

**Table 1:** Summary of Welch’s t-test results for AUC, Rec, GM, and  $F_1$  between CIL approaches and AROSS at a significance level of 0.05 (win-tie-lose).

		Random	Synthetic sampling										Cluster based				
ORIG		ROS	S	AS	DS	SMPD	SENN	STL	NARS	GS	RWO	ANS	DBS	CS	KS	SOMO	AROS
<b>DT classifier</b>																	
recall	62-8-0	61-8-1	54-14-2	53-15-2	54-16-0	59-11-0	40-23-7	54-15-1	68-2-0	57-13-0	54-16-0	55-15-0	61-9-0	64-6-0	58-12-0	59-11-0	53-17-0
f1_score	35-32-3	33-30-7	31-32-7	31-29-10	32-33-5	36-30-4	23-40-7	29-35-6	35-33-2	32-34-4	28-37-5	27-39-4	33-31-6	31-35-4	32-35-3	29-35-6	33-36-1
g_mean	53-16-1	52-16-2	45-22-3	43-24-3	42-27-1	51-18-1	33-26-11	43-25-2	56-14-0	48-20-2	42-26-2	42-28-0	51-18-1	50-20-0	48-21-1	49-20-1	48-22-0
auc	54-15-1	50-18-2	47-22-1	47-17-6	45-24-1	52-17-1	35-29-6	42-27-1	56-14-0	47-22-1	42-26-2	44-26-0	54-15-1	55-15-0	48-21-1	49-20-1	46-24-0
<b>RF classifier</b>																	
recall	59-10-1	40-25-5	21-39-10	23-36-11	30-35-5	60-9-1	16-30-24	21-39-10	64-6-0	26-40-4	22-44-4	39-27-4	52-17-1	52-17-1	50-19-1	48-20-2	30-39-1
f1_score	25-38-7	21-42-7	18-43-9	22-40-8	19-44-7	25-40-5	22-38-10	18-42-10	31-37-2	19-44-7	16-48-6	21-42-7	27-37-6	23-41-6	21-43-6	25-39-6	15-54-1
g_mean	49-20-1	31-34-5	20-40-10	25-34-11	23-41-6	50-19-1	19-33-18	19-40-11	52-18-0	22-43-5	18-48-4	26-40-4	43-25-2	37-32-1	39-30-1	38-30-2	28-42-0
auc	7-51-12	5-54-11	7-47-16	12-40-18	5-51-14	7-49-14	15-40-15	8-48-14	26-35-9	4-47-19	1-60-9	5-55-10	7-50-13	5-52-13	5-56-9	5-57-8	1-69-0
<b>SVM classifier</b>																	
recall	65-3-2	20-33-17	25-28-17	21-23-26	22-36-12	63-5-2	20-26-24	25-29-16	51-17-2	27-25-18	17-34-19	46-18-6	47-17-6	47-19-4	56-13-1	50-17-3	30-40-0
f1_score	36-29-5	18-41-11	17-40-13	24-35-11	24-33-13	32-32-6	21-39-10	18-39-13	27-34-9	18-39-13	17-44-9	19-36-15	23-34-13	17-40-13	31-34-5	23-42-5	15-55-0
g_mean	53-17-0	18-36-16	21-35-14	25-29-16	22-36-12	52-18-0	16-39-15	19-37-14	39-28-3	19-38-13	14-41-15	30-33-7	31-32-7	32-32-6	46-24-0	39-28-3	24-46-0
auc	14-41-15	13-41-16	14-41-15	19-33-18	13-44-13	13-43-14	18-40-12	14-41-15	19-41-10	13-43-14	11-44-15	10-47-13	18-38-14	10-48-12	16-46-8	11-52-7	5-64-1
<b>kNN classifier</b>																	
recall	58-12-0	7-38-25	12-62-9	15-1-50	6-35-29	57-12-1	6-24-40	6-31-33	35-30-5	7-31-32	4-35-31	23-33-14	36-30-4	25-34-11	37-31-2	30-36-4	32-38-0
f1_score	32-36-2	29-34-7	29-32-9	37-22-11	29-33-8	31-36-3	33-28-9	30-31-9	27-42-1	26-37-7	27-36-7	21-44-5	26-42-2	22-44-4	29-41-0	25-44-1	23-47-0
g_mean	48-22-0	15-43-12	10-39-21	16-32-22	10-48-12	48-22-0	11-39-20	12-37-21	31-38-1	11-43-16	11-42-17	17-46-7	35-32-3	24-41-5	36-33-1	29-39-2	25-45-0
auc	12-57-1	29-39-2	16-47-7	27-32-11	14-49-7	14-55-1	26-38-6	18-45-7	32-37-1	17-48-5	10-54-6	9-55-6	21-48-1	11-56-3	10-60-0	13-55-2	5-65-0