APPENDIX A

Table 1. Accuracy performances at different sample sizes of PAIN dataset, after repeating 50 times 10-fold cross validation. Paired t-test was performed to compare RED+ALIGN v. SVM and RED+SVM v. SVM.

Sample size	Training size (90%)	RED+ALIGN	RED+SVM	SVM	Paired ttest RED+ALIGN – SVM		Paired ttest RED+SVM – SVM	
					Mean difference	p-value	Mean difference	p-value
50	45	67.3	67.3	68.5	-1.2	0.2111	-1.2	0.1444
100	90	70.3	69.6	71.4	-1.1	0.0825	-1.8	0.0021
150	135	72.4	72.2	73.2	-0.8	0.1435	-1	0.0324
200	180	74.8	74.3	74.4	0.4	0.3237	-0.1	0.9387
250	225	76.7	76.3	75.5	1.2	0.0036	0.8	0.0327
300	270	77.8	77.5	76.9	0.9	0.0074	0.6	0.0644
350	315	78.5	78.3	77.3	1.2	0.0006	1	0.0014
400	360	79.3	79.2	78	1.3	<0.0001	1.2	<0.0001
450	405	80.1	79.8	78.2	1.9	<0.0001	1.6	<0.0001
500	450	80.8	80.7	79.2	1.6	<0.0001	1.5	<0.0001
550	495	81.6	81.5	80.1	1.5	<0.0001	1.4	<0.0001
600	540	81.9	81.8	80.1	1.8	<0.0001	1.7	<0.0001
650	585	82.1	82.1	80.6	1.5	<0.0001	1.5	<0.0001
700	630	82.5	82.4	81.1	1.4	<0.0001	1.3	<0.0001

Table 2. Accuracy performances at different sample sizes of SMOKE dataset, after repeating 50 times 10-fold cross validation. Paired t-test was performed to compare RED+ALIGN v. SVM and RED+SVM v. SVM.

Sample size	Training size (90%)	RED+ALIGN	RED+SVM	SVM	Paired ttest RED+ALIGN – SVM		Paired ttest RED+SVM – SVM	
					Mean difference	p-value	Mean difference	p-value
50	45	55.1	56.9	56.5	-1.4	0.1839	0.4	0.6186
100	90	61.3	63	63	-1.7	0.0152	0	0.9483
150	135	63.9	66.3	67.2	-3.3	<0.0001	-0.9	0.0661
200	180	68	70.6	70.1	-2.1	<0.0001	0.5	0.2190
250	225	69.8	72.2	71.6	-1.8	0.0001	0.6	0.1627
300	270	71.8	73.9	74	-2.2	<0.0001	-0.1	0.7990
350	315	73.1	75.1	75	-1.9	<0.0001	0.1	0.6455
400	360	73.3	75.4	75.6	-2.3	<0.0001	-0.2	0.4644
450	405	74.4	76.7	76.2	-1.8	<0.0001	0.5	0.0584
500	450	75.2	77.2	76.7	-1.5	<0.0001	0.5	0.0328
550	495	76.2	78.3	77.2	-1	0.0002	1.1	<0.0001
600	540	77	79	77.9	-0.9	0.0014	1.1	<0.0001
650	585	77.4	79.4	78.4	-1	0.0005	1	<0.0001
700	630	77.9	79.9	78.7	-0.8	0.0004	1.2	<0.0001
750	675	78.3	80.3	78.9	-0.6	0.0062	1.4	<0.0001
800	720	79.3	81	79	0.3	0.2336	2	<0.0001
850	765	79.5	81.4	79.9	-0.4	0.0953	1.5	<0.0001
900	810	80.2	82.1	79.7	0.5	0.0142	2.4	<0.0001
950	855	80.6	82.4	80	0.6	0.0020	2.4	<0.0001
1000	900	81	82.7	80.2	0.8	0.0001	2.5	<0.0001
1050	945	81.5	83.2	80.3	1.2	<0.0001	2.9	<0.0001
1090	981	81.9	83.5	80.5	1.4	<0.0001	3	<0.0001