 / .757	.937 / .499	.973 / .815	.971 / .830	.974 / .835
TOP+	F1 / GM	.786 / .790	.776 / .779	.799 / .804	.764 / .765	.671 / .677	.702 / .705	.749 / .753	.429 / .518	.775 / .776	.785 / .789	.786 / .787
SMOTE	AUROC / AUPRC	.932 / .681	.969 / .807	.968 / .839	.961 / .798	.845 / .520	.901 / .665	.929 / .757	.953 / .671	.973 / .820	.974 / .844	.973 / .836
TOP+	F1 / GM	.786 / .790	.776 / .779	.800 / .805	.764 / .765	.671 / .677	.702 / .705	.749 / .753	.429 / .518	.775 / .776	.790 / .796	.786 / .787
RSLS	AUROC / AUPRC	.932 / .681	.969 / .807	.968 / .824	.961 / .798	.845 / .520	.901 / .665	.929 / .757	.953 / .671	.973 / .819	.963 / .773	.973 / .836
OVUN	F1 / GM	.691 / .713	.730 / .745	.728 / .750	.599 / .643	.642 / .661	.618 / .653	.584 / .628	.320 / .428	.649 / .687	.732 / .745	.668 / .689
OVUN	AUROC / AUPRC	.909 / .468	.967 / .763	.968 / .766	.958 / .786	.868 / .475	.920 / .568	.928 / .604	.911 / .619	.972 / .821	.969 / .769	.956 / .774
ROSE	F1 / GM	.225 / .354	.199 / .331	.497 / .571	.658 / .679	.499 / .553	.546 / .597	.553 / .602	.250 / .377	.728 / .745	.212 / .343	.668 / .696
KOSE	AUROC / AUPRC	.570 / .153	.767 / .311	.954 / .626	.966 / .793	.837 / .332	.918 / .534	.939 / .638	.950 / .673	.976 / .831	.964 / .731	.971 / .822
DBSM*	F1 / GM	.705 /	/	/	/	/	/	/	/	/	/	/
DDSM	AUROC / AUPRC	.875 /	/	/	/	/	/	/	/	/	/	/

^{*}DBSM does not implemented in our experiment.