

Table 1: Early Detection of Diseases Performance Comparison between *DBSDA* and LDA Baselines (Testing Sample Size = 1000×2), where “ACC.” refers to accuracy and “F1.” refers to F1-Score.

Algorithm	Training Set						
	100	200	300	400	500	600	700
LDA	0.543 \pm 0.034	0.586 \pm 0.033	0.616 \pm 0.022	0.642 \pm 0.029	0.642 \pm 0.022	0.657 \pm 0.025	0.658 \pm 0.026
Ye-LDA	0.627 \pm 0.050	0.620 \pm 0.077	0.652 \pm 0.063	0.620 \pm 0.067	0.655 \pm 0.062	0.637 \pm 0.064	0.670 \pm 0.045
SDA	0.658 \pm 0.023	0.676 \pm 0.024	0.682 \pm 0.028	0.686 \pm 0.022	0.683 \pm 0.021	0.692 \pm 0.025	0.695 \pm 0.018
<i>DBSDA</i>	0.659\pm0.022	0.677\pm0.028	0.691\pm0.024	0.692\pm0.023	0.690\pm0.021	0.696\pm0.024	0.701\pm0.023
Decision Tree	0.621 \pm 0.046	0.649 \pm 0.031	0.652 \pm 0.041	0.655 \pm 0.030	0.671 \pm 0.028	0.665 \pm 0.031	0.668 \pm 0.040
Linear SVM	0.615 \pm 0.026	0.628 \pm 0.030	0.647 \pm 0.023	0.666 \pm 0.029	0.666 \pm 0.021	0.670 \pm 0.030	0.675 \pm 0.029
Kernel SVM	0.635 \pm 0.032	0.669 \pm 0.027	0.674 \pm 0.039	0.678 \pm 0.021	0.668 \pm 0.038	0.688 \pm 0.024	0.682 \pm 0.029
AdaBoost	0.631 \pm 0.035	0.630 \pm 0.039	0.620 \pm 0.028	0.622 \pm 0.027	0.621 \pm 0.022	0.617 \pm 0.025	0.626 \pm 0.070
Random Forest	0.590 \pm 0.035	0.602 \pm 0.035	0.653 \pm 0.031	0.602 \pm 0.040	0.674 \pm 0.024	0.666 \pm 0.026	0.658 \pm 0.032