

Table 1: Experimental results (Rec) of DT and CIL approaches on 70 datasets.

No.	ORIG	Random	Synthetic sampling										Cluster based					
		ROS	S	AS	DS	SMPD	SENN	STL	NARS	GS	RWO	ANS	DBS	CS	KS	SOMO	AROS	AROSS
D1	0.90100	0.90870	0.92338	0.94487	0.91965	0.90100	0.90648	0.92342	0.89627	0.92023	0.91772	0.93274	0.89680	0.92282	0.90721	0.93078	0.92481	0.96250
D2	0.90565	0.91963	0.91914	0.94153	0.92906	0.90565	0.91489	0.91368	0.89259	0.91915	0.92296	0.93375	0.90483	0.92944	0.90946	0.92770	0.93420	0.97137
D3	0.57834	0.56398	0.59164	0.60205	0.59006	0.55532	0.71700	0.58375	0.51379	0.59631	0.56815	0.61724	0.58586	0.57290	0.59119	0.60061	0.61176	0.69312
D4	0.91429	0.90714	0.90714	0.90429	0.88286	0.88571	0.89714	0.89000	0.88571	0.89571	0.89000	0.91429	0.88286	0.88714	0.88000	0.86143	0.91571	0.97143
D5	0.84286	0.81714	0.84143	0.85000	0.84571	0.82857	0.84143	0.81000	0.82571	0.84714	0.83857	0.83000	0.83000	0.85143	0.82286	0.84143	0.87286	0.96000
D6	0.71429	0.71143	0.75571	0.71571	0.74714	0.80000	0.87857	0.75286	0.70571	0.74571	0.73571	0.78000	0.72857	0.77000	0.78857	0.72429	0.77429	0.89429
D7	0.55714	0.58571	0.60429	0.58000	0.61286	0.55714	0.76000	0.60000	0.62571	0.59857	0.61286	0.59429	0.60143	0.62143	0.60857	0.57571	0.70143	0.86571
D8	0.67000	0.70900	0.72200	0.72000	0.71400	0.67400	0.83300	0.72100	0.63000	0.73200	0.74000	0.72000	0.71700	0.69900	0.73900	0.70100	0.75700	0.88800
D9	0.55641	0.54074	0.56487	0.58162	0.56517	0.56516	0.55105	0.57781	0.43178	0.57100	0.58746	0.56601	0.56130	0.56116	0.52849	0.55547	0.55273	0.61880
D10	0.76061	0.71939	0.75970	0.77485	0.77455	0.70697	0.83030	0.74515	0.70909	0.75061	0.78000	0.72667	0.70455	0.74152	0.73364	0.79909	0.76000	0.79364
D11	0.48952	0.46766	0.53473	0.54174	0.54320	0.51946	0.65625	0.53077	0.40261	0.53587	0.48182	0.54266	0.51212	0.51357	0.51637	0.51358	0.49205	0.54810
D12	0.91535	0.93928	0.93119	0.91486	0.91090	0.91535	0.88644	0.92496	0.77624	0.91867	0.91983	0.91900	0.92312	0.91132	0.92749	0.90947	0.91939	0.92416
D13	0.31176	0.38059	0.38051	0.39787	0.41412	0.47676	0.54456	0.38581	0.17213	0.38037	0.40382	0.38301	0.30287	0.38912	0.44037	0.41456	0.48059	0.58831
D14	0.37333	0.42489	0.43600	0.52000	0.53200	0.48444	0.46733	0.48889	0.36778	0.41222	0.53000	0.36733	0.53111	0.45356	0.43222	0.47600	0.54200	0.80733
D15	0.84182	0.76545	0.78055	0.75745	0.80418	0.84255	0.96582	0.78291	0.68091	0.79509	0.80309	0.78164	0.80182	0.81655	0.76309	0.75455	0.87418	0.96382
D16	0.75333	0.80408	0.81992	0.82275	0.81358	0.77258	0.89392	0.82408	0.75167	0.81158	0.82992	0.78583	0.78608	0.79100	0.82358	0.76850	0.74808	0.87083
D17	0.88758	0.91758	0.92758	0.92869	0.95307	0.88758	0.97536	0.94758	0.89536	0.93536	0.93150	0.91536	0.91425	0.89843	0.89869	0.95425	0.94425	0.96536
D18	0.38571	0.34143	0.41714	0.37714	0.44714	0.42286	0.50143	0.40857	0.27000	0.34571	0.41429	0.29857	0.26714	0.38143	0.30571	0.34286	0.34143	0.56000
D19	0.88500	0.88000	0.88700	0.89500	0.88850	0.90000	0.89850	0.88250	0.91650	0.89450	0.93800	0.88550	0.87600	0.87850	0.88650	0.92600	0.95800	0.98250
D20	0.88000	0.98400	0.92800	0.94000	0.95600	0.88000	0.98400	0.92800	0.82533	0.89200	0.98000	0.88000	0.88000	0.95600	0.88400	0.94400	0.95200	1.00000
D21	0.42000	0.42500	0.59900	0.61000	0.56200	0.42200	0.78200	0.60200	0.36900	0.59000	0.66300	0.47700	0.43700	0.54900	0.52200	0.52800	0.51500	0.64300
D22	0.82000	0.83133	0.85467	0.85333	0.85933	0.82400	0.84733	0.85733	0.80133	0.85133	0.89200	0.80200	0.82733	0.79333	0.81400	0.84400	0.92267	0.96667
D23	0.88571	0.85143	0.91714	0.92857	0.88286	0.91429	0.89429	0.91429	0.92571	0.92286	0.92571	0.91143	0.89714	0.85714	0.87143	0.84857	0.93429	0.98571
D24	0.73455	0.77745	0.82473	0.81582	0.76709	0.75455	0.86036	0.82455	0.75509	0.81055	0.83836	0.81073	0.77327	0.81473	0.81545	0.79455	0.84527	0.91764
D25	0.87826	0.88174	0.92870	0.95043	0.92870	0.90435	0.94870	0.92522	0.90000	0.92957	0.93043	0.92087	0.92435	0.90957	0.93391	0.91130	0.92174	0.95304
D26	0.35402	0.35947	0.47573	0.47702	0.44122	0.38675	0.66879	0.47900	0.31997	0.43673	0.44261	0.44745	0.39916	0.42839	0.39214	0.40084	0.52162	0.63500
D27	0.80000	0.85600	0.86333	0.81600	0.82333	0.83333	0.87533	0.86000	0.80333	0.85000	0.80333	0.86000	0.86333	0.83667	0.80933	0.80333	0.88667	0.90333
D28	0.73693	0.70121	0.74729	0.75358	0.75146	0.69356	0.89241	0.75758	0.68405	0.73784	0.72413	0.75430	0.69972	0.73100	0.72381	0.70491	0.74737	0.83665
D29	0.60000	0.52571	0.68286	0.62571	0.66000	0.64857	0.84571	0.68286	0.46571	0.64857	0.66000	0.58571	0.50286	0.55429	0.64571	0.60286	0.63429	0.80571
D30	0.76429	0.73304	0.80143	0.80179	0.78393	0.76000	0.85018	0.79696	0.72786	0.78768	0.80464	0.83429	0.70268	0.77821	0.73821	0.78857	0.78446	0.84179
D31	0.80000	0.71500	0.83000	0.87000	0.88000	0.75000	0.78500	0.78000	0.71500	0.79000	0.80500	0.78500	0.71000	0.74500	0.76500	0.70000	0.81000	0.89500
D32	0.78727	0.72000	0.80491	0.81273	0.85673	0.76727	0.85873	0.81182	0.69909	0.80436	0.72600	0.75691	0.73127	0.74782	0.78927	0.72600	0.83636	0.89709
D33	0.74000	0.73700	0.74600	0.75500	0.76500	0.78000	0.74400	0.71700	0.63000	0.77000	0.73500	0.80500	0.77500	0.76500	0.83000	0.77500	0.79600	0.83000
D34	0.80000	0.72000	0.78000	0.80500	0.88000	0.65000	0.79500	0.75500	0.75000	0.75000	0.81000	0.70000	0.71000	0.72000	0.73500	0.71500	0.83000	0.89000
D35	0.40000	0.36667	0.46000	0.48167	0.39833	0.40000	0.51167	0.48167	0.40000	0.38833	0.44333	0.32833	0.29000	0.30000	0.40000	0.33500	0.45833	0.77333
D36	0.26000	0.22800	0.38000	0.37800	0.36600	0.26000	0.52400	0.38200	0.27000	0.33200	0.33200	0.35200	0.32400	0.25400	0.33000	0.31400	0.34600	0.36000
D37	0.43368	0.49642	0.52100	0.53021	0.49137	0.49121	0.63763	0.53032	0.46784	0.49784	0.50742	0.50453	0.41542	0.46532	0.48221	0.47242	0.51742	0.55737
D38	0.75000	0.66500	0.77500	0.79500	0.70000	0.75000	0.77500	0.79000	0.69500	0.82500	0.80000	0.80500	0.63000	0.77500	0.78000	0.73500	0.82000	0.87500
D39	0.68000	0.64800	0.75100	0.79600	0.74700	0.64400	0.79000	0.73600	0.69700	0.73500	0.67000	0.71600	0.57000	0.68100	0.72000	0.67900	0.72400	0.87200
D40	0.71000	0.68700	0.71200	0.71100	0.72500	0.76000	0.72800	0.69800	0.57600	0.70000	0.69600	0.77000	0.71000	0.72400	0.80200	0.64000	0.77300	0.81000
D41	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.87000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.90000	0.90000
D42	0.80000	0.65500	0.78500	0.79500	0.72000	0.80000	0.78000	0.76000	0.74000	0.80000	0.78000	0.78000	0.75000	0.80000	0.78000	0.76000	0.83000	0.87500
D43	0.64000	0.63600	0.70800	0.69600	0.72400	0.59200	0.72400	0.69600	0.61200	0.68400	0.67600	0.70800	0.60000	0.62000	0.65200	0.59600	0.65600	0.78800
D44	0.46727	0.44873	0.52927	0.51582	0.52218	0.46800	0.70964	0.54036	0.40727	0.47000	0.50491	0.51818	0.45727	0.48509	0.51545	0.46036	0.55400	0.71091
D45	0.89394	0.88970	0.91530	0.91697	0.81515	0.87576	0.97636	0.88909	0.87439	0.88409	0.88212	0.90152	0.84848	0.86515	0.88727	0.88939	0.94212	0.97348
D46	0.77778	0.68889	0.74111	0.59667	0.64667	0.81222	0.75778	0.71667	0.75556	0.81778	0.79444	0.77778	0.78333	0.72333	0.78444	0.69667	0.84556	1.00000
D47	0.85000	0.78500	0.79000	0.76000	0.73500	0.85000	0.78000	0.72500	0.66500	0.76500	0.78500	0.81500	0.85000	0.72500	0.85000	0.74000	0.91500	0.85000
D48	0.20000	0.36833	0.40333	0.37333	0.28000	0.20000	0.42167	0.43167	0.20000	0.39167	0.50167	0.33500	0.18000	0.26500	0.20000	0.26667	0.28333	0.63667
D49	0.72000	0.65667	0.67200	0.64867	0.76000	0.70333	0.79000	0.69533	0.62000	0.69067	0.71333	0.71333	0.65333	0.68000	0.60267	0.73000	0.69400	0.75667
D50	0.80714	0.78714	0.80714	0.80714	0.80714	0.80714	0.41571	0.80714	0.29429	0.80714	0.81286	0.83571	0.81000	0.82143	0.82714	0.80714	0.80714	0.83571
D51	0.65000	0.63500	0.73500	0.82500	0.79500	0.67000	0.69000	0.71500	0.69000	0.72500	0.70000	0.68000	0.69500	0.65000	0.68500	0.64500	0.82000	0.90000
D52	0.70000	1.00000	0.98000	1.00000														

D55	0.56000	0.66000	0.77600	0.67600	0.76000	0.62000	0.73200	0.74800	0.62400	0.63600	0.77200	0.72000	0.48000	0.67200	0.61200	0.62400	0.79200	0.88000
D56	0.33333	0.26667	0.68333	0.69000	0.66667	0.33333	0.51667	0.67667	0.46000	0.65667	0.51000	0.30667	0.23000	0.46333	0.51333	0.60000	0.66000	0.81333
D57	0.55000	0.65000	0.70500	0.81000	0.72500	0.55500	0.72000	0.75000	0.58500	0.71000	0.72000	0.66000	0.65500	0.62500	0.66500	0.60000	0.81000	0.86500
D58	0.30000	0.33333	0.40000	0.37667	0.36667	0.30000	0.50000	0.42667	0.22000	0.47333	0.45000	0.30000	0.18000	0.42667	0.31000	0.40000	0.51000	0.63000
D59	0.66667	0.72667	0.74000	0.76667	0.68667	0.66667	0.87333	0.72667	0.53667	0.72667	0.89333	0.60000	0.63333	0.70000	0.65667	0.74667	0.73333	1.00000
D60	0.55000	0.75000	0.76500	0.76000	0.80000	0.70000	0.77500	0.76500	0.73500	0.75500	0.76000	0.72500	0.70000	0.65000	0.74500	0.74500	0.81000	0.85000
D61	0.73333	0.80000	0.85333	0.77400	0.80000	0.76667	0.83667	0.88333	0.73000	0.86667	0.81200	0.73333	0.72667	0.80000	0.73333	0.80000	0.92000	1.00000
D62	0.35556	0.29083	0.37306	0.38889	0.38917	0.31583	0.42583	0.36611	0.26528	0.34500	0.36361	0.32500	0.31306	0.36778	0.39056	0.26389	0.42417	0.57222
D63	0.80000	0.70000	0.70000	0.70000	0.70000	0.80000	0.80000	0.70000	0.64000	0.70000	0.78000	0.80000	0.80000	0.80000	0.78000	0.80000	0.74000	0.98000
D64	0.90000	0.80000	0.80000	0.80000	0.80000	0.90000	0.80000	0.80000	0.74000	0.80000	0.80000	0.80000	0.80000	0.80000	0.89000	0.90000	0.75000	0.97000
D65	0.50000	0.43000	0.59500	0.50000	0.59500	0.50000	0.70500	0.61000	0.50000	0.57000	0.52000	0.56000	0.45000	0.49500	0.52000	0.55000	0.55000	0.55000
D66	0.29636	0.27655	0.43818	0.44564	0.33891	0.31073	0.59273	0.47309	0.16527	0.37818	0.36000	0.40073	0.31436	0.28782	0.29636	0.29636	0.45545	0.59836
D67	0.33333	0.17333	0.35000	0.33333	0.24667	0.33333	0.44667	0.32000	0.31000	0.23667	0.29667	0.25000	0.13667	0.25333	0.33333	0.33333	0.22000	0.28333
D68	0.75000	0.59556	0.75639	0.79667	0.83944	0.63722	0.88528	0.74528	0.63917	0.69444	0.76250	0.59333	0.55167	0.63917	0.75000	0.75000	0.77250	0.91083
D69	0.60000	0.10000	0.60000	0.30000	0.80000	0.60000	0.52000	0.60000	0.78000	0.40000	0.74000	0.60000	0.40000	0.60000	0.80000	0.80000	0.80000	0.80000
D70	0.72000	0.72171	0.78200	0.78962	0.78286	0.70924	0.78038	0.78429	0.42781	0.76057	0.83124	0.77467	0.70067	0.72457	0.72000	0.71810	0.72000	0.84400
AVG	0.64810	0.64081	0.70624	0.70197	0.69886	0.65478	0.74953	0.70466	0.60253	0.68700	0.70290	0.66943	0.63311	0.66113	0.67142	0.66926	0.71142	0.81337

Table 2: Experimental results (F_1) of DT and CIL approaches on 70 datasets.

No.	ORIG	Random	Synthetic sampling										Cluster based					
		ROS	S	AS	DS	SMPD	SENN	STL	NARS	GS	RWO	ANS	DBS	CS	KS	SOMO	AROS	AROSS
D1	0.88848	0.90090	0.90339	0.91745	0.90028	0.88848	0.90085	0.90536	0.90883	0.90377	0.90981	0.91747	0.88783	0.90355	0.89442	0.91772	0.91149	0.92463
D2	0.89763	0.86357	0.86380	0.87421	0.84864	0.89763	0.90750	0.87621	0.90126	0.86945	0.88308	0.86983	0.84805	0.90484	0.90002	0.85973	0.90613	0.89280
D3	0.58561	0.57537	0.57345	0.56898	0.57198	0.55784	0.63798	0.57073	0.57181	0.57607	0.56698	0.58750	0.58517	0.56883	0.58290	0.58146	0.59223	0.64411
D4	0.87926	0.87623	0.87626	0.88063	0.86083	0.86426	0.87079	0.86508	0.87494	0.86949	0.86535	0.87926	0.86011	0.86170	0.86375	0.84317	0.87216	0.90647
D5	0.80497	0.82010	0.82238	0.83116	0.81648	0.80192	0.80261	0.80631	0.83071	0.82763	0.83531	0.81136	0.81178	0.82811	0.82084	0.82810	0.80710	0.85888
D6	0.72488	0.69707	0.71155	0.67422	0.71185	0.73458	0.71548	0.71510	0.71267	0.70710	0.69644	0.73856	0.73158	0.73384	0.72793	0.68810	0.68541	0.75901
D7	0.58298	0.59793	0.61315	0.59626	0.61814	0.57863	0.65333	0.61278	0.65253	0.61810	0.61774	0.61134	0.60640	0.63393	0.59365	0.59797	0.63623	0.72975
D8	0.65872	0.69921	0.69864	0.69918	0.70139	0.67197	0.75193	0.71316	0.67404	0.71007	0.70669	0.69961	0.70880	0.68873	0.71155	0.69281	0.69364	0.75483
D9	0.54514	0.53554	0.53702	0.54769	0.55009	0.54784	0.54618	0.55429	0.55127	0.54338	0.55110	0.55001	0.55023	0.54007	0.51839	0.54179	0.54047	0.57033
D10	0.77125	0.74337	0.76446	0.76626	0.77176	0.72877	0.78896	0.75951	0.74594	0.74934	0.75970	0.75422	0.73411	0.74605	0.75410	0.75959	0.73788	0.75831
D11	0.46525	0.46029	0.48963	0.49003	0.49338	0.48926	0.54155	0.49022	0.46544	0.48708	0.46445	0.49039	0.48886	0.48061	0.48234	0.47943	0.48292	0.51051
D12	0.89982	0.89267	0.90033	0.87933	0.89230	0.89982	0.81571	0.89690	0.84211	0.89494	0.89956	0.89735	0.89511	0.90003	0.90397	0.89191	0.90170	0.90348
D13	0.26614	0.32107	0.31929	0.33909	0.33753	0.35967	0.41052	0.32370	0.23135	0.32286	0.32932	0.31958	0.26139	0.30667	0.34602	0.33927	0.39004	0.44442
D14	0.39532	0.42164	0.42871	0.47014	0.50427	0.44504	0.42198	0.48657	0.37691	0.40408	0.46701	0.38280	0.47518	0.43470	0.44997	0.46849	0.46400	0.61566
D15	0.85728	0.80180	0.80727	0.77910	0.83594	0.87033	0.88505	0.80124	0.72430	0.81032	0.81760	0.81703	0.85175	0.83816	0.81086	0.76302	0.81817	0.88652
D16	0.71157	0.74274	0.73396	0.73342	0.70774	0.72479	0.78636	0.74134	0.72666	0.74681	0.74416	0.72274	0.74189	0.73419	0.74797	0.73109	0.70259	0.76991
D17	0.90615	0.92400	0.92205	0.91778	0.92581	0.90077	0.94474	0.93274	0.89135	0.92989	0.92277	0.92265	0.92368	0.90085	0.90936	0.93809	0.91381	0.92172
D18	0.31131	0.32655	0.36397	0.32371	0.37730	0.32238	0.34789	0.34810	0.27581	0.31710	0.35056	0.25899	0.26271	0.33999	0.27291	0.30905	0.26345	0.40124
D19	0.82650	0.85745	0.85844	0.86554	0.85662	0.83878	0.86527	0.85069	0.87357	0.86085	0.87068	0.83865	0.85115	0.81668	0.83039	0.85646	0.82494	0.84144
D20	0.92778	0.99056	0.95722	0.96444	0.97556	0.92778	0.99111	0.95778	0.83107	0.93611	0.94988	0.92778	0.92778	0.97389	0.93056	0.96889	0.86394	0.90659
D21	0.45096	0.45283	0.54543	0.54019	0.52021	0.46126	0.58196	0.54074	0.43175	0.54699	0.53766	0.47399	0.44559	0.52110	0.49070	0.50479	0.48749	0.57142
D22	0.80456	0.83319	0.82587	0.85257	0.81159	0.81366	0.79586	0.83174	0.78235	0.81496	0.78306	0.80112	0.81810	0.79894	0.81043	0.79302	0.76113	0.77491
D23	0.90128	0.86727	0.91267	0.92846	0.88379	0.92242	0.90699	0.91295	0.89733	0.91833	0.90273	0.91045	0.91170	0.86225	0.87753	0.85577	0.89481	0.90290
D24	0.64861	0.72788	0.69826	0.66045	0.69254	0.65929	0.71384	0.72880	0.73169	0.73068	0.71200	0.72863	0.68933	0.71634	0.72632	0.69920	0.70624	0.73734
D25	0.90851	0.88965	0.91048	0.92467	0.91184	0.92312	0.91878	0.90966	0.92555	0.91129	0.91163	0.93068	0.92269	0.91273	0.92537	0.90421	0.90379	0.91251
D26	0.32196	0.35373	0.38218	0.38554	0.36755	0.34025	0.43873	0.39137	0.33801	0.37405	0.37261	0.38526	0.36098	0.37333	0.36766	0.37208	0.40903	0.46457
D27	0.81492	0.82600	0.81078	0.75430	0.82182	0.83310	0.83160	0.82691	0.86158	0.79600	0.78670	0.85583	0.85765	0.82763	0.82334	0.81305	0.82907	0.83555
D28	0.71681	0.70221	0.70454	0.69774	0.70587	0.68075	0.73584	0.71463	0.72200	0.70496	0.69484	0.71650	0.69063	0.70121	0.69187	0.68136	0.70016	0.75581
D29	0.61123	0.52111	0.58463	0.55220	0.59609	0.60504	0.59500	0.57708	0.51897	0.57746	0.61014	0.55084	0.50580	0.52022	0.57569	0.57763	0.61231	0.68256
D30	0.74425	0.75057	0.76423	0.75648	0.74710	0.75851	0.76083	0.75729	0.74430	0.76268	0.75399	0.70846	0.72692	0.75605	0.75675	0.77972	0.72211	0.74842
D31	0.70349	0.71868	0.67106	0.70879	0.70922	0.63433	0.64080	0.62189	0.61635	0.67037	0.64095	0.69141	0.75063	0.65437	0.67027	0.60558	0.62687	0.67896
D32	0.73575	0.68545	0.72882	0.70343	0.76518	0.72070	0.71840	0.72937	0.70868	0.71488	0.68343	0.70546	0.69487	0.70493	0.71129	0.67298	0.73430	0.76504
D33	0.66239	0.64689	0.56497	0.57231	0.61109	0.66884	0.52938	0.57130	0.64902	0.58795	0.60079	0.69172	0.73905	0.66436	0.67431	0.64685	0.65231	0.66609
D34	0.71111	0.73070	0.67488	0.68774	0.71244	0.61111	0.66895	0.64330	0.70780	0.67282	0.65483	0.64035	0.72921	0.64278	0.66614	0.62296	0.65622	0.70830
D35	0.35065	0.37569	0.38217	0.37996	0.27527	0.35065	0.33672	0.37346	0.35065	0.31518	0.34146	0.30819	0.23714	0.25695	0.35065	0.31432	0.38483	0.56146
D36	0.21270	0.20149	0.24165	0.25397	0.25662	0.21270	0.26320	0.25220	0.31622	0.23833	0.26388	0.25200	0.26489	0.21228	0.27062	0.27138	0.27733	0.28545
D37	0.34854	0.42259	0.37526	0.38154	0.36587	0.38230	0.40571	0.38438	0.47720	0.35193	0.38766	0.38924	0.34274	0.37726	0.37291	0.37985	0.39556	0.41876
D38	0.68646	0.72625	0.66935	0.66498	0.59200	0.68646	0.65388	0.67781	0.70262	0.68651	0.66785	0.70548	0.63111	0.68820	0.68504	0.68029	0.65689	0.69292
D39	0.58333	0.52978	0.62159	0.65954	0.59901	0.57027	0.63393	0.61091	0.63747	0.58893	0.56312	0.61277	0.53270	0.58194	0.61818	0.59046	0.60176	0.69718
D40	0.64746	0.59414	0.55452	0.55730	0.55185	0.66520	0.51006	0.54123	0.57546	0.55938	0.57377	0.68052	0.66000	0.60901	0.67286	0.58152	0.64592	0.65213
D41	0.81000	0.81000	0.81000	0.81000	0.81000	0.81000	0.81000	0.81000	0.79413	0.81000	0.96000	0.81000	0.81000	0.81000	0.81000	0.81000	0.66745	0.76305
D42	0.72450	0.68350	0.69857	0.69252	0.67442	0.72450	0.63008	0.66974	0.69941	0.72617	0.69999	0.69705	0.76587	0.74682	0.71978	0.72645	0.66519	0.69745
D43	0.56913	0.60540	0.58054	0.55020	0.66137	0.50802	0.54891	0.57970	0.59081	0.53744	0.57240	0.60359	0.55393	0.54550	0.58741	0.54525	0.55825	0.62736
D44	0.39079	0.42097	0.42052	0.40184	0.41952	0.38697	0.44604	0.42345	0.43096	0.39979	0.42525	0.42441	0.43847	0.39546	0.44440	0.38677	0.42988	0.53820
D45	0.88105	0.88883	0.88283	0.88190	0.82620	0.87066	0.87223	0.87053	0.90415	0.86435	0.86927	0.87571	0.85480	0.85884	0.87243	0.87668	0.87648	0.89158
D46	0.81140	0.71978	0.74484	0.66132	0.71056	0.82032	0.75860	0.72652	0.74365	0.77699	0.77609	0.81140	0.74999	0.72727	0.76364	0.71621	0.56635	0.57935
D47	0.79371	0.73932	0.65475	0.61560	0.57373	0.77228	0.58572	0.61611	0.66538	0.65091	0.65828	0.76977	0.80397	0.67332	0.79371	0.71079	0.64073	0.66121
D48	0.14486	0.35931	0.31982	0.29925	0.21579	0.14486	0.33361	0.34091	0.14486	0.34849	0.36985	0.30537	0.15738	0.18673	0.15276	0.23524	0.22632	0.45917
D49	0.55685	0.58704	0.54088	0.46329	0.54660	0.58406	0.57377	0.53476	0.60051	0.52946	0.58376	0.60805	0.55828	0.56818	0.50556	0.60317	0.56830	0.63870
D50	0.68278	0.63441	0.67587	0.67609	0.68037	0.68278	0.33258	0.67683	0.27238	0.68084	0.68286	0.70366	0.68491	0.71067	0.69592	0.68278	0.66273	0.66671
D51	0.64810	0.65722	0.74303	0.79454	0.75810	0.66714	0.66486	0.69570	0.64414	0.73626	0.67081	0.71168	0.69330	0.65805	0.66078	0.58920	0.70226	0.71341
D52	0.66667	0.93333	0.92000	0.93333	0.93333	0.66667	0.82222	0.93333	0.									

D55	0.51641	0.66203	0.66903	0.55189	0.69856	0.54287	0.59791	0.65463	0.60397	0.60840	0.67733	0.64993	0.50433	0.60197	0.56483	0.62660	0.63441	0.66305
D56	0.26333	0.27362	0.61376	0.62195	0.51024	0.26333	0.41494	0.60867	0.48629	0.56400	0.49614	0.28056	0.23019	0.44895	0.46603	0.55060	0.56886	0.67619
D57	0.54206	0.64159	0.64314	0.70090	0.66123	0.54683	0.61129	0.64191	0.58247	0.64427	0.62395	0.63207	0.60177	0.60844	0.60927	0.52259	0.61233	0.64416
D58	0.31305	0.31682	0.29235	0.28099	0.28694	0.31305	0.27372	0.30703	0.27544	0.38567	0.32396	0.26306	0.16259	0.36847	0.31200	0.41709	0.37992	0.45202
D59	0.58879	0.60603	0.61191	0.62120	0.55879	0.58879	0.57253	0.59816	0.51129	0.58906	0.67334	0.55024	0.56290	0.62290	0.55624	0.68200	0.51801	0.64187
D60	0.58333	0.73061	0.71066	0.75029	0.69600	0.61455	0.64443	0.71456	0.65803	0.68542	0.67444	0.62953	0.61673	0.63135	0.65297	0.65655	0.60843	0.64481
D61	0.69861	0.74710	0.79424	0.73255	0.73532	0.69496	0.73935	0.81852	0.62305	0.80424	0.71779	0.69861	0.67674	0.74710	0.68139	0.73290	0.72068	0.79249
D62	0.27214	0.27789	0.26969	0.28564	0.28380	0.29502	0.22889	0.27306	0.22617	0.28839	0.27273	0.24825	0.30001	0.27382	0.30864	0.26014	0.33872	0.44155
D63	0.59556	0.46222	0.46222	0.46222	0.46222	0.59556	0.54222	0.46222	0.45159	0.46222	0.52889	0.58222	0.58222	0.58222	0.57308	0.59556	0.50709	0.63011
D64	0.71686	0.58353	0.58353	0.58353	0.58353	0.71686	0.58353	0.58353	0.57110	0.58353	0.54622	0.65020	0.65020	0.65020	0.71820	0.71686	0.42980	0.59659
D65	0.49212	0.42459	0.42517	0.32569	0.50575	0.49212	0.40336	0.43463	0.60444	0.44570	0.48943	0.55971	0.33815	0.39343	0.51345	0.52323	0.54545	0.54545
D66	0.31694	0.31031	0.31354	0.32036	0.25706	0.30077	0.30824	0.33290	0.22799	0.29764	0.33384	0.32225	0.27522	0.25826	0.31694	0.31694	0.36622	0.44946
D67	0.26612	0.17504	0.22050	0.19912	0.17774	0.26612	0.18052	0.20235	0.23001	0.15576	0.17685	0.20289	0.12596	0.18440	0.26612	0.26612	0.16168	0.20710
D68	0.69914	0.61824	0.64163	0.65231	0.69282	0.61017	0.68355	0.63256	0.62060	0.61790	0.67072	0.52630	0.56957	0.61609	0.69914	0.69914	0.63517	0.70755
D69	0.48000	0.06667	0.33326	0.15238	0.39267	0.48000	0.28676	0.34377	0.59333	0.30000	0.42695	0.48000	0.40000	0.48000	0.52444	0.52444	0.42022	0.42271
D70	0.73196	0.74396	0.67221	0.69022	0.70161	0.73284	0.64538	0.68143	0.44033	0.68713	0.60969	0.72018	0.70955	0.67111	0.73196	0.74627	0.73196	0.46324
AVG	0.60827	0.61410	0.62541	0.61782	0.61816	0.60849	0.61362	0.62447	0.59433	0.61978	0.62396	0.61812	0.60297	0.60918	0.61937	0.62066	0.60466	0.65809

Table 3: Experimental results (GM) of DT and CIL approaches on 70 datasets.

		Random		Synthetic sampling										Cluster based					
No.	ORIG	ROS	S	AS	DS	SMPD	SENN	STL	NARS	GS	RWO	ANS	DBS	CS	KS	SOMO	AROS	AROSS	
D1	0.91212	0.92161	0.92511	0.93721	0.92286	0.91212	0.92083	0.92656	0.92462	0.92509	0.92867	0.93618	0.91118	0.92541	0.91704	0.93615	0.93044	0.94459	
D2	0.91868	0.86882	0.86974	0.88140	0.84770	0.91868	0.92656	0.88962	0.91933	0.87690	0.89589	0.86986	0.85336	0.92251	0.92087	0.86338	0.92433	0.89523	
D3	0.67277	0.66569	0.66303	0.65918	0.66221	0.65120	0.71485	0.66186	0.65934	0.66580	0.65803	0.67388	0.67393	0.65896	0.67119	0.67014	0.67913	0.72161	
D4	0.91251	0.90876	0.90883	0.91090	0.89519	0.89878	0.90464	0.89932	0.90453	0.90314	0.89923	0.91251	0.89510	0.89639	0.89738	0.88152	0.90669	0.93788	
D5	0.85187	0.85985	0.86387	0.87206	0.85947	0.84688	0.84922	0.84819	0.86872	0.86755	0.87241	0.85557	0.85406	0.86874	0.86077	0.86941	0.85788	0.90291	
D6	0.78630	0.76676	0.77956	0.74856	0.77888	0.79385	0.77813	0.78117	0.77677	0.77492	0.76766	0.80302	0.79117	0.79623	0.78957	0.76164	0.75775	0.81985	
D7	0.67027	0.68654	0.69743	0.68396	0.70272	0.66786	0.70734	0.69471	0.72502	0.70087	0.70009	0.69606	0.69184	0.71341	0.68052	0.68429	0.71685	0.79507	
D8	0.71026	0.75147	0.75468	0.75232	0.75941	0.72205	0.76692	0.76566	0.73024	0.75850	0.75857	0.74448	0.76350	0.74842	0.76430	0.75144	0.73560	0.79128	
D9	0.65784	0.64855	0.65093	0.66056	0.66072	0.66057	0.65645	0.66465	0.63418	0.65666	0.66352	0.66097	0.66124	0.65332	0.63584	0.65483	0.65388	0.67944	
D10	0.82909	0.80303	0.82327	0.82711	0.82911	0.79458	0.85180	0.81664	0.80089	0.81313	0.82310	0.81110	0.79500	0.80876	0.81241	0.82673	0.80453	0.82332	
D11	0.60502	0.59927	0.62608	0.62663	0.62982	0.62414	0.66987	0.62667	0.58936	0.62435	0.60354	0.62699	0.62384	0.61771	0.61869	0.61698	0.61643	0.64148	
D12	0.93506	0.93905	0.93995	0.92615	0.93043	0.93506	0.88948	0.93693	0.86948	0.93416	0.93643	0.93518	0.93558	0.93408	0.94053	0.93018	0.93724	0.93935	
D13	0.41436	0.45751	0.45937	0.48284	0.46679	0.49982	0.53993	0.45258	0.35931	0.46109	0.47259	0.43940	0.39727	0.44062	0.48901	0.47312	0.52948	0.56804	
D14	0.53816	0.56473	0.56207	0.61313	0.63976	0.59314	0.57135	0.62105	0.50659	0.54287	0.61700	0.51083	0.61890	0.57656	0.58951	0.60134	0.61544	0.75653	
D15	0.89804	0.85240	0.85890	0.84169	0.87668	0.90197	0.94314	0.85749	0.78689	0.86424	0.87032	0.86346	0.88221	0.88247	0.85381	0.83377	0.89112	0.94587	
D16	0.80372	0.83254	0.83095	0.83197	0.82044	0.81256	0.86475	0.83693	0.80482	0.83567	0.83779	0.81375	0.82958	0.82373	0.83929	0.81346	0.79429	0.85442	
D17	0.93271	0.94894	0.95184	0.95048	0.96189	0.93123	0.97545	0.96205	0.93084	0.95694	0.95335	0.94771	0.94757	0.93487	0.93763	0.96636	0.95481	0.96475	
D18	0.49911	0.50339	0.54011	0.50928	0.55962	0.51258	0.55168	0.53152	0.45169	0.48401	0.54113	0.44278	0.43727	0.51005	0.45222	0.49478	0.44845	0.59719	
D19	0.89744	0.90981	0.91231	0.91691	0.91222	0.90575	0.91834	0.90702	0.92836	0.91436	0.93338	0.90585	0.90457	0.87798	0.89303	0.91403	0.90416	0.91785	
D20	0.93380	0.99127	0.96057	0.96719	0.97677	0.93380	0.99155	0.96085	0.85121	0.94099	0.97745	0.93380	0.93380	0.97592	0.93620	0.97044	0.93447	0.96975	
D21	0.61630	0.61769	0.72278	0.72437	0.69916	0.62020	0.79584	0.72114	0.57913	0.71955	0.74171	0.63581	0.61996	0.69484	0.67306	0.68061	0.66959	0.74830	
D22	0.88347	0.89516	0.90273	0.90855	0.90070	0.88701	0.89141	0.90530	0.87003	0.89818	0.90356	0.87566	0.88984	0.87108	0.88240	0.88427	0.90557	0.92355	
D23	0.93148	0.91003	0.94716	0.95559	0.92624	0.94803	0.93618	0.94576	0.94680	0.95060	0.94844	0.94405	0.93812	0.91052	0.91978	0.90526	0.94939	0.97172	
D24	0.79678	0.84594	0.84946	0.83395	0.83421	0.81807	0.86064	0.85848	0.82712	0.85710	0.86032	0.85661	0.82788	0.84678	0.85122	0.83378	0.86064	0.89533	
D25	0.93184	0.92940	0.95317	0.96513	0.95330	0.94566	0.96268	0.95164	0.94423	0.95369	0.95432	0.95424	0.95386	0.94598	0.95840	0.94461	0.94855	0.96314	
D26	0.54366	0.55621	0.62163	0.62320	0.59968	0.56988	0.71065	0.62569	0.52673	0.60441	0.60620	0.61257	0.57737	0.59921	0.57913	0.58597	0.65239	0.71438	
D27	0.87242	0.90545	0.90635	0.87236	0.89037	0.88984	0.91558	0.90841	0.88996	0.89701	0.87388	0.91346	0.91521	0.89273	0.87973	0.87853	0.91776	0.92669	
D28	0.83939	0.82022	0.84252	0.84496	0.84465	0.81363	0.91187	0.84927	0.81446	0.83854	0.83019	0.84713	0.81806	0.83494	0.82949	0.81853	0.84206	0.89199	
D29	0.75335	0.69773	0.78902	0.75452	0.78069	0.77569	0.86090	0.78671	0.66219	0.76966	0.78357	0.73739	0.68186	0.70992	0.76871	0.74733	0.76934	0.86578	
D30	0.85777	0.84364	0.87861	0.87757	0.86797	0.85669	0.90016	0.87534	0.83896	0.87191	0.87736	0.88180	0.82548	0.86556	0.84717	0.87417	0.86119	0.89133	
D31	0.85768	0.78594	0.82817	0.85720	0.84824	0.77392	0.79523	0.77416	0.74420	0.81808	0.79806	0.78922	0.79925	0.76438	0.77978	0.75391	0.78328	0.81794	
D32	0.86747	0.82462	0.87423	0.87138	0.90366	0.85613	0.89688	0.87704	0.81921	0.87172	0.82898	0.84639	0.83456	0.84334	0.86159	0.82593	0.88923	0.92137	
D33	0.82670	0.81747	0.80318	0.80612	0.81821	0.84790	0.75871	0.78855	0.77159	0.82113	0.80871	0.85817	0.85605	0.83490	0.86240	0.83360	0.85017	0.86811	
D34	0.86088	0.81112	0.82391	0.84617	0.85396	0.73840	0.82231	0.81714	0.82851	0.81881	0.82441	0.75942	0.79689	0.76854	0.79886	0.76241	0.81950	0.87589	
D35	0.52544	0.53525	0.59464	0.60634	0.51328	0.52544	0.58085	0.60293	0.52544	0.52298	0.54449	0.49684	0.44610	0.45889	0.52544	0.47009	0.54714	0.81608	
D36	0.42616	0.41625	0.54447	0.54474	0.54343	0.42616	0.60605	0.54923	0.45579	0.51352	0.47613	0.53211	0.51834	0.44049	0.47479	0.52086	0.48571	0.49355	
D37	0.59882	0.64393	0.63839	0.64835	0.63288	0.62831	0.68329	0.64619	0.63644	0.62153	0.64370	0.63663	0.58283	0.61228	0.62137	0.62434	0.65208	0.67915	
D38	0.82756	0.79532	0.82969	0.83993	0.78237	0.82756	0.82576	0.84155	0.79947	0.86024	0.84097	0.85208	0.74720	0.83535	0.83564	0.81551	0.81328	0.85276	
D39	0.77793	0.73019	0.81506	0.84760	0.81244	0.75768	0.83602	0.80633	0.79018	0.80437	0.75724	0.79793	0.70152	0.77715	0.80299	0.77012	0.79939	0.88910	
D40	0.80494	0.77307	0.77841	0.78095	0.78317	0.83483	0.72577	0.76844	0.73034	0.77596	0.78319	0.83672	0.80929	0.79939	0.84913	0.75487	0.83628	0.85454	
D41	0.89365	0.89365	0.89365	0.89365	0.89365	0.89365	0.89365	0.89365	0.88293	0.89365	0.99365	0.89365	0.89365	0.89365	0.89365	0.89365	0.81311	0.87197	
D42	0.86740	0.78713	0.84975	0.84931	0.80909	0.86740	0.82808	0.83111	0.81956	0.85939	0.84487	0.84250	0.85121	0.86860	0.85061	0.84747	0.83684	0.85499	
D43	0.72339	0.75339	0.77239	0.76152	0.81762	0.68596	0.73074	0.77192	0.73609	0.74936	0.73638	0.77649	0.72223	0.72749	0.75421	0.72126	0.74594	0.82534	
D44	0.61547	0.62568	0.66920	0.65785	0.65967	0.61227	0.73991	0.67256	0.60272	0.63193	0.64678	0.65645	0.61291	0.63314	0.65610	0.61204	0.67762	0.77914	
D45	0.93849	0.93678	0.94773	0.94815	0.89525	0.92875	0.97423	0.93412	0.93165	0.93096	0.93092	0.94094	0.91370	0.92170	0.93340	0.93519	0.95925	0.97491	
D46	0.86904	0.81519	0.84214	0.75363	0.79283	0.88782	0.85318	0.82863	0.85059	0.88513	0.87564	0.86904	0.86530	0.83385	0.86745	0.82014	0.78046	0.78375	
D47	0.90200	0.85887	0.84754	0.81919	0.80213	0.89982	0.77816	0.80559	0.78985	0.83625	0.84380	0.88056	0.90466	0.81610	0.90200	0.88688	0.85728	0.87731	
D48	0.30982	0.48254	0.51377	0.50073	0.38487	0.30982	0.53490	0.56017	0.30982	0.52517	0.60390	0.46091	0.26792	0.39640	0.31264	0.37934	0.41196	0.71997	
D49	0.77472	0.76676	0.75439	0.69184	0.79925	0.78381	0.78109	0.75619	0.74064	0.75183	0.78287	0.79016	0.74677	0.76842	0.71047	0.79944	0.76200		

D55	0.70067	0.78164	0.84000	0.72871	0.84429	0.72918	0.78337	0.81958	0.75374	0.75463	0.82531	0.81144	0.66514	0.75299	0.74316	0.75294	0.84431	0.89064
D56	0.41531	0.38754	0.72880	0.73404	0.70236	0.41531	0.65043	0.72691	0.57903	0.72523	0.63287	0.41104	0.32839	0.60537	0.59169	0.73957	0.73194	0.86517
D57	0.70407	0.74263	0.81261	0.87055	0.82449	0.70817	0.79932	0.83312	0.70570	0.80577	0.80716	0.79012	0.73020	0.76290	0.77649	0.67125	0.85203	0.88802
D58	0.52421	0.54321	0.58547	0.56576	0.56854	0.52421	0.63252	0.59747	0.43730	0.65337	0.62398	0.49313	0.31091	0.60867	0.53071	0.60641	0.67558	0.75885
D59	0.73161	0.78584	0.79024	0.79436	0.71669	0.73161	0.81091	0.77965	0.68699	0.76021	0.85865	0.69215	0.70334	0.75116	0.68262	0.83742	0.71437	0.90024
D60	0.71992	0.84753	0.85111	0.85126	0.87288	0.80180	0.78019	0.85392	0.81529	0.83712	0.83161	0.82057	0.80511	0.78499	0.83640	0.83928	0.83973	0.85732
D61	0.81382	0.85498	0.89386	0.84120	0.85406	0.82846	0.86952	0.91415	0.75138	0.90232	0.85783	0.81382	0.80857	0.85498	0.81024	0.85149	0.90758	0.96329
D62	0.54275	0.49583	0.56733	0.58744	0.58804	0.49717	0.59469	0.56912	0.41673	0.55701	0.56517	0.52822	0.53300	0.56277	0.57750	0.47192	0.61256	0.72533
D63	0.82322	0.68180	0.68180	0.68180	0.68180	0.82322	0.74160	0.68180	0.61863	0.68180	0.72989	0.82152	0.82152	0.82152	0.80258	0.82322	0.73394	0.88713
D64	0.89823	0.75681	0.75681	0.75681	0.75681	0.89823	0.75681	0.75681	0.68898	0.75681	0.75151	0.83966	0.83966	0.83966	0.89287	0.89823	0.69941	0.88558
D65	0.67507	0.60618	0.73043	0.63758	0.74898	0.67507	0.78964	0.73774	0.68176	0.72131	0.68973	0.72470	0.62299	0.65352	0.69164	0.71574	0.71649	0.71649
D66	0.53169	0.49248	0.63623	0.64317	0.55116	0.53179	0.73164	0.66231	0.38897	0.59446	0.57953	0.59928	0.54304	0.49908	0.53169	0.53169	0.64948	0.75278
D67	0.55024	0.34743	0.55686	0.53272	0.47217	0.55024	0.61460	0.53064	0.49320	0.40593	0.51020	0.46767	0.23650	0.46795	0.55024	0.55024	0.35926	0.50724
D68	0.85925	0.76329	0.85620	0.87652	0.90340	0.78525	0.92812	0.84806	0.78226	0.81982	0.86188	0.75147	0.73560	0.78700	0.85925	0.85925	0.86574	0.94273
D69	0.58856	0.09909	0.57211	0.31364	0.72897	0.58856	0.49456	0.57452	0.76674	0.39633	0.73195	0.58856	0.40000	0.58856	0.77540	0.77540	0.77020	0.77100
D70	0.83641	0.83547	0.87261	0.87952	0.87279	0.83000	0.87122	0.87576	0.63865	0.86023	0.89989	0.86551	0.82440	0.83963	0.83641	0.83687	0.83641	0.89651
AVG	0.73726	0.73146	0.77433	0.76779	0.76644	0.73831	0.78166	0.77437	0.70893	0.76083	0.77112	0.74919	0.72378	0.74464	0.75155	0.75290	0.76083	0.82742

Table 4: Experimental results (AUC) of DT and CIL approaches on 70 datasets.

No.	ORIG	Random	Synthetic sampling										Cluster based					
		ROS	S	AS	DS	SMPD	SENN	STL	NARS	GS	RWO	ANS	DBS	CS	KS	SOMO	AROS	AROSS
D1	0.91261	0.92736	0.92290	0.93220	0.92473	0.91261	0.92332	0.92785	0.92861	0.92497	0.92604	0.93642	0.91361	0.92488	0.91645	0.93778	0.92519	0.94518
D2	0.91914	0.90247	0.87342	0.92108	0.86657	0.91914	0.92691	0.89196	0.92065	0.89051	0.91637	0.86932	0.87215	0.91516	0.92400	0.86715	0.92878	0.91034
D3	0.68317	0.66816	0.66863	0.67312	0.67104	0.67087	0.71216	0.66957	0.68765	0.67529	0.67018	0.67745	0.68267	0.66613	0.68101	0.66850	0.67562	0.72346
D4	0.91429	0.91036	0.90786	0.90786	0.90571	0.90000	0.90357	0.90536	0.91536	0.90929	0.90679	0.91429	0.90036	0.90929	0.89429	0.86964	0.91429	0.94036
D5	0.85357	0.85964	0.86143	0.88893	0.86107	0.85000	0.86536	0.86143	0.87964	0.86821	0.85679	0.86250	0.87250	0.86214	0.86393	0.87429	0.87286	0.90679
D6	0.79495	0.78794	0.77797	0.76914	0.78083	0.80677	0.78996	0.79232	0.77143	0.78845	0.79128	0.79649	0.80110	0.79169	0.79496	0.78037	0.78270	0.82830
D7	0.69914	0.72704	0.70030	0.70564	0.72478	0.69569	0.72584	0.71054	0.74335	0.70548	0.71885	0.72946	0.72092	0.72924	0.70615	0.70991	0.73268	0.80292
D8	0.72548	0.76721	0.76919	0.76817	0.76850	0.73329	0.80136	0.77955	0.73383	0.76360	0.76767	0.75195	0.75852	0.76067	0.77345	0.75788	0.76550	0.81281
D9	0.67271	0.65951	0.65907	0.66561	0.66914	0.67339	0.66974	0.67680	0.69361	0.65817	0.66804	0.66516	0.67186	0.66727	0.66017	0.67544	0.66325	0.68647
D10	0.83420	0.80835	0.82641	0.82054	0.84009	0.80517	0.85903	0.82017	0.80812	0.82526	0.82818	0.82009	0.80682	0.82695	0.81602	0.83143	0.81686	0.83065
D11	0.61869	0.62601	0.63842	0.62614	0.64109	0.63139	0.67335	0.62747	0.63076	0.64039	0.62683	0.64368	0.63015	0.62684	0.63316	0.62473	0.63442	0.65054
D12	0.96395	0.96189	0.96309	0.95602	0.96167	0.96395	0.89229	0.96213	0.88591	0.96351	0.96328	0.96533	0.96165	0.96291	0.96373	0.95932	0.96497	0.96670
D13	0.51525	0.54718	0.56225	0.56349	0.57679	0.58102	0.60863	0.57652	0.54410	0.55998	0.55017	0.55529	0.53754	0.55205	0.55801	0.55662	0.58100	0.61786
D14	0.61494	0.65575	0.64116	0.58721	0.70560	0.65383	0.64623	0.66199	0.61551	0.61689	0.62593	0.60598	0.66328	0.64610	0.64166	0.65910	0.65480	0.76662
D15	0.90244	0.86179	0.86474	0.84150	0.88784	0.90576	0.93605	0.88177	0.79193	0.87808	0.87239	0.87438	0.88850	0.89059	0.86254	0.84508	0.88935	0.94659
D16	0.81882	0.84496	0.84247	0.83190	0.82542	0.82009	0.87558	0.84871	0.80854	0.83721	0.83358	0.83319	0.85102	0.83184	0.83628	0.83052	0.80643	0.86487
D17	0.94519	0.94998	0.94961	0.92033	0.95864	0.94359	0.97707	0.95676	0.92939	0.95169	0.95720	0.95765	0.95231	0.94953	0.94706	0.96598	0.95083	0.96364
D18	0.55026	0.60352	0.58339	0.53376	0.61325	0.55730	0.58638	0.57952	0.56418	0.58796	0.57981	0.51407	0.51511	0.57757	0.53762	0.54180	0.52040	0.61389
D19	0.90313	0.91025	0.92056	0.89688	0.91988	0.91125	0.91650	0.91194	0.92650	0.91394	0.93100	0.91288	0.91450	0.88394	0.89844	0.91750	0.91175	0.92681
D20	0.94000	0.98800	0.96400	0.96400	0.98000	0.94000	0.99400	0.96600	0.87217	0.95200	0.97365	0.94000	0.94000	0.96200	0.94400	0.96800	0.94304	0.97087
D21	0.66600	0.67020	0.72550	0.69870	0.72160	0.67200	0.78200	0.72380	0.65000	0.73800	0.74900	0.68220	0.67900	0.72820	0.70100	0.70200	0.70700	0.75940
D22	0.88800	0.89620	0.90567	0.89820	0.90247	0.89320	0.89567	0.90367	0.87527	0.90140	0.90307	0.88093	0.89333	0.87300	0.88213	0.88927	0.90460	0.92553
D23	0.93452	0.91655	0.95024	0.96310	0.93345	0.94992	0.95016	0.94595	0.94532	0.95167	0.94377	0.94567	0.95159	0.92270	0.93230	0.91095	0.93909	0.97230
D24	0.80518	0.84053	0.84746	0.83310	0.83505	0.82420	0.86974	0.85420	0.82366	0.85258	0.85887	0.86046	0.84004	0.84970	0.84751	0.83392	0.86176	0.89667
D25	0.93440	0.94406	0.95355	0.91862	0.95636	0.94744	0.96328	0.95462	0.94534	0.95540	0.95145	0.95246	0.94864	0.94441	0.96006	0.94470	0.95158	0.96352
D26	0.61333	0.63645	0.66129	0.65021	0.64532	0.62269	0.71964	0.65465	0.62339	0.65046	0.65841	0.64370	0.63831	0.64409	0.64563	0.64278	0.66976	0.72570
D27	0.89189	0.90941	0.90135	0.88034	0.89982	0.90856	0.90455	0.90829	0.90315	0.89360	0.88694	0.91640	0.92252	0.90946	0.90494	0.89698	0.93000	0.93059
D28	0.84802	0.83712	0.85019	0.84257	0.84129	0.82483	0.90595	0.84905	0.82961	0.84103	0.83864	0.85902	0.82690	0.84618	0.84160	0.83481	0.85606	0.89417
D29	0.77667	0.71747	0.78442	0.73497	0.79525	0.78534	0.86649	0.79490	0.69551	0.80073	0.79381	0.77283	0.71340	0.75391	0.78680	0.77538	0.78700	0.87062
D30	0.86919	0.85514	0.87646	0.85529	0.87625	0.86683	0.89569	0.87695	0.84908	0.88402	0.88966	0.89255	0.84289	0.87496	0.86557	0.88335	0.86831	0.89737
D31	0.86944	0.82667	0.80333	0.83833	0.85639	0.79444	0.80500	0.77694	0.80806	0.84444	0.83556	0.82361	0.85861	0.81583	0.80278	0.78194	0.80417	0.85417
D32	0.87418	0.83217	0.87426	0.86389	0.89957	0.86419	0.90145	0.87016	0.82746	0.88637	0.84926	0.86137	0.84754	0.86345	0.86740	0.84044	0.89080	0.92362
D33	0.83750	0.83800	0.80525	0.79725	0.83825	0.85475	0.76425	0.79350	0.78800	0.83425	0.82375	0.86825	0.87675	0.83350	0.86825	0.84700	0.86175	0.87525
D34	0.87237	0.84117	0.79453	0.82322	0.87125	0.75015	0.80402	0.80094	0.84890	0.84612	0.84324	0.78508	0.84674	0.80211	0.82207	0.79980	0.84380	0.88798
D35	0.64516	0.65000	0.68366	0.61538	0.60712	0.64516	0.61395	0.70524	0.64516	0.65669	0.67048	0.62019	0.58167	0.60401	0.64710	0.62594	0.65401	0.82570
D36	0.57300	0.56212	0.57616	0.58832	0.57965	0.57300	0.60407	0.58939	0.60848	0.58634	0.60681	0.59181	0.60378	0.55087	0.60532	0.60004	0.61901	0.62312
D37	0.65883	0.69276	0.67710	0.67293	0.67678	0.68024	0.73192	0.68927	0.70445	0.68166	0.68379	0.69691	0.64848	0.66535	0.68324	0.65806	0.68778	0.70979
D38	0.83911	0.83164	0.84833	0.86470	0.83080	0.83911	0.84782	0.84258	0.84572	0.87118	0.84757	0.86471	0.80634	0.85689	0.86746	0.83548	0.85285	0.87114
D39	0.80591	0.75536	0.79914	0.78741	0.83064	0.79264	0.84050	0.81509	0.81905	0.82173	0.78909	0.82600	0.74232	0.79195	0.82500	0.80950	0.81023	0.89600
D40	0.82250	0.78800	0.79112	0.76742	0.80640	0.84381	0.74188	0.79011	0.79851	0.78535	0.80763	0.85150	0.83000	0.80552	0.86250	0.79175	0.84559	0.86513
D41	0.91875	0.91875	0.91875	0.91875	0.91875	0.91875	0.91875	0.91875	0.90191	0.91875	0.98563	0.91875	0.91875	0.91875	0.91875	0.91875	0.86320	0.90430
D42	0.87838	0.81709	0.81696	0.82554	0.82054	0.87838	0.83169	0.83696	0.84899	0.85432	0.84318	0.86142	0.85419	0.87588	0.84872	0.84912	0.86595	0.87264
D43	0.76348	0.79378	0.77223	0.76584	0.82444	0.72535	0.75763	0.79640	0.76378	0.74253	0.78995	0.79235	0.75478	0.77174	0.77679	0.75511	0.75622	0.83468
D44	0.67795	0.67446	0.66871	0.63470	0.70137	0.68177	0.75039	0.69051	0.65045	0.67545	0.67956	0.69080	0.68479	0.67282	0.71283	0.67522	0.72203	0.79263
D45	0.93992	0.93910	0.92047	0.90591	0.90239	0.93083	0.96979	0.92735	0.93482	0.92877	0.93703	0.93574	0.92446	0.92824	0.93838	0.93155	0.96024	0.97521
D46	0.88222	0.83156	0.85100	0.85100	0.82139	0.90056	0.87228	0.86367	0.85766	0.88622	0.86878	0.88222	0.88300	0.84872	0.87467	0.84061	0.85344	0.86419
D47	0.90750	0.88075	0.83800	0.81075	0.82125	0.90500	0.78375	0.85550	0.80200	0.85750	0.85325	0.89325	0.90675	0.85375	0.90575	0.85025	0.86900	0.88200
D48	0.53429	0.63279	0.64188	0.62031	0.58817	0.53429	0.58217	0.63902	0.53429	0.63429	0.68843	0.64212	0.52010	0.55731	0.53857	0.60029	0.58969	0.75406
D49	0.80429	0.78058	0.77567	0.79055	0.79145	0.82035	0.81121	0.77815	0.76249	0.78358	0.79753	0.81613	0.77915	0.79163	0.78024	0.83004	0.80069	0.83310
D50	0.84138	0.82730	0.83506	0.79072	0.83648	0.84138	0.63269	0.83608	0.58883	0.83891	0.84217	0.85510	0.84283	0.84940	0.85156	0.84138	0.81508	0.82955
D51	0.81136	0.80705	0.83909	0.81023	0.88568	0.81886	0.85182	0.83364	0.83932	0.84409	0.84295	0.82227	0.83091	0.82318	0.81023	0.79114	0.88591	0.91773
D52	0.84000	0.99500	0.99500	0.99000	0.99500	0.84000	0.96868	0.99500	0.87729	0.99500	<							

D55	0.74068	0.79178	0.82786	0.78176	0.85737	0.76396	0.77486	0.82391	0.77922	0.77291	0.81779	0.82167	0.70560	0.79062	0.76052	0.80304	0.88387	0.89560
D56	0.64167	0.60938	0.83240	0.77583	0.80406	0.64167	0.72323	0.83781	0.72688	0.80177	0.75438	0.63698	0.59635	0.70385	0.73354	0.79625	0.79677	0.88135
D57	0.75962	0.81712	0.82038	0.87154	0.84077	0.76212	0.80077	0.83327	0.78577	0.84058	0.83038	0.80635	0.82192	0.79635	0.81077	0.78385	0.88038	0.89577
D58	0.62787	0.62130	0.66765	0.60297	0.64033	0.62787	0.68808	0.66540	0.60287	0.68325	0.66178	0.63540	0.55930	0.69115	0.62991	0.68138	0.71689	0.77361
D59	0.75083	0.81200	0.81200	0.76750	0.75833	0.75083	0.83625	0.80500	0.74417	0.77725	0.85508	0.72500	0.74167	0.77500	0.76125	0.84917	0.82076	0.91725
D60	0.75915	0.86167	0.87329	0.75730	0.87937	0.81987	0.83179	0.86937	0.82865	0.83976	0.84413	0.84631	0.81810	0.81362	0.85103	0.85032	0.85027	0.86945
D61	0.85759	0.89092	0.94092	0.94092	0.88855	0.86744	0.88994	0.92426	0.85136	0.92426	0.89069	0.85759	0.84857	0.89103	0.85418	0.88751	0.95623	0.96597
D62	0.64514	0.61974	0.64880	0.61635	0.62352	0.63956	0.65958	0.64124	0.61840	0.63685	0.63712	0.64000	0.64638	0.63155	0.64550	0.61221	0.67570	0.75426
D63	0.84571	0.79571	0.79571	0.79571	0.79571	0.84571	0.84857	0.79571	0.73914	0.79571	0.84357	0.84571	0.84571	0.84571	0.83043	0.84571	0.78086	0.90743
D64	0.91098	0.86098	0.86098	0.86098	0.86098	0.91098	0.86098	0.86098	0.82159	0.86098	0.85634	0.86098	0.86098	0.86098	0.91122	0.91098	0.80720	0.91012
D65	0.73917	0.71253	0.77162	0.71892	0.77443	0.73917	0.78578	0.78370	0.74892	0.76598	0.74203	0.76809	0.69853	0.72249	0.74167	0.76310	0.76417	0.76417
D66	0.63771	0.64138	0.67791	0.69022	0.64083	0.63806	0.73392	0.68540	0.57822	0.66704	0.65529	0.68022	0.63985	0.63140	0.63771	0.63771	0.72143	0.77957
D67	0.63087	0.56972	0.60530	0.55681	0.58004	0.63087	0.60010	0.59329	0.61453	0.58995	0.60934	0.57694	0.54345	0.58152	0.63087	0.63087	0.58719	0.61858
D68	0.86875	0.79639	0.88396	0.86264	0.91194	0.81667	0.92066	0.86007	0.81715	0.83743	0.86163	0.79049	0.76771	0.81892	0.86875	0.86875	0.87622	0.94483
D69	0.77434	0.52446	0.75196	0.75196	0.83562	0.77434	0.68153	0.74233	0.85707	0.66119	0.83720	0.77434	0.66694	0.77434	0.87616	0.87616	0.87153	0.87190
D70	0.85824	0.86326	0.87296	0.87804	0.88652	0.85372	0.87476	0.88024	0.70924	0.87632	0.90643	0.88244	0.84941	0.86610	0.85824	0.85745	0.85824	0.90215
AVG	0.78265	0.78376	0.79824	0.77653	0.79973	0.78309	0.80323	0.80117	0.76858	0.79654	0.80327	0.79076	0.77713	0.78588	0.79236	0.79190	0.80074	0.84667

Table 5: Experimental results (Rec) of RF and CIL approaches on 70 datasets.

No.	ORIG	Random	Synthetic sampling										Cluster based					
		ROS	S	AS	DS	SMPD	SENN	STL	NARS	GS	RWO	ANS	DBS	CS	KS	SOMO	AROS	AROSS
D1	0.94385	0.94509	0.94936	0.96162	0.94660	0.93052	0.93896	0.95454	0.92773	0.95125	0.95034	0.94328	0.94525	0.94142	0.92676	0.95405	0.94231	0.95739
D2	0.92968	0.94846	0.95034	0.96678	0.94516	0.92027	0.94322	0.95363	0.93147	0.95453	0.95312	0.94520	0.93154	0.93805	0.92074	0.94132	0.94420	0.95362
D3	0.58973	0.63402	0.66952	0.68140	0.66502	0.57475	0.78330	0.68439	0.54392	0.66795	0.64644	0.66837	0.58218	0.60776	0.62962	0.63854	0.63590	0.68934
D4	0.90000	0.89857	0.89714	0.90000	0.89714	0.90571	0.90857	0.89857	0.88286	0.89429	0.89857	0.90000	0.89714	0.89571	0.89857	0.89571	0.93714	0.96571
D5	0.85714	0.86714	0.86143	0.87143	0.86429	0.85714	0.84857	0.85429	0.84714	0.86143	0.86857	0.85857	0.86000	0.85714	0.86000	0.85857	0.91429	0.94571
D6	0.82857	0.84714	0.85571	0.85143	0.84571	0.79571	0.91286	0.82286	0.77429	0.85286	0.84857	0.84571	0.85857	0.81571	0.79857	0.81286	0.84143	0.90000
D7	0.61429	0.65429	0.66857	0.69000	0.65429	0.61429	0.81429	0.69429	0.65286	0.66000	0.69143	0.64857	0.64429	0.66286	0.64000	0.63714	0.74000	0.83000
D8	0.72000	0.77900	0.78500	0.80200	0.78600	0.74800	0.90100	0.78700	0.69000	0.78700	0.79700	0.73700	0.73000	0.74700	0.76900	0.76300	0.81500	0.87300
D9	0.46802	0.48057	0.48665	0.50575	0.49235	0.45206	0.48476	0.48150	0.42775	0.48213	0.46453	0.46549	0.44938	0.44514	0.45665	0.46251	0.46093	0.48379
D10	0.72121	0.74879	0.76818	0.80970	0.77727	0.72030	0.84091	0.77879	0.73394	0.77364	0.81697	0.73303	0.74727	0.74939	0.74152	0.80848	0.76818	0.79576
D11	0.47103	0.57631	0.59442	0.61189	0.59094	0.44042	0.70614	0.59354	0.42084	0.58764	0.49495	0.60981	0.47340	0.53631	0.48799	0.52195	0.48289	0.51924
D12	0.92640	0.94546	0.93558	0.94400	0.92640	0.92276	0.88209	0.93079	0.77581	0.92862	0.92385	0.92970	0.92790	0.92201	0.93520	0.92238	0.92603	0.92712
D13	0.33750	0.43838	0.42985	0.45235	0.42875	0.35000	0.58279	0.41743	0.17750	0.43118	0.49074	0.40750	0.35625	0.41125	0.38625	0.40875	0.46044	0.52243
D14	0.35333	0.35333	0.35333	0.35933	0.35333	0.35778	0.41333	0.35333	0.35333	0.35333	0.37711	0.35333	0.35378	0.35333	0.35333	0.35333	0.46600	0.59356
D15	0.88182	0.86855	0.88000	0.88236	0.88055	0.84564	0.96582	0.87055	0.61236	0.88582	0.87382	0.86145	0.85964	0.84909	0.84782	0.87418	0.91182	0.93782
D16	0.75417	0.83850	0.86700	0.89800	0.87767	0.78917	0.91367	0.86583	0.80483	0.86008	0.85317	0.82925	0.82800	0.81517	0.85208	0.79217	0.81650	0.86525
D17	0.95425	0.96536	0.96536	0.95536	0.96203	0.95425	0.97647	0.97425	0.92758	0.96203	0.96536	0.96536	0.96203	0.95536	0.95980	0.95425	0.96536	0.96536
D18	0.14286	0.29857	0.37000	0.38429	0.37571	0.14571	0.55714	0.35143	0.21286	0.32857	0.38857	0.22000	0.14571	0.26714	0.16000	0.14286	0.21429	0.32286
D19	0.86000	0.90000	0.89350	0.89800	0.89050	0.85600	0.90250	0.90000	0.91450	0.89900	0.93950	0.86000	0.89650	0.86600	0.88500	0.94600	0.96050	0.97950
D20	0.96000	0.97067	0.96467	0.98800	0.96000	0.94667	0.96000	0.97267	0.77667	0.94333	1.00000	0.90667	0.92667	0.95867	0.95200	0.93200	0.98800	1.00000
D21	0.47000	0.57200	0.70200	0.71500	0.69600	0.47400	0.82400	0.68200	0.38900	0.66600	0.75200	0.51100	0.61400	0.57200	0.54400	0.52400	0.57200	0.63000
D22	0.81333	0.82533	0.83400	0.84333	0.82733	0.78800	0.82733	0.83600	0.78800	0.83333	0.88533	0.79067	0.83067	0.81067	0.78400	0.83533	0.92600	0.96333
D23	0.94286	0.86857	0.89429	0.90000	0.89714	0.94286	0.90857	0.90857	0.92571	0.89429	0.95429	0.87143	0.88857	0.93143	0.92857	0.90286	0.94857	0.99714
D24	0.73455	0.84909	0.84473	0.86545	0.85455	0.70545	0.88145	0.84127	0.77036	0.84145	0.87764	0.81164	0.77473	0.78345	0.79709	0.77691	0.83527	0.86727
D25	0.91304	0.94261	0.95652	0.96522	0.94957	0.90435	0.95913	0.95652	0.92261	0.95565	0.94957	0.93826	0.94435	0.92783	0.94783	0.92527	0.94783	0.95652
D26	0.30381	0.36087	0.49866	0.51929	0.46299	0.31331	0.71904	0.49356	0.32867	0.44791	0.51381	0.46468	0.28820	0.38520	0.36525	0.32593	0.53277	0.64421
D27	0.86667	0.86000	0.86667	0.90000	0.88000	0.85333	0.88533	0.87667	0.77000	0.87667	0.89667	0.80000	0.81000	0.84333	0.84333	0.85000	0.90000	0.90000
D28	0.71269	0.80025	0.82146	0.85466	0.81659	0.70172	0.90318	0.82025	0.72729	0.80928	0.76502	0.81892	0.73816	0.74261	0.76271	0.71197	0.76006	0.79883
D29	0.48571	0.56857	0.70571	0.73429	0.71143	0.54857	0.89429	0.72286	0.55429	0.70571	0.65714	0.64571	0.52857	0.62000	0.66000	0.63429	0.58286	0.69429
D30	0.76964	0.79339	0.82071	0.84125	0.80518	0.77000	0.86500	0.82518	0.74393	0.81232	0.82125	0.88429	0.78464	0.79982	0.77857	0.78107	0.80054	0.82179
D31	0.80000	0.80000	0.87500	0.85000	0.80500	0.80000	0.85000	0.87000	0.84500	0.85000	0.87000	0.83500	0.75000	0.80500	0.83500	0.85000	0.82500	0.89500
D32	0.74909	0.77964	0.83927	0.82764	0.84527	0.73327	0.90745	0.83709	0.75891	0.81091	0.80236	0.75636	0.74327	0.77255	0.78309	0.75636	0.82327	0.83527
D33	0.79000	0.79000	0.79000	0.79000	0.75000	0.75000	0.79000	0.75000	0.75000	0.79400	0.79000	0.79000	0.79000	0.76600	0.79000	0.79000	0.81400	0.83000
D34	0.80000	0.80000	0.86000	0.85000	0.80000	0.80000	0.86500	0.86000	0.84500	0.85000	0.84500	0.85000	0.80500	0.79000	0.82500	0.85000	0.80500	0.90000
D35	0.13333	0.29333	0.36000	0.38833	0.32667	0.13333	0.54833	0.34833	0.13333	0.33333	0.27833	0.21333	0.16333	0.17500	0.13333	0.13333	0.20000	0.33333
D36	0.18000	0.23200	0.36200	0.34800	0.30400	0.18000	0.50400	0.34800	0.20800	0.27600	0.28000	0.29600	0.13400	0.19200	0.17200	0.17200	0.25800	0.28000
D37	0.47421	0.48653	0.58347	0.60047	0.57332	0.45084	0.65474	0.57916	0.46579	0.51521	0.52374	0.52979	0.40816	0.45605	0.47521	0.44553	0.55400	0.60537
D38	0.75000	0.80500	0.86000	0.84500	0.80500	0.75000	0.88000	0.86500	0.81000	0.90000	0.82500	0.82000	0.76000	0.82000	0.83000	0.83000	0.85500	0.89500
D39	0.64000	0.62000	0.79600	0.78400	0.71600	0.64000	0.81600	0.78000	0.67200	0.72400	0.76800	0.62000	0.56000	0.66000	0.63600	0.64400	0.72800	0.78000
D40	0.71000	0.69600	0.76000	0.76500	0.72000	0.76000	0.76000	0.75600	0.66500	0.75600	0.76000	0.76000	0.68400	0.75200	0.76000	0.76000	0.77000	0.81000
D41	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
D42	0.80000	0.79000	0.81500	0.84500	0.80000	0.80000	0.82500	0.83000	0.79000	0.80000	0.81500	0.76500	0.79500	0.74500	0.77500	0.80500	0.84000	0.85000
D43	0.60000	0.64800	0.72000	0.72800	0.68400	0.60000	0.74800	0.71200	0.68400	0.71200	0.77200	0.68400	0.52000	0.66400	0.62800	0.70000	0.66800	0.75600
D44	0.35273	0.39018	0.55964	0.56618	0.53473	0.38818	0.69927	0.58582	0.37764	0.51618	0.45473	0.54109	0.37273	0.42127	0.45764	0.41036	0.49509	0.53109
D45	0.87727	0.90864	0.95652	0.92727	0.94212	0.89545	0.98182	0.95273	0.91212	0.94242	0.95136	0.92909	0.92076	0.90515	0.92561	0.94152	0.94879	0.96515
D46	0.60000	0.64111	0.67778	0.61111	0.66556	0.59000	0.67111	0.67778	0.68333	0.67111	0.80000	0.60000	0.58667	0.62556	0.62667	0.60889	0.98444	0.99556
D47	0.80000	0.80500	0.82500	0.80500	0.82500	0.80000	0.83000	0.82500	0.79500	0.84500	0.83500	0.82500	0.83000	0.84500	0.85000	0.85000	0.85000	0.85000
D48	0.06667	0.29333	0.32667	0.34667	0.28667	0.06667	0.47667	0.33833	0.06667	0.30000	0.27667	0.23000	0.15667	0.20167	0.06500	0.11667	0.14500	0.23000
D49	0.58667	0.67667	0.76000	0.76000	0.76000	0.63000	0.78667	0.75333	0.64667	0.73667	0.75333	0.75667	0.55667	0.65333	0.72333	0.75000	0.73000	0.78333
D50	0.80714	0.83286	0.81000	0.80714	0.80714	0.80143	0.37857	0.81000	0.27143	0.80714	0.80714	0.81571	0.80714	0.78429	0.79571	0.83571	0.78714	0.83571
D51	0.75000	0.80500	0.86000	0.84500	0.81000	0.75000	0.85000	0.87000	0.82000	0.85000	0.82000	0.84000	0.75500	0.83500	0.83000	0.82500	0.88000	0.90000
D52	0.90000	0.97000	0.98000	0.980														

D55	0.64000	0.73600	0.76000	0.81600	0.72000	0.60000	0.78800	0.77600	0.71200	0.74000	0.83200	0.72000	0.50000	0.69200	0.63200	0.57600	0.77200	0.87200
D56	0.36667	0.33333	0.52000	0.50000	0.50000	0.36667	0.53667	0.52667	0.53333	0.49333	0.49667	0.38667	0.38333	0.30667	0.40667	0.42000	0.47000	0.70333
D57	0.75000	0.78500	0.84000	0.81500	0.80000	0.76000	0.84000	0.82500	0.75000	0.79000	0.81500	0.75500	0.79500	0.75500	0.76000	0.75000	0.83000	0.87000
D58	0.30000	0.22000	0.34000	0.32000	0.37333	0.30000	0.46000	0.35667	0.19333	0.23333	0.43333	0.21333	0.06333	0.20667	0.29333	0.16667	0.44333	0.46667
D59	0.46667	0.63333	0.77667	0.80000	0.77333	0.46667	0.82000	0.77000	0.40000	0.77667	0.93333	0.46667	0.62333	0.64000	0.58333	0.63333	0.77333	0.92667
D60	0.70000	0.74000	0.88500	0.78500	0.87000	0.70000	0.89000	0.87000	0.87500	0.83000	0.88000	0.82000	0.78500	0.80000	0.83000	0.78000	0.82500	0.90000
D61	0.76667	0.96667	0.96667	0.96667	0.96667	0.83333	0.95533	0.96667	0.73467	0.96667	0.99200	0.90000	0.83333	0.84000	0.76000	0.81333	0.99000	1.00000
D62	0.11944	0.15000	0.35056	0.36000	0.29833	0.11917	0.44278	0.35667	0.08222	0.28889	0.42139	0.30778	0.07944	0.28361	0.13194	0.11194	0.37833	0.43889
D63	0.70000	0.90000	0.75000	0.70000	0.80000	0.70000	0.88000	0.75000	0.70000	0.70000	0.91000	0.80000	0.80000	0.80000	0.78000	0.89000	0.74000	0.86000
D64	0.70000	0.90000	0.84000	0.80000	0.87000	0.70000	0.91000	0.82000	0.70000	0.78000	0.84000	0.80000	0.70000	0.70000	0.68000	0.77000	0.81000	0.89000
D65	0.55000	0.46000	0.56000	0.24500	0.59500	0.55000	0.56000	0.56500	0.47000	0.55000	0.55000	0.54000	0.36000	0.51000	0.53000	0.55000	0.55000	0.55000
D66	0.14000	0.16945	0.45036	0.46436	0.40200	0.15800	0.62600	0.44455	0.12036	0.36127	0.25345	0.39673	0.14400	0.18145	0.14000	0.14000	0.25745	0.29982
D67	0.13333	0.18333	0.24667	0.21000	0.22000	0.13333	0.32000	0.21333	0.13333	0.10000	0.31000	0.15000	0.00000	0.09333	0.13333	0.13333	0.13667	0.14333
D68	0.50000	0.73722	0.85722	0.86389	0.82139	0.51000	0.90611	0.85472	0.72389	0.81222	0.81472	0.74944	0.47472	0.67139	0.50000	0.50000	0.75000	0.79639
D69	0.40000	0.31000	0.60000	0.23000	0.60000	0.40000	0.74000	0.60000	0.60000	0.53000	0.80000	0.24000	0.26000	0.20000	0.40000	0.42000	0.80000	0.80000
D70	0.54381	0.68210	0.74705	0.74181	0.72971	0.57695	0.75238	0.74448	0.42581	0.72705	0.84305	0.70829	0.64210	0.71943	0.54381	0.58343	0.54381	0.81067
AVG	0.61933	0.67131	0.72291	0.71540	0.71030	0.62008	0.77322	0.72299	0.60500	0.69938	0.72785	0.67111	0.62028	0.64935	0.64224	0.64805	0.70211	0.75461

Table 6: Experimental results (F_1) of RF and CIL approaches on 70 datasets.

No.	ORIG	Random	Synthetic sampling										Cluster based					
		ROS	S	AS	DS	SMPD	SENN	STL	NARS	GS	RWO	ANS	DBS	CS	KS	SOMO	AROS	AROSS
D1	0.95012	0.94762	0.94780	0.95119	0.94733	0.94098	0.93816	0.95226	0.94485	0.94967	0.94900	0.94752	0.94942	0.94765	0.93822	0.95365	0.94190	0.94848
D2	0.93810	0.94654	0.94879	0.95360	0.94534	0.93762	0.93985	0.94968	0.94391	0.94950	0.94856	0.94466	0.94363	0.94280	0.93741	0.94435	0.94160	0.94917
D3	0.63967	0.64766	0.65345	0.65214	0.65735	0.63274	0.68514	0.66725	0.61614	0.65308	0.64978	0.65636	0.62986	0.63514	0.64601	0.64574	0.65049	0.67973
D4	0.88381	0.87874	0.87748	0.87388	0.87574	0.88754	0.85474	0.87893	0.87561	0.87479	0.87929	0.88381	0.88300	0.86951	0.87831	0.87500	0.89924	0.91406
D5	0.82311	0.83315	0.82789	0.82255	0.81971	0.82741	0.81429	0.82075	0.83494	0.82837	0.82532	0.82935	0.83154	0.82540	0.82774	0.82713	0.83581	0.85883
D6	0.81689	0.80365	0.79493	0.78458	0.79074	0.79072	0.74360	0.77930	0.76720	0.79489	0.79810	0.80373	0.80944	0.77796	0.78310	0.78088	0.77110	0.80358
D7	0.64418	0.65651	0.66769	0.67351	0.65735	0.64418	0.69938	0.68469	0.65797	0.65489	0.67654	0.65548	0.65457	0.66564	0.64226	0.66022	0.69951	0.75712
D8	0.71202	0.74479	0.74306	0.75185	0.75061	0.73646	0.78254	0.74968	0.72872	0.74718	0.74602	0.72288	0.71702	0.72861	0.73593	0.74024	0.74120	0.76543
D9	0.58134	0.55948	0.56041	0.56360	0.56282	0.57504	0.55459	0.56125	0.57497	0.55830	0.57510	0.56280	0.55967	0.56154	0.56829	0.57169	0.57511	0.59616
D10	0.75744	0.76592	0.77798	0.78927	0.77684	0.75271	0.80276	0.78720	0.76767	0.78006	0.79257	0.76790	0.76655	0.76979	0.76314	0.78527	0.75624	0.77997
D11	0.52999	0.57879	0.57545	0.57277	0.57646	0.51683	0.58647	0.57559	0.50159	0.57358	0.54141	0.58482	0.51337	0.55387	0.53862	0.56014	0.53581	0.56544
D12	0.91797	0.91488	0.91775	0.91219	0.91545	0.91427	0.83170	0.91909	0.84295	0.91578	0.91484	0.91618	0.91508	0.91484	0.91889	0.91383	0.91760	0.91752
D13	0.32492	0.37581	0.35937	0.37387	0.35815	0.33694	0.44601	0.34674	0.23262	0.35970	0.38794	0.32182	0.31765	0.34593	0.36537	0.34922	0.38838	0.44723
D14	0.38809	0.38382	0.38095	0.38038	0.39063	0.39109	0.39205	0.38133	0.40298	0.38314	0.37880	0.38809	0.36591	0.38780	0.41519	0.40451	0.43646	0.53329
D15	0.88003	0.86756	0.86811	0.86559	0.86504	0.86382	0.88003	0.86213	0.60946	0.87017	0.85633	0.86034	0.86789	0.84688	0.85655	0.86021	0.86282	0.88069
D16	0.75507	0.77965	0.79015	0.79879	0.78229	0.76679	0.79371	0.78511	0.77960	0.78471	0.77694	0.78347	0.78984	0.77935	0.78930	0.76967	0.77401	0.79943
D17	0.95457	0.95856	0.95546	0.93128	0.94630	0.95457	0.94958	0.95750	0.93429	0.94684	0.95179	0.96027	0.95856	0.95182	0.95742	0.95457	0.94503	0.94612
D18	0.15061	0.30210	0.34175	0.35068	0.33425	0.13065	0.37771	0.32402	0.21471	0.30762	0.33559	0.20914	0.16694	0.26491	0.17882	0.14585	0.19793	0.28582
D19	0.82327	0.84397	0.84047	0.84608	0.83873	0.83867	0.84126	0.84494	0.85145	0.84678	0.85635	0.82459	0.84227	0.81559	0.83321	0.85733	0.82511	0.83517
D20	0.93007	0.91039	0.91021	0.91950	0.90667	0.92677	0.90667	0.91371	0.71120	0.90086	0.91972	0.91596	0.91413	0.90489	0.91480	0.89200	0.86399	0.86730
D21	0.51532	0.55017	0.59368	0.59053	0.58725	0.51034	0.59762	0.57246	0.44574	0.57591	0.57697	0.53861	0.56604	0.53713	0.54160	0.51866	0.53906	0.58781
D22	0.86537	0.83571	0.84085	0.85864	0.84358	0.85812	0.80906	0.83923	0.80425	0.84231	0.80138	0.83828	0.83425	0.85162	0.81041	0.78557	0.77476	0.79293
D23	0.96923	0.90652	0.92429	0.91199	0.91811	0.96923	0.91813	0.93196	0.94197	0.92615	0.94428	0.91231	0.92179	0.94872	0.95626	0.93112	0.93141	0.95660
D24	0.76002	0.79834	0.78945	0.75682	0.76526	0.73954	0.78629	0.78098	0.76192	0.79840	0.79107	0.79411	0.77995	0.77534	0.77051	0.76012	0.78202	0.79258
D25	0.93244	0.93052	0.92366	0.91293	0.91032	0.92758	0.91357	0.92461	0.93042	0.92160	0.92812	0.94634	0.93625	0.92076	0.93530	0.92000	0.92695	0.93189
D26	0.36959	0.40137	0.44749	0.45490	0.43324	0.37987	0.48647	0.44216	0.36462	0.43436	0.46768	0.44254	0.35889	0.41099	0.40643	0.37262	0.46425	0.51470
D27	0.90545	0.87568	0.84502	0.85389	0.84816	0.87348	0.85993	0.85596	0.85141	0.85440	0.87566	0.82143	0.83792	0.86729	0.85705	0.88368	0.80866	0.81278
D28	0.75775	0.78939	0.78547	0.78584	0.78542	0.75209	0.77029	0.78863	0.76698	0.78566	0.76842	0.79792	0.76480	0.76103	0.77487	0.75184	0.76945	0.79169
D29	0.59212	0.55232	0.62482	0.63841	0.63072	0.63494	0.60276	0.63798	0.58760	0.63904	0.61024	0.62689	0.57085	0.61686	0.63165	0.62871	0.63351	0.68709
D30	0.79815	0.81044	0.79676	0.78915	0.79767	0.80083	0.77041	0.79813	0.78008	0.80334	0.79303	0.77384	0.80184	0.80337	0.80903	0.80218	0.78582	0.79709
D31	0.70914	0.71531	0.74177	0.70931	0.70395	0.74011	0.73304	0.73884	0.76034	0.74085	0.74027	0.75270	0.70481	0.73895	0.74523	0.74693	0.67834	0.72608
D32	0.80253	0.77990	0.75954	0.75185	0.78939	0.78919	0.75350	0.75817	0.78947	0.75680	0.76485	0.77080	0.79976	0.76435	0.79035	0.78177	0.80364	0.81093
D33	0.78687	0.73168	0.65318	0.62558	0.63459	0.77422	0.60717	0.64003	0.76488	0.68901	0.73117	0.73250	0.80855	0.73492	0.77806	0.77644	0.75295	0.76458
D34	0.75397	0.73800	0.74506	0.72727	0.72599	0.77705	0.74888	0.75780	0.81255	0.75142	0.73595	0.78289	0.77669	0.74201	0.75151	0.76105	0.68337	0.74377
D35	0.15000	0.34935	0.33728	0.35102	0.32844	0.15000	0.39035	0.32936	0.15000	0.32685	0.24655	0.25314	0.21786	0.22819	0.15000	0.16667	0.17189	0.30932
D36	0.23667	0.28719	0.32385	0.29776	0.31099	0.23667	0.27638	0.31598	0.27647	0.29421	0.32993	0.29716	0.19594	0.24099	0.22822	0.24587	0.27655	0.30177
D37	0.50171	0.49804	0.52752	0.52334	0.55197	0.47666	0.51747	0.53043	0.49074	0.48871	0.51790	0.47194	0.46314	0.45931	0.49358	0.48645	0.54250	0.58339
D38	0.74355	0.75399	0.76125	0.72871	0.72731	0.74355	0.78519	0.77057	0.81803	0.78268	0.73681	0.78683	0.75103	0.79726	0.78951	0.77838	0.74608	0.77697
D39	0.65762	0.57079	0.70790	0.67956	0.65552	0.66223	0.68053	0.69098	0.72411	0.64634	0.69392	0.60326	0.60317	0.69079	0.66728	0.63608	0.69560	0.73878
D40	0.75879	0.66652	0.62348	0.60238	0.60121	0.78095	0.58125	0.62457	0.70957	0.63694	0.72759	0.75088	0.73455	0.75118	0.78691	0.77009	0.73121	0.76263
D41	0.92000	1.00000	1.00000	1.00000	1.00000	0.92000	1.00000	1.00000	0.74626	1.00000	0.95333	0.96000	0.98800	0.98400	0.97200	0.92952	0.82306	0.82439
D42	0.81397	0.76156	0.74755	0.73405	0.73957	0.79942	0.73950	0.75473	0.80360	0.73550	0.73904	0.74428	0.79979	0.75112	0.75828	0.78291	0.74291	0.75686
D43	0.58889	0.66189	0.65839	0.64946	0.65575	0.58889	0.64066	0.65542	0.69475	0.66918	0.68406	0.64961	0.57390	0.67536	0.65048	0.73026	0.59794	0.66075
D44	0.39313	0.38541	0.45245	0.44637	0.45260	0.41199	0.48395	0.47406	0.41208	0.43406	0.44393	0.47628	0.41356	0.40064	0.45315	0.41618	0.49331	0.52353
D45	0.90164	0.88921	0.88286	0.86198	0.87707	0.90424	0.87230	0.88083	0.91809	0.88689	0.88851	0.91812	0.90125	0.90363	0.90724	0.90594	0.89337	0.90010
D46	0.68968	0.72387	0.74190	0.70455	0.74268	0.67375	0.73468	0.74196	0.74218	0.73646	0.80417	0.68968	0.68502	0.69486	0.72340	0.71131	0.65974	0.66287
D47	0.85476	0.78641	0.70667	0.66089	0.69294	0.83944	0.67802	0.70810	0.80163	0.76236	0.73449	0.83958	0.84734	0.82103	0.88486	0.86530	0.78957	0.79051
D48	0.10000	0.35978	0.35357	0.36801	0.30516	0.10000	0.39747	0.35336	0.10000	0.31922	0.28102	0.32595	0.22800	0.25392	0.09800	0.15000	0.17066	0.27251
D49	0.61385	0.66279	0.62309	0.57384	0.62109	0.63639	0.62117	0.61728	0.69010	0.64485	0.69197	0.68778	0.61078	0.67103	0.73593	0.74103	0.65890	0.71429
D50	0.70250	0.68350	0.70463	0.70250	0.70247	0.70247	0.32153	0.70463	0.24127	0.70250	0.67578	0.71414	0.70250	0.69917	0.70114	0.71943	0.66723	0.69259
D51	0.79365	0.83786	0.86881	0.84021	0.82667	0.77397	0.83635	0.86738	0.84206	0.87429	0.83093	0.85333	0.80190	0.85175	0.85460	0.85619	0.79054	0.80200
D52	0.86667	0.92667	0.94733	0.90800	0.92267	0.86667	0.93333	0.93400	0.68									

D55	0.69034	0.73950	0.72524	0.73421	0.69511	0.65647	0.71854	0.72512	0.71911	0.71132	0.75654	0.74141	0.57127	0.72218	0.67033	0.63703	0.67332	0.73637
D56	0.45333	0.41010	0.61714	0.60267	0.60533	0.45333	0.60338	0.62381	0.63333	0.57914	0.58700	0.48000	0.48133	0.38200	0.51267	0.49200	0.46029	0.68519
D57	0.74688	0.78199	0.76820	0.73108	0.77466	0.75755	0.74433	0.75876	0.78759	0.75219	0.75113	0.75582	0.79779	0.74208	0.74433	0.75194	0.71773	0.74536
D58	0.42444	0.31714	0.34593	0.32457	0.42353	0.42444	0.29928	0.35869	0.27302	0.28826	0.41589	0.27415	0.09881	0.28478	0.41254	0.23873	0.51673	0.53241
D59	0.54667	0.65514	0.64948	0.63146	0.69562	0.54667	0.61190	0.63746	0.36638	0.63164	0.68720	0.54867	0.66667	0.64995	0.62286	0.60286	0.56459	0.67024
D60	0.69143	0.75309	0.80980	0.77237	0.82573	0.64426	0.78358	0.80332	0.78174	0.79879	0.78643	0.77114	0.75836	0.76478	0.75886	0.75797	0.67709	0.73532
D61	0.76526	0.92299	0.91133	0.96002	0.90813	0.80010	0.87084	0.90716	0.66118	0.91118	0.92088	0.86526	0.81515	0.81413	0.76136	0.81250	0.81421	0.82064
D62	0.20081	0.22167	0.32457	0.32756	0.30140	0.19010	0.27592	0.33186	0.13681	0.33116	0.38499	0.30728	0.12823	0.30493	0.21061	0.18190	0.39510	0.45222
D63	0.47556	0.67956	0.54120	0.48140	0.61544	0.47556	0.63533	0.54819	0.47000	0.48222	0.66622	0.60889	0.60889	0.60889	0.57987	0.66956	0.57044	0.65603
D64	0.51556	0.71556	0.63544	0.58222	0.67556	0.51556	0.71373	0.61622	0.51014	0.60889	0.62356	0.68889	0.55556	0.55556	0.50356	0.65422	0.55616	0.63971
D65	0.65778	0.54844	0.52224	0.25802	0.62794	0.65778	0.45780	0.53489	0.57756	0.61660	0.65054	0.64711	0.47129	0.57908	0.63644	0.65778	0.65778	0.65778
D66	0.22171	0.24379	0.39020	0.39410	0.40708	0.23319	0.35939	0.39349	0.18902	0.39465	0.32961	0.41605	0.21877	0.24316	0.22171	0.22171	0.33854	0.39050
D67	0.19048	0.23149	0.22758	0.19982	0.24519	0.19048	0.18742	0.19563	0.19048	0.10507	0.28374	0.18175	0.00000	0.13506	0.19048	0.19048	0.19333	0.22071
D68	0.61282	0.72332	0.74710	0.74413	0.73516	0.60009	0.74383	0.74523	0.70394	0.73480	0.72164	0.69205	0.57184	0.70678	0.61282	0.61282	0.72437	0.75074
D69	0.36000	0.28000	0.38895	0.23333	0.42038	0.36000	0.45440	0.38381	0.49333	0.31659	0.56819	0.20000	0.21143	0.16000	0.36000	0.38000	0.66667	0.66667
D70	0.64525	0.75217	0.73852	0.72908	0.76176	0.68689	0.72925	0.74144	0.52094	0.74699	0.75340	0.77877	0.73227	0.76824	0.64525	0.68531	0.64525	0.55234
AVG	0.63835	0.66432	0.67317	0.65796	0.67193	0.63760	0.66484	0.67264	0.61855	0.66460	0.68020	0.66461	0.63663	0.65021	0.65016	0.64971	0.65013	0.68575

Table 7: Experimental results (GM) of RF and CIL approaches on 70 datasets.

No.	ORIG	Random	Synthetic sampling										Cluster based					
		ROS	S	AS	DS	SMPD	SENN	STL	NARS	GS	RWO	ANS	DBS	CS	KS	SOMO	AROS	AROOS
D1	0.95892	0.95744	0.95833	0.96274	0.95759	0.95074	0.95056	0.96208	0.95266	0.95984	0.95923	0.95705	0.95867	0.95674	0.94828	0.96284	0.95305	0.95980
D2	0.94885	0.95745	0.95922	0.96518	0.95619	0.94671	0.95232	0.96037	0.95283	0.96042	0.95951	0.95577	0.95264	0.95324	0.94667	0.95487	0.95294	0.95964
D3	0.71200	0.72221	0.72846	0.72791	0.73103	0.70589	0.75547	0.74014	0.69145	0.72856	0.72477	0.73060	0.70555	0.71116	0.72086	0.72078	0.72446	0.74927
D4	0.90975	0.90713	0.90581	0.90479	0.90528	0.91305	0.89212	0.90699	0.90197	0.90406	0.90747	0.90975	0.90897	0.90166	0.90723	0.90511	0.92548	0.93980
D5	0.86582	0.87395	0.86926	0.86658	0.86469	0.86926	0.85981	0.86421	0.87417	0.86981	0.86781	0.86993	0.87182	0.86714	0.86869	0.86834	0.88110	0.90076
D6	0.86295	0.85605	0.84885	0.84111	0.84546	0.84050	0.80543	0.83548	0.82104	0.84971	0.85209	0.85623	0.86167	0.83450	0.83688	0.83579	0.83330	0.86231
D7	0.72085	0.73449	0.74225	0.74731	0.73320	0.72085	0.75162	0.75716	0.73087	0.73150	0.75048	0.73133	0.73213	0.73994	0.71896	0.73504	0.76948	0.81963
D8	0.75032	0.77991	0.77806	0.78409	0.78164	0.77162	0.75785	0.78527	0.77071	0.78262	0.77767	0.76446	0.75735	0.76696	0.77402	0.78074	0.77233	0.79408
D9	0.66009	0.65279	0.65365	0.65957	0.65652	0.65230	0.65116	0.65317	0.64390	0.65222	0.65619	0.65068	0.64462	0.64413	0.65027	0.65424	0.65512	0.67167
D10	0.81047	0.82114	0.83224	0.84715	0.83375	0.80764	0.86250	0.83947	0.81931	0.83445	0.85034	0.81912	0.82126	0.82326	0.81848	0.84369	0.81671	0.83576
D11	0.64009	0.69039	0.69119	0.69192	0.69153	0.62545	0.70840	0.69136	0.61231	0.68897	0.65174	0.69885	0.63237	0.66806	0.64912	0.66879	0.64603	0.67064
D12	0.94602	0.95036	0.94870	0.94888	0.94504	0.94347	0.89576	0.94773	0.86970	0.94584	0.94402	0.94633	0.94534	0.94346	0.94903	0.94318	0.94576	0.94607
D13	0.43566	0.50387	0.46947	0.48392	0.45988	0.45508	0.58755	0.46540	0.34238	0.47255	0.51597	0.41645	0.43540	0.46239	0.48038	0.46518	0.51552	0.58539
D14	0.48698	0.48478	0.48356	0.49658	0.48707	0.48953	0.53490	0.48383	0.49270	0.48419	0.50154	0.48698	0.47886	0.48684	0.49757	0.49367	0.54785	0.66754
D15	0.91835	0.90922	0.91283	0.91278	0.91198	0.90092	0.94106	0.90761	0.67584	0.91548	0.90608	0.90435	0.90661	0.89484	0.89783	0.90799	0.92113	0.93603
D16	0.81285	0.85008	0.86294	0.87457	0.86039	0.83112	0.87435	0.86072	0.83839	0.85938	0.84952	0.84762	0.85129	0.84311	0.85856	0.83093	0.83745	0.86337
D17	0.97083	0.97598	0.97506	0.96398	0.97127	0.97083	0.97740	0.97881	0.95517	0.97142	0.97380	0.97233	0.97474	0.97045	0.97362	0.97083	0.97204	0.97233
D18	0.24750	0.47536	0.52217	0.53005	0.51861	0.23880	0.58032	0.50429	0.36718	0.48938	0.52041	0.37032	0.30345	0.43663	0.33456	0.29136	0.36344	0.46301
D19	0.88164	0.90052	0.89772	0.90218	0.89497	0.89072	0.89848	0.90210	0.90860	0.90272	0.91386	0.88277	0.89882	0.87432	0.89140	0.90953	0.89455	0.90316
D20	0.96653	0.95771	0.95647	0.96650	0.95379	0.95980	0.95379	0.96020	0.75903	0.94684	0.96953	0.94285	0.94896	0.95227	0.95428	0.93937	0.94247	0.94790
D21	0.65805	0.71479	0.77775	0.78052	0.77281	0.65812	0.81400	0.76226	0.59287	0.75853	0.78449	0.68477	0.73647	0.71017	0.69902	0.68270	0.71021	0.74907
D22	0.89432	0.89291	0.89770	0.90562	0.89575	0.88165	0.88659	0.89810	0.87014	0.89757	0.90735	0.87895	0.89486	0.89046	0.86983	0.87768	0.91235	0.92985
D23	0.97033	0.92585	0.94036	0.94027	0.94034	0.97033	0.94489	0.94776	0.95726	0.94049	0.96943	0.92785	0.93688	0.96108	0.96142	0.94471	0.96449	0.98923
D24	0.83127	0.88727	0.88152	0.88104	0.88047	0.81425	0.88704	0.87817	0.84485	0.88201	0.89534	0.87069	0.85169	0.85332	0.85736	0.84746	0.87161	0.88650
D25	0.95113	0.96298	0.96712	0.96800	0.96121	0.94653	0.96564	0.96728	0.95443	0.96626	0.96529	0.96433	0.96488	0.95484	0.96607	0.95316	0.96407	0.96880
D26	0.52176	0.56539	0.65094	0.66318	0.62586	0.53245	0.74118	0.64535	0.53411	0.62325	0.66372	0.63052	0.51160	0.58347	0.57186	0.53856	0.67280	0.73316
D27	0.92573	0.91633	0.91198	0.92989	0.91748	0.91313	0.92365	0.91993	0.86729	0.92037	0.93159	0.87287	0.88236	0.90595	0.90385	0.91312	0.91624	0.91771
D28	0.83425	0.88106	0.89054	0.90525	0.88818	0.82842	0.92368	0.89046	0.84313	0.88480	0.86160	0.89110	0.84794	0.84992	0.86104	0.83298	0.85948	0.88086
D29	0.68369	0.72561	0.80981	0.82402	0.81291	0.72786	0.88131	0.82018	0.72580	0.81168	0.78349	0.78033	0.70484	0.76471	0.78813	0.77102	0.74507	0.81142
D30	0.86723	0.88093	0.89176	0.90050	0.88463	0.86770	0.90768	0.89405	0.85225	0.88894	0.89065	0.91474	0.87549	0.88248	0.87287	0.87364	0.87930	0.89085
D31	0.81413	0.83853	0.86913	0.85086	0.83357	0.85262	0.86154	0.86822	0.87904	0.86322	0.85385	0.86941	0.82323	0.85170	0.86897	0.86031	0.78883	0.82218
D32	0.85632	0.86731	0.89119	0.88398	0.89861	0.84898	0.92176	0.88992	0.85726	0.87885	0.87573	0.85497	0.85333	0.86234	0.87083	0.85785	0.89245	0.89903
D33	0.87164	0.85980	0.83690	0.82779	0.83500	0.84608	0.77164	0.83387	0.85222	0.85067	0.85963	0.85095	0.87392	0.84867	0.86933	0.86908	0.87688	0.88679
D34	0.86142	0.85544	0.87843	0.86543	0.85661	0.87063	0.87662	0.88084	0.89891	0.87628	0.86643	0.89010	0.87229	0.85106	0.86535	0.86883	0.82642	0.88263
D35	0.22323	0.46516	0.50073	0.51826	0.48064	0.22323	0.65529	0.49415	0.22323	0.48785	0.38712	0.35742	0.29170	0.29619	0.22323	0.22715	0.27780	0.46698
D36	0.32158	0.43593	0.55797	0.54104	0.52156	0.32158	0.61003	0.54591	0.36989	0.49556	0.43646	0.50637	0.27744	0.38230	0.31778	0.35888	0.37731	0.41810
D37	0.63639	0.64444	0.70777	0.71777	0.70734	0.61560	0.71013	0.70554	0.63252	0.65509	0.66901	0.66101	0.59105	0.61810	0.63492	0.62314	0.69106	0.72853
D38	0.84205	0.86743	0.88930	0.87374	0.85875	0.84205	0.90323	0.89257	0.88771	0.91156	0.86659	0.88357	0.84849	0.88490	0.88844	0.88185	0.87686	0.90100
D39	0.76166	0.73068	0.85791	0.84404	0.80924	0.76235	0.85728	0.84709	0.78939	0.80419	0.84146	0.73747	0.69964	0.77732	0.76003	0.76008	0.82192	0.85713
D40	0.81578	0.79432	0.81332	0.80726	0.79296	0.85315	0.75301	0.81082	0.79256	0.81608	0.84151	0.84763	0.80331	0.84327	0.85286	0.84929	0.84828	0.87437
D41	0.98730	1.00000	1.00000	1.00000	0.98730	1.00000	1.00000	1.00000	1.00000	1.00000	0.99236	0.99365	0.99809	0.99746	0.99555	0.98712	0.88279	0.88277
D42	0.87963	0.86366	0.86898	0.87358	0.86159	0.87683	0.86823	0.87763	0.87421	0.85842	0.86422	0.84660	0.87482	0.83771	0.85506	0.87486	0.87456	0.88158
D43	0.67050	0.77034	0.79999	0.79827	0.78804	0.67050	0.78282	0.79543	0.79631	0.79979	0.83094	0.77760	0.68104	0.77844	0.76092	0.80648	0.75516	0.81327
D44	0.54981	0.56921	0.67390	0.67380	0.66384	0.54446	0.74921	0.69635	0.57653	0.65188	0.62053	0.66539	0.56880	0.58808	0.62050	0.57936	0.64848	0.67669
D45	0.93301	0.94614	0.96682	0.95045	0.95962	0.94160	0.97650	0.96492	0.95116	0.96087	0.96520	0.95880	0.95294	0.94597	0.95601	0.96302	0.96476	0.97288
D46	0.75897	0.78534	0.80669	0.76522	0.80115	0.74944	0.80235	0.80707	0.80969	0.80228	0.87991	0.75897	0.75409	0.77428	0.77968	0.76912	0.92649	0.92755
D47	0.88565	0.87863	0.86778	0.84637	0.86807	0.88411	0.83081	0.87109	0.87959	0.89266	0.87891	0.89728	0.90013	0.90324	0.91642	0.91416	0.90066	0.90117
D48	0.11547	0.46841	0.48898	0.50097	0.44166	0.11547	0.59262	0.50154	0.11547	0.46724	0.39687	0.40857	0.28376	0.32934	0.11392	0.21109	0.23872	0.35434
D49	0.73605	0.78093	0.79321	0.78022	0.80091	0.75874	0.79182	0.78241	0.78159	0.79870	0.81154	0.81851	0.72399	0.77375	0.82781	0.84080	0.80385	0.84237
D50	0.83530	0.84308	0.83709	0.83530	0.83530	0.83543	0.50182	0.83709	0.38756	0.83530	0.83223	0.84111	0.83530	0.82770	0.83088	0.85269	0.82327	0.84806
D51	0.85148	0.88621	0.91812	0.90509	0.88801	0.84900	0.90864	0.92356	0.89725	0.91502	0.89361	0.90729	0.85463	0.90434	0.90185	0.89962	0.91900	0.92955
D52	0.93636	0.97838	0.98425	0.98047	0.98854	0.93636	0.99264	0.9885										

D55	0.77625	0.83048	0.83379	0.85406	0.80615	0.74247	0.82855	0.83495	0.82012	0.82252	0.86378	0.82303	0.67248	0.80494	0.76631	0.72275	0.83622	0.89697
D56	0.46802	0.44104	0.64150	0.63029	0.63055	0.46802	0.65604	0.64543	0.64967	0.62194	0.63123	0.49630	0.51227	0.40153	0.53689	0.50091	0.58734	0.81715
D57	0.83888	0.86768	0.89561	0.87047	0.87784	0.84717	0.88963	0.88698	0.85328	0.86767	0.87858	0.84571	0.87656	0.84721	0.84762	0.83944	0.87676	0.90520
D58	0.54122	0.44041	0.51385	0.48969	0.59106	0.54122	0.60970	0.53735	0.38517	0.41223	0.63531	0.40209	0.14041	0.40549	0.53419	0.35811	0.65492	0.67090
D59	0.67145	0.76648	0.83110	0.83171	0.84471	0.67145	0.81745	0.82285	0.50938	0.82899	0.86469	0.67163	0.77200	0.77006	0.73898	0.75586	0.76310	0.85395
D60	0.80319	0.84275	0.91521	0.86606	0.91604	0.79368	0.89321	0.90749	0.89465	0.89274	0.89908	0.87952	0.86329	0.87034	0.87509	0.86073	0.85219	0.89443
D61	0.85285	0.97681	0.97492	0.98086	0.97445	0.88838	0.96100	0.97421	0.75002	0.97492	0.98742	0.93738	0.89111	0.89471	0.84649	0.88201	0.95408	0.96124
D62	0.34471	0.38003	0.56527	0.57296	0.52643	0.29208	0.62161	0.57246	0.23577	0.51694	0.62879	0.51643	0.23138	0.50769	0.35887	0.29458	0.59570	0.64375
D63	0.68302	0.88353	0.74503	0.68112	0.82489	0.68302	0.83737	0.75222	0.65756	0.68387	0.87202	0.82444	0.82444	0.82444	0.79477	0.87725	0.74348	0.82327
D64	0.69514	0.89514	0.80997	0.75372	0.85271	0.69514	0.88725	0.79036	0.67582	0.74446	0.80955	0.83902	0.69760	0.69760	0.68357	0.82061	0.77386	0.84767
D65	0.72319	0.64787	0.72019	0.42595	0.74756	0.72319	0.71763	0.72482	0.65987	0.72131	0.72278	0.71490	0.58080	0.68964	0.70662	0.72319	0.72319	0.72319
D66	0.33111	0.36790	0.65315	0.66390	0.61518	0.33113	0.76068	0.64976	0.30461	0.59008	0.49486	0.61215	0.32822	0.37510	0.33111	0.33111	0.45510	0.52874
D67	0.27801	0.35154	0.47431	0.43453	0.43415	0.27801	0.53098	0.42991	0.27801	0.20434	0.53099	0.31242	0.00000	0.20885	0.27801	0.27801	0.28599	0.35018
D68	0.70124	0.85294	0.91692	0.91990	0.89864	0.70737	0.94250	0.91541	0.84033	0.89391	0.89495	0.85718	0.68575	0.81437	0.70124	0.70124	0.85980	0.88673
D69	0.39814	0.32033	0.58752	0.24216	0.59035	0.39814	0.71057	0.58714	0.59631	0.53220	0.78544	0.23814	0.25719	0.19814	0.39814	0.41814	0.79443	0.79443
D70	0.71840	0.81040	0.85162	0.84891	0.84183	0.74097	0.85596	0.85032	0.63361	0.83736	0.91011	0.82860	0.78711	0.83488	0.71840	0.74203	0.71840	0.88349
AVG	0.71348	0.75630	0.78941	0.77673	0.78302	0.71347	0.80704	0.78988	0.69882	0.77004	0.79006	0.75614	0.71296	0.73545	0.73018	0.73032	0.75892	0.80071

Table 8: Experimental results (AUC) of RF and CIL approaches on 70 datasets.

No.	ORIG	Random	Synthetic sampling										Cluster based					
		ROS	S	AS	DS	SMPD	SENN	STL	NARS	GS	RWO	ANS	DBS	CS	KS	SOMO	AROS	AROSS
D1	0.98956	0.99084	0.99049	0.99206	0.99084	0.98986	0.98933	0.99134	0.99075	0.99086	0.99068	0.99024	0.98953	0.99073	0.99006	0.99116	0.98892	0.98955
D2	0.99087	0.99163	0.99152	0.99173	0.99134	0.99194	0.99055	0.99101	0.99053	0.99135	0.99138	0.99129	0.99237	0.99061	0.99206	0.99065	0.98994	0.99088
D3	0.82756	0.82369	0.82254	0.81987	0.82245	0.82704	0.82574	0.82227	0.83505	0.82470	0.82403	0.82199	0.82164	0.82070	0.82358	0.82278	0.82377	0.82933
D4	0.98827	0.99036	0.99003	0.98827	0.98809	0.98878	0.98750	0.99077	0.99061	0.98972	0.98962	0.98827	0.99010	0.98653	0.99015	0.98931	0.99298	0.99347
D5	0.96607	0.96462	0.96349	0.95704	0.96263	0.96901	0.96253	0.96293	0.96821	0.96439	0.96505	0.96594	0.96645	0.96513	0.96247	0.96242	0.96587	0.96699
D6	0.93452	0.93395	0.93364	0.92658	0.93605	0.93384	0.90645	0.93339	0.92981	0.93017	0.93189	0.92956	0.93093	0.92729	0.93224	0.92080	0.90985	0.90885
D7	0.88930	0.87838	0.87763	0.86238	0.88056	0.88329	0.86182	0.88261	0.89230	0.87057	0.87818	0.87529	0.87597	0.87645	0.88200	0.87493	0.88276	0.89134
D8	0.90238	0.90445	0.90723	0.90444	0.90626	0.90669	0.89618	0.90710	0.89406	0.90538	0.90302	0.89685	0.89720	0.90707	0.90681	0.91299	0.89983	0.89980
D9	0.76549	0.76277	0.74904	0.75303	0.75838	0.76597	0.74824	0.74761	0.73188	0.75833	0.77007	0.75940	0.76012	0.76931	0.76228	0.76743	0.76824	0.76971
D10	0.92878	0.92950	0.93162	0.92879	0.93158	0.93206	0.92658	0.93320	0.92874	0.93187	0.93409	0.92838	0.93020	0.92917	0.93200	0.92658	0.92465	0.92918
D11	0.77365	0.77879	0.77419	0.77051	0.77099	0.77265	0.77830	0.77571	0.76531	0.77336	0.77153	0.77622	0.76850	0.77183	0.77534	0.78010	0.76965	0.77176
D12	0.98314	0.98320	0.98250	0.98222	0.98496	0.98391	0.94667	0.98181	0.94120	0.98397	0.98339	0.98441	0.98136	0.98392	0.98237	0.98355	0.98272	0.98201
D13	0.69348	0.67305	0.68678	0.67622	0.68274	0.69342	0.65852	0.67915	0.64336	0.67086	0.69928	0.69059	0.67071	0.69439	0.69744	0.69009	0.70162	0.68299
D14	0.77598	0.77609	0.76238	0.78847	0.78158	0.78392	0.77661	0.76107	0.79370	0.76473	0.78896	0.76460	0.77729	0.77283	0.80184	0.78379	0.80627	0.81948
D15	0.97860	0.98225	0.98050	0.98279	0.98222	0.98224	0.97713	0.98231	0.97580	0.98241	0.98194	0.98017	0.98371	0.98064	0.98494	0.98394	0.98146	0.98129
D16	0.95531	0.95788	0.95202	0.95250	0.95139	0.95820	0.92321	0.95215	0.95317	0.95465	0.95655	0.95622	0.95194	0.95474	0.95195	0.95791	0.96224	0.96451
D17	0.98433	0.98560	0.98569	0.98297	0.98359	0.98450	0.98504	0.98431	0.98588	0.98413	0.98420	0.98397	0.98834	0.98352	0.98443	0.98502	0.98451	0.98458
D18	0.61177	0.62643	0.63795	0.60955	0.64347	0.60303	0.65698	0.64021	0.60138	0.61698	0.61989	0.59042	0.58595	0.61270	0.56228	0.60803	0.55499	0.57317
D19	0.96956	0.97516	0.97799	0.97017	0.97857	0.97461	0.97719	0.97862	0.97793	0.97793	0.97910	0.96968	0.97537	0.96966	0.97996	0.97113	0.94898	0.94856
D20	0.98870	0.98957	0.98974	0.98870	0.98313	0.98957	0.98896	0.99000	0.94172	0.98957	0.98887	0.98870	0.98957	0.99070	0.98243	0.96548	0.97126	0.97629
D21	0.87310	0.87781	0.87930	0.86759	0.88582	0.87346	0.86928	0.87709	0.81862	0.88079	0.88128	0.87432	0.88505	0.88870	0.88521	0.87454	0.87432	0.87762
D22	0.95853	0.96240	0.96467	0.96687	0.97039	0.96387	0.96387	0.96722	0.95659	0.96379	0.97739	0.96418	0.96349	0.96516	0.95570	0.95593	0.97410	0.97860
D23	1.00000	0.99889	0.99992	1.00000	0.99937	0.99933	0.99948	0.99968	0.99917	1.00000	0.99980	0.99940	0.99841	0.99980	0.99996	0.99976	0.99921	0.99929
D24	0.92107	0.94116	0.93991	0.92899	0.93042	0.92610	0.93715	0.94011	0.93159	0.94276	0.93911	0.93548	0.92957	0.93193	0.93623	0.94292	0.92938	0.93089
D25	0.99627	0.99589	0.99619	0.99647	0.99583	0.99627	0.99264	0.99579	0.98992	0.99619	0.99637	0.99662	0.99604	0.99602	0.99615	0.99604	0.99583	0.99597
D26	0.85010	0.85999	0.85847	0.86808	0.85717	0.85377	0.87404	0.85968	0.81360	0.85335	0.86204	0.85078	0.84784	0.85096	0.85029	0.84804	0.84108	0.85061
D27	0.97640	0.98536	0.97939	0.97748	0.97470	0.97816	0.98404	0.97694	0.98778	0.97765	0.98722	0.98095	0.97813	0.98304	0.97779	0.98557	0.97826	0.98053
D28	0.96320	0.96787	0.96758	0.96514	0.96459	0.96233	0.96839	0.96625	0.95349	0.96583	0.96468	0.96619	0.96588	0.96288	0.96437	0.96115	0.96468	0.96523
D29	0.93797	0.93277	0.93238	0.92854	0.93534	0.94045	0.92765	0.93228	0.93197	0.93648	0.93667	0.93977	0.94230	0.94272	0.93914	0.94419	0.95119	0.95111
D30	0.98007	0.98409	0.98363	0.98026	0.98456	0.98377	0.98295	0.98298	0.97467	0.98422	0.98375	0.98143	0.98321	0.98574	0.98474	0.98484	0.98373	0.98404
D31	0.97986	0.98167	0.99326	0.98694	0.99229	0.98729	0.98951	0.99215	0.99132	0.99160	0.98292	0.98979	0.98576	0.98896	0.98590	0.97736	0.97097	0.97451
D32	0.98822	0.99053	0.98954	0.99005	0.99159	0.98667	0.98747	0.98889	0.95719	0.98938	0.99065	0.98607	0.98304	0.98758	0.98914	0.98747	0.98909	0.98885
D33	0.96963	0.95078	0.95783	0.94754	0.95729	0.97274	0.93785	0.95660	0.93871	0.96331	0.96284	0.96935	0.96081	0.96321	0.96609	0.96441	0.96480	0.96218
D34	0.99032	0.98650	0.99070	0.98877	0.99166	0.99038	0.99151	0.99094	0.99209	0.99291	0.99092	0.98674	0.99029	0.99055	0.98946	0.98494	0.98537	0.98541
D35	0.72500	0.82078	0.87301	0.84761	0.86274	0.72500	0.80987	0.86457	0.72500	0.86874	0.80086	0.81925	0.79613	0.75333	0.72629	0.79487	0.80863	0.79134
D36	0.71740	0.71333	0.70468	0.68402	0.69539	0.71740	0.69036	0.69543	0.73734	0.70158	0.72537	0.69018	0.71006	0.71819	0.72214	0.72504	0.71996	0.71980
D37	0.82048	0.81960	0.80941	0.79496	0.81232	0.82191	0.81057	0.80882	0.81398	0.79091	0.83278	0.81331	0.82826	0.82405	0.82588	0.82631	0.83908	0.83607
D38	0.99174	0.98748	0.98958	0.98765	0.99140	0.99278	0.99115	0.98962	0.98972	0.98943	0.98588	0.99264	0.99101	0.99325	0.99258	0.99000	0.98633	0.98501
D39	0.96114	0.95739	0.95910	0.96208	0.96447	0.95663	0.95299	0.96868	0.96118	0.95680	0.97225	0.97686	0.96411	0.97464	0.96626	0.96332	0.96815	0.96968
D40	0.97135	0.94941	0.94832	0.94132	0.94623	0.97071	0.92097	0.94693	0.92549	0.95118	0.95568	0.97361	0.95691	0.96233	0.96534	0.96419	0.96520	0.96540
D41	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.99969
D42	0.99189	0.99142	0.99338	0.98986	0.99142	0.98953	0.99135	0.99405	0.99061	0.99203	0.99041	0.99311	0.99432	0.99345	0.99311	0.98892	0.98669	0.98777
D43	0.88704	0.90680	0.87508	0.88036	0.88210	0.87243	0.88801	0.87690	0.88808	0.87425	0.93974	0.88329	0.89837	0.88236	0.88368	0.87358	0.92862	0.93210
D44	0.85522	0.88179	0.86539	0.85380	0.86410	0.86630	0.86870	0.86622	0.80219	0.85927	0.86841	0.86096	0.87351	0.86486	0.85709	0.85684	0.87715	0.87753
D45	0.99695	0.99579	0.99364	0.99594	0.99541	0.99663	0.98019	0.98931	0.98497	0.99361	0.99400	0.99384	0.99594	0.99427	0.99443	0.99652	0.99401	0.99221
D46	0.98769	0.98277	0.98312	0.98769	0.98022	0.98560	0.98071	0.98582	0.98173	0.98330	0.98824	0.98769	0.98712	0.98317	0.98711	0.98207	0.98261	0.98292
D47	0.96625	0.96725	0.96406	0.96206	0.96156	0.96756	0.96481	0.96475	0.95719	0.96525	0.96250	0.96988	0.97200	0.97056	0.96613	0.97425	0.96700	0.96069
D48	0.72857	0.80276	0.84410	0.82136	0.83348	0.72857	0.82443	0.85107	0.72857	0.83686	0.74593	0.74193	0.77481	0.71455	0.73105	0.72081	0.69845	0.68929
D49	0.90534	0.91855	0.91439	0.91234	0.92848	0.91072	0.91272	0.91628	0.88659	0.91507	0.93892	0.93657	0.92671	0.93074	0.94914	0.95304	0.94305	0.94204
D50	0.88607	0.86578	0.88168	0.89252	0.87611	0.88988	0.58987	0.87981	0.63534	0.88922	0.88417	0.88697	0.88444	0.88738	0.89058	0.86185	0.87744	0.87786
D51	0.98920	0.99472	0.99284	0.99108	0.99102	0.99040	0.99534	0.99358	0.99239	0.99398	0.99443	0.99250	0.99449	0.99534	0.99375	0.99392	0.98750	0.98892
D52	1.00000	1.00000																

D55	0.91777	0.92255	0.92000	0.91415	0.92181	0.91078	0.90673	0.91818	0.91612	0.90942	0.95845	0.91843	0.92067	0.91928	0.92104	0.90234	0.95379	0.96244
D56	0.97292	0.96719	0.97109	0.98255	0.96688	0.97292	0.97089	0.97281	0.94089	0.97438	0.97276	0.97182	0.96823	0.97193	0.97255	0.98010	0.96578	0.97365
D57	0.99327	0.99034	0.98596	0.98928	0.98394	0.99240	0.98813	0.98553	0.98947	0.99163	0.98827	0.99115	0.99005	0.99399	0.99183	0.99490	0.97933	0.97899
D58	0.81608	0.82548	0.81756	0.80174	0.80270	0.81608	0.80232	0.81809	0.75288	0.82975	0.81221	0.81877	0.79802	0.80934	0.81629	0.82293	0.83424	0.82967
D59	0.98292	0.94413	0.98267	0.89654	0.99058	0.98292	0.98050	0.97821	0.93034	0.97383	0.93925	0.93146	0.94829	0.95350	0.92942	0.97058	0.89896	0.90667
D60	0.99448	0.98602	0.98915	0.96574	0.99136	0.99234	0.98729	0.98697	0.99185	0.99388	0.97990	0.99367	0.98989	0.98769	0.98936	0.98418	0.98354	0.97900
D61	0.99356	0.99689	0.99665	0.99356	0.99292	0.99894	0.99417	0.99663	0.98559	0.99767	0.99509	0.99356	0.99790	0.99322	0.99225	0.99350	0.99307	0.99282
D62	0.82834	0.80535	0.81371	0.81208	0.82049	0.80295	0.80440	0.81818	0.77021	0.82355	0.82472	0.80447	0.79025	0.83530	0.82254	0.81396	0.84054	0.84433
D63	0.95429	0.99314	0.94200	0.97886	0.95486	0.95429	0.96571	0.93514	0.88371	0.97229	0.95443	0.96000	0.92629	0.99829	0.92157	0.98457	0.89114	0.89286
D64	0.93902	0.99439	0.94073	0.95037	0.95573	0.93902	0.96220	0.94037	0.91061	0.95098	0.98976	0.94146	0.95366	0.98293	0.93951	0.95024	0.90256	0.90780
D65	0.90318	0.91843	0.85982	0.86524	0.87201	0.90318	0.86598	0.86087	0.74534	0.85706	0.88144	0.81509	0.86357	0.84351	0.85371	0.83133	0.86228	0.86473
D66	0.92511	0.93653	0.92531	0.93090	0.92546	0.92884	0.92602	0.92455	0.84954	0.92164	0.93006	0.92796	0.92259	0.91980	0.92511	0.92511	0.92947	0.92955
D67	0.70245	0.73331	0.72359	0.75585	0.73097	0.70245	0.73815	0.72439	0.73111	0.67579	0.71838	0.76346	0.68847	0.69821	0.70245	0.70245	0.74039	0.70895
D68	0.98962	0.98827	0.99208	0.99195	0.99036	0.98738	0.99128	0.99204	0.98931	0.99242	0.99305	0.99057	0.98014	0.98938	0.98962	0.98962	0.99213	0.99242
D69	0.93266	0.91661	0.93338	0.93266	0.96339	0.93266	0.92492	0.93070	0.94830	0.92462	0.96086	0.93945	0.97642	0.93630	0.94418	0.96155	0.94466	0.94230
D70	0.97419	0.97255	0.99021	0.98920	0.98815	0.97429	0.98886	0.98954	0.91878	0.98817	0.99171	0.98245	0.97996	0.97508	0.97419	0.97418	0.97419	0.98030
AVG	0.91557	0.92132	0.92034	0.91664	0.92009	0.91585	0.91131	0.91982	0.89756	0.91867	0.92148	0.91632	0.91665	0.91565	0.91476	0.91663	0.91255	0.91316

Table 9: Experimental results (Rec) of SVM and CIL approaches on 70 datasets.

No.	ORIG	Random	Synthetic sampling										Cluster based					
		ROS	S	AS	DS	SMPD	SENN	STL	NARS	GS	RWO	ANS	DBS	CS	KS	SOMO	AROS	AROSS
D1	0.95770	0.96987	0.97034	0.97843	0.96846	0.95770	0.96430	0.97225	0.95584	0.97271	0.97034	0.96940	0.96283	0.96662	0.94924	0.96236	0.92503	0.93827
D2	0.95305	0.96987	0.96987	0.97843	0.96895	0.95770	0.96659	0.97224	0.95441	0.97369	0.97320	0.96702	0.96426	0.96426	0.94828	0.96425	0.92179	0.93497
D3	0.55982	0.71113	0.71187	0.75925	0.69483	0.56248	0.78500	0.72010	0.57307	0.71340	0.71081	0.68880	0.61305	0.62251	0.64674	0.65738	0.60544	0.69140
D4	0.92857	0.96571	0.96000	0.97143	0.96143	0.91429	0.97143	0.96143	0.94857	0.95857	0.96143	0.92857	0.93571	0.94143	0.95286	0.93143	0.95429	0.97143
D5	0.85714	0.92143	0.89143	0.94571	0.89286	0.85714	0.89286	0.89571	0.88000	0.89143	0.91000	0.86714	0.87000	0.86000	0.88429	0.88714	0.91571	0.93571
D6	0.62857	0.88429	0.88000	0.91143	0.90857	0.74429	0.93714	0.88000	0.84429	0.88286	0.89000	0.85000	0.87000	0.84286	0.77286	0.86286	0.82429	0.90429
D7	0.71429	0.91857	0.90857	0.94000	0.91429	0.73000	0.93857	0.90571	0.80286	0.90571	0.91571	0.85429	0.88857	0.86143	0.81143	0.81429	0.80429	0.93429
D8	0.77000	0.86400	0.86100	0.89200	0.85000	0.78000	0.88900	0.85200	0.78200	0.85900	0.86600	0.79200	0.82700	0.81500	0.81800	0.84300	0.80600	0.84800
D9	0.42159	0.47596	0.48247	0.52642	0.48009	0.42159	0.51897	0.47483	0.41787	0.48155	0.47802	0.46224	0.44399	0.43283	0.42475	0.44536	0.44603	0.47184
D10	0.71515	0.94970	0.94879	0.97273	0.97121	0.71061	0.94667	0.94576	0.92970	0.94970	0.95000	0.91576	0.94727	0.93030	0.94364	0.91848	0.94000	0.94848
D11	0.37565	0.71585	0.71516	0.70296	0.69649	0.41102	0.80646	0.71516	0.53218	0.71843	0.72028	0.67578	0.68953	0.58990	0.43500	0.52871	0.52226	0.60487
D12	0.76835	0.87275	0.88490	0.93265	0.89692	0.77817	0.86547	0.87789	0.77647	0.88488	0.87383	0.81534	0.82675	0.82420	0.86733	0.83051	0.83517	0.84589
D13	0.22500	0.56368	0.52390	0.56243	0.50279	0.28426	0.61074	0.51162	0.37441	0.57324	0.55522	0.42478	0.49824	0.44051	0.28794	0.41897	0.44522	0.47926
D14	0.40222	0.50756	0.49489	0.51800	0.47778	0.46444	0.58156	0.47689	0.48800	0.48556	0.50533	0.42022	0.50889	0.48644	0.39111	0.50600	0.51756	0.55067
D15	0.74182	0.89382	0.87382	0.91182	0.82782	0.78182	0.94382	0.87982	0.57182	0.88582	0.88582	0.82982	0.72182	0.77982	0.70982	0.85582	0.79582	0.86382
D16	0.70333	0.83508	0.80533	0.85592	0.81142	0.75500	0.85967	0.82825	0.76492	0.81583	0.85033	0.78267	0.75583	0.75133	0.77158	0.78000	0.76267	0.83617
D17	0.76340	0.94314	0.94647	0.95203	0.94327	0.83007	0.95092	0.94536	0.86281	0.94314	0.93967		0.93203	0.91824	0.47784	0.69425	0.90608	0.97379
D18	0.08571	0.58000	0.56429	0.65000	0.57857	0.14286	0.68429	0.56429	0.35143	0.54286	0.55714	0.37714	0.22857	0.45143	0.22714	0.22857	0.30571	0.42714
D19	0.75000	0.98350	0.97800	0.99500	0.98950	0.72750	0.98100	0.97850	0.97550	0.97450	0.98550	0.75000	0.98600	0.96650	0.92900	0.99750	0.85250	0.99000
D20	0.64667	0.84000	0.87333	0.88000	0.85667	0.68000	0.91600	0.86333	0.58867	0.79000	0.87600	0.88000	0.88000	0.70667	0.58800	0.67000	0.79667	0.80000
D21	0.37000	0.90900	0.89600	0.92500	0.94300	0.38000	0.91500	0.88500	0.56600	0.88900	0.91500	0.47200	0.84800	0.80000	0.53100	0.72700	0.67100	0.73700
D22	0.60000	0.94133	0.93267	0.95200	0.94000	0.77200	0.92867	0.93067	0.92467	0.92800	0.94733	0.81333	0.92400	0.91267	0.75933	0.88600	0.95200	0.97133
D23	0.88571	1.00000	0.99714	1.00000	0.97714	0.88571	0.97714	0.99429	0.97429	1.00000	1.00000	0.96286	0.94000	0.95714	0.89429	0.96000	0.97143	1.00000
D24	0.88545	0.92364	0.92182	0.90727	0.91091	0.88545	0.92000	0.91818	0.90545	0.92000	0.92364	0.90545	0.90545	0.89945	0.90909	0.92000	0.92182	0.92364
D25	0.91304	0.98000	0.97217	0.99913	0.97652	0.90435	0.97652	0.96870	0.94174	0.97739	0.97565	0.93826	0.95826	0.94957	0.96174	0.95217	0.96435	0.97391
D26	0.27082	0.71313	0.67000	0.70377	0.64032	0.34196	0.72835	0.66407	0.43755	0.66026	0.71407	0.54488	0.31653	0.47656	0.42327	0.34693	0.57004	0.65514
D27	0.70000	0.76667	0.80000	0.76667	0.80000	0.70000	0.78933	0.79667	0.69000	0.80000	0.79667	0.70667	0.73333	0.73000	0.75667	0.76667	0.90000	0.90000
D28	0.70568	0.88453	0.86676	0.88801	0.85222	0.69962	0.89073	0.86913	0.78398	0.86621	0.88826	0.83902	0.74443	0.78809	0.79441	0.76926	0.83483	0.86242
D29	0.57143	0.88857	0.87143	0.89714	0.85714	0.67429	0.91429	0.85429	0.78571	0.88000	0.91429	0.83714	0.82571	0.83143	0.83143	0.79429	0.85429	0.89714
D30	0.71429	0.87893	0.87786	0.93321	0.74839	0.72857	0.89482	0.87696	0.78518	0.87661	0.88286	0.85089	0.90054	0.72625	0.41732	0.69054	0.75804	0.76982
D31	0.75000	0.85000	0.80000	0.82500	0.80000	0.75000	0.80000	0.81000	0.84000	0.81000	0.85000	0.78500	0.80000	0.74500	0.79000	0.80000	0.83500	0.85000
D32	0.66909	0.83800	0.83400	0.87636	0.82909	0.66909	0.87273	0.83982	0.70309	0.82164	0.84055	0.72109	0.68909	0.77473	0.73909	0.69273	0.78000	0.82927
D33	0.69000	0.79000	0.78500	0.79000	0.79000	0.69000	0.78000	0.78500	0.65000	0.79000	0.79400	0.69000	0.68000	0.70500	0.74000	0.75000	0.87000	0.87800
D34	0.70000	0.84500	0.80000	0.81500	0.80000	0.70000	0.80000	0.80000	0.81500	0.80000	0.85000	0.74500	0.75000	0.75000	0.77000	0.80000	0.82000	0.85000
D35	0.00000	0.62833	0.65333	0.66000	0.45000	0.00000	0.77667	0.65333	0.00000	0.47167	0.65500	0.35000	0.35000	0.46167	0.00000	0.20000	0.08167	0.30000
D36	0.10000	0.57600	0.57200	0.55800	0.47200	0.10000	0.66800	0.58600	0.33400	0.52000	0.58000	0.44400	0.25400	0.40400	0.18400	0.26600	0.29200	0.39400
D37	0.21263	0.57821	0.54668	0.61042	0.57274	0.41563	0.60074	0.55068	0.53711	0.54968	0.60274	0.51411	0.32211	0.51884	0.36221	0.29547	0.60932	0.68147
D38	0.70000	0.85000	0.84000	0.85000	0.80000	0.70000	0.84500	0.84500	0.82000	0.85000	0.85000	0.74000	0.77500	0.76000	0.78000	0.80000	0.85000	0.85500
D39	0.68000	0.81200	0.80000	0.81200	0.80000	0.68000	0.82400	0.80000	0.75600	0.80000	0.84000	0.76000	0.76000	0.73600	0.72000	0.80000	0.83600	0.88000
D40	0.67000	0.76000	0.76000	0.76000	0.76000	0.67000	0.76000	0.76000	0.70300	0.75500	0.76000	0.67000	0.67600	0.68500	0.72000	0.76000	0.86000	0.86000
D41	0.60000	0.80000	0.80000	0.81000	0.70000	0.60000	0.82000	0.81000	0.69000	0.79000	0.87000	0.70000	0.70000	0.70000	0.57000	0.79000	0.90000	0.90000
D42	0.75000	0.85000	0.82000	0.84500	0.80000	0.75000	0.80500	0.82000	0.82500	0.84000	0.85000	0.74500	0.83000	0.75000	0.79000	0.81000	0.85000	0.85000
D43	0.56000	0.62800	0.61200	0.60000	0.60800	0.56000	0.60400	0.60400	0.67200	0.62000	0.67600	0.65200	0.54000	0.68000	0.64000	0.64000	0.78000	0.80400
D44	0.19636	0.64364	0.62364	0.68418	0.57636	0.39436	0.70327	0.61473	0.54509	0.61018	0.64364	0.55309	0.50564	0.55564	0.45636	0.48291	0.58964	0.69782
D45	0.92879	0.96545	0.96364	0.98182	0.98182	0.92879	0.98182	0.96364	0.96909	0.96364	0.97636	0.95864	0.96545	0.93591	0.95530	0.96364	0.98182	0.98182
D46	0.50000	0.61111	0.61111	0.60889	0.61111	0.49667	0.61667	0.61111	0.62000	0.61111	0.71556	0.50000	0.58444	0.58889	0.58667	0.56111	0.90111	0.95000
D47	0.75000	0.75000	0.75000	0.75000	0.75000	0.73500	0.75000	0.75000	0.65000	0.75000	0.79000	0.75000	0.70500	0.75000	0.75000	0.75000	0.85500	0.90000
D48	0.00000	0.66167	0.64667	0.68833	0.54333	0.00000	0.79833	0.66333	0.00000	0.61500	0.71167	0.40000	0.35667	0.47667	0.00000	0.05000	0.24333	0.46667
D49	0.52000	0.74667	0.74667	0.78667	0.78667	0.52000	0.78667	0.74667	0.60333	0.67667	0.75333	0.67667	0.52000	0.55333	0.68667	0.72000	0.79000	0.82000
D50	0.77857	0.78500	0.78214	0.78214	0.78214	0.77857	0.79929	0.77357	0.73214	0.77929	0.81821	0.79607	0.77857	0.76750	0.82143	0.81071	0.86429	0.87000
D51	0.80000	0.85000	0.85000	0.85000	0.85000	0.80000	0.85000	0.85000	0.84000	0.85000	0.85000	0.80000	0.80000	0.80000	0.80000	0.80000	0.90000	0.90000
D52	0.50000	0.80000	0.80000	0.80000	0.70000	0												

D55	0.60000	0.64000	0.64000	0.63200	0.64000	0.60000	0.66000	0.64000	0.67200	0.64000	0.68800	0.64000	0.56000	0.62800	0.59600	0.69600	0.84000	0.87600
D56	0.13333	0.66667	0.61667	0.60000	0.44000	0.13333	0.64667	0.59333	0.50000	0.54333	0.74000	0.30000	0.66667	0.36000	0.41333	0.47333	0.44333	0.83000
D57	0.75000	0.85000	0.85000	0.85000	0.85000	0.75000	0.85000	0.85000	0.84500	0.85000	0.85000	0.78000	0.80000	0.79000	0.80000	0.75000	0.85000	0.85000
D58	0.13333	0.55667	0.61000	0.57000	0.52667	0.13333	0.71000	0.59667	0.33333	0.51667	0.60333	0.46667	0.43333	0.45333	0.13333	0.20000	0.46333	0.53333
D59	0.53333	0.93333	0.81000	0.85333	0.92667	0.53333	0.81667	0.81333	0.24333	0.75333	0.92000	0.63333	0.53333	0.69333	0.64333	0.70000	0.77333	0.93333
D60	0.80000	0.80000	0.80000	0.80000	0.80000	0.84000	0.81000	0.89500	0.81500	0.85500	0.85000	0.85000	0.85000	0.84000	0.85000	0.85000	0.90000	0.90000
D61	0.59333	0.82000	0.80000	0.86667	0.73333	0.62000	0.80333	0.81667	0.80000	1.00000	0.85333	0.71333	0.62000	0.77667	0.48333	0.66667	0.73333	0.73333
D62	0.06944	0.73611	0.68389	0.68361	0.69889	0.19694	0.70167	0.66806	0.06972	0.59306	0.71917	0.53889	0.42778	0.49194	0.07444	0.13889	0.40833	0.44444
D63	0.30000	0.70000	0.70000	0.70000	0.70000	0.30000	0.80000	0.70000	0.30000	0.70000	0.70000	0.70000	0.70000	0.70000	0.40000	0.70000	0.90000	0.96000
D64	0.20000	0.70000	0.70000	0.70000	0.70000	0.20000	0.70000	0.70000	0.20000	0.70000	0.70000	0.70000	0.70000	0.70000	0.27000	0.53000	0.78000	0.84000
D65	0.40000	0.55000	0.46000	0.30000	0.51000	0.40000	0.50500	0.46000	0.55000	0.47000	0.55000	0.55000	0.28500	0.42500	0.55000	0.55000	0.55000	0.55000
D66	0.00000	0.69691	0.66891	0.69291	0.65073	0.35455	0.70873	0.68091	0.39655	0.63655	0.69782	0.52055	0.43455	0.48291	0.00000	0.00000	0.53836	0.59327
D67	0.00000	0.48333	0.53333	0.50000	0.55667	0.00000	0.59333	0.52667	0.00000	0.49667	0.56000	0.40667	0.30000	0.27000	0.00000	0.00000	0.26333	0.26333
D68	0.41111	0.93333	0.92861	0.93111	0.93333	0.63611	0.93333	0.92889	0.86389	0.90694	0.93333	0.86389	0.72778	0.84944	0.41111	0.41111	0.94167	0.97778
D69	0.80000	0.80000	0.80000	1.00000	0.80000	0.80000	0.80000	0.80000	0.80000	0.80000	0.80000	0.80000	0.80000	0.80000	0.80000	0.80000	0.80000	0.80000
D70	0.27905	0.87905	0.88038	0.90571	0.90305	0.39905	0.88571	0.87505	0.66229	0.89105	0.92800	0.80438	0.92667	0.82200	0.27905	0.47905	0.27905	0.82438
AVG	0.53775	0.78625	0.77506	0.79397	0.75876	0.56797	0.80635	0.77403	0.63293	0.76769	0.79904	0.69821	0.68558	0.70118	0.59044	0.64377	0.71981	0.78245

Table 10: Experimental results (F_1) of SVM and CIL approaches on 70 datasets.

No.	ORIG	Random	Synthetic sampling										Cluster based					
		ROS	S	AS	DS	SMPD	SENN	STL	NARS	GS	RWO	ANS	DBS	CS	KS	SOMO	AROS	AROSS
D1	0.96424	0.96615	0.96642	0.96122	0.96692	0.96424	0.96140	0.96762	0.96450	0.96901	0.96730	0.96818	0.96593	0.96850	0.96209	0.96258	0.95443	0.96105
D2	0.96183	0.96703	0.96570	0.96036	0.96765	0.96205	0.96361	0.96673	0.96400	0.96858	0.96898	0.96765	0.96669	0.96750	0.96360	0.96824	0.95235	0.95925
D3	0.63021	0.65697	0.65626	0.66641	0.65185	0.63034	0.66589	0.65822	0.62102	0.66073	0.65868	0.65539	0.63430	0.64367	0.64577	0.64748	0.64168	0.67815
D4	0.91518	0.92527	0.92515	0.90698	0.91824	0.90504	0.91320	0.92684	0.92748	0.92338	0.92318	0.91518	0.91985	0.90076	0.91942	0.91061	0.91311	0.93148
D5	0.86495	0.88449	0.87067	0.88888	0.87323	0.86022	0.87008	0.87401	0.87758	0.87254	0.87711	0.86625	0.86582	0.85884	0.87281	0.86357	0.87046	0.88275
D6	0.62381	0.70783	0.71697	0.68275	0.73606	0.69893	0.70516	0.71609	0.72158	0.71397	0.70164	0.72233	0.71173	0.72891	0.70904	0.73852	0.70491	0.72843
D7	0.68823	0.74669	0.73933	0.71684	0.75282	0.70203	0.70408	0.74252	0.70236	0.73988	0.73646	0.72647	0.73660	0.73714	0.71627	0.72358	0.67611	0.72545
D8	0.76799	0.75862	0.76120	0.75805	0.75376	0.75651	0.74332	0.75862	0.75702	0.76222	0.75718	0.74909	0.75511	0.76538	0.74506	0.77730	0.74910	0.76742
D9	0.56479	0.55346	0.55170	0.52587	0.54617	0.56479	0.55179	0.55003	0.56728	0.55821	0.55259	0.54598	0.50481	0.53933	0.57459	0.56010	0.56853	0.58798
D10	0.64106	0.76065	0.76315	0.76418	0.76512	0.63399	0.74485	0.76155	0.75762	0.76542	0.76183	0.75819	0.76102	0.75234	0.76260	0.75204	0.75340	0.75628
D11	0.47409	0.58302	0.57742	0.57104	0.58920	0.49138	0.58055	0.57755	0.55510	0.57775	0.58476	0.58257	0.56658	0.57949	0.50374	0.54453	0.55080	0.57333
D12	0.80139	0.81120	0.81341	0.76947	0.80327	0.80921	0.81038	0.81366	0.80915	0.80833	0.80671	0.81006	0.79844	0.80931	0.77714	0.81077	0.82324	0.82861
D13	0.29619	0.49621	0.45104	0.45899	0.44981	0.35263	0.47522	0.44194	0.35909	0.47437	0.48828	0.42400	0.40550	0.40123	0.36384	0.42100	0.48961	0.51329
D14	0.49868	0.45100	0.44751	0.49767	0.46516	0.46876	0.47387	0.43399	0.42466	0.44596	0.45130	0.52765	0.45904	0.44697	0.46918	0.54455	0.49710	0.52155
D15	0.78106	0.87273	0.86678	0.88636	0.82540	0.80270	0.86589	0.86647	0.60285	0.87600	0.86808	0.82709	0.76848	0.80072	0.75909	0.85560	0.80373	0.84587
D16	0.69761	0.73611	0.74107	0.73500	0.74740	0.74164	0.75404	0.75052	0.73140	0.75023	0.74543	0.74524	0.71872	0.72935	0.72509	0.74684	0.70417	0.74471
D17	0.84628	0.79681	0.81219	0.78529	0.87508	0.85515	0.77992	0.80961	0.78293	0.80230	0.77737	0.84147	0.81221	0.82604	0.51270	0.77892	0.78027	0.79151
D18	0.12411	0.38960	0.38866	0.43468	0.38676	0.15057	0.42692	0.38758	0.32356	0.37134	0.36646	0.31155	0.22793	0.33789	0.20887	0.24685	0.21348	0.28923
D19	0.65006	0.83992	0.84299	0.83644	0.84802	0.64208	0.84240	0.84304	0.84153	0.84010	0.84020	0.65070	0.84807	0.84715	0.80776	0.84199	0.72438	0.82856
D20	0.59977	0.72715	0.75789	0.79597	0.76585	0.60256	0.77103	0.75497	0.50778	0.68388	0.74421	0.80256	0.78938	0.61560	0.55917	0.60172	0.59585	0.59459
D21	0.47169	0.60119	0.60260	0.59755	0.61084	0.48436	0.60910	0.59953	0.52061	0.60008	0.59921	0.49005	0.60687	0.59658	0.54250	0.57745	0.54414	0.57857
D22	0.64840	0.81422	0.84529	0.79204	0.81701	0.82858	0.84266	0.84463	0.84548	0.83999	0.80288	0.83046	0.80895	0.90036	0.71030	0.78422	0.77288	0.78134
D23	0.92256	0.97333	0.97179	0.97333	0.96103	0.93590	0.96110	0.96894	0.95791	0.97467	0.96833	0.95333	0.94511	0.95426	0.94072	0.95714	0.96362	0.97750
D24	0.87015	0.82505	0.85153	0.76045	0.76558	0.87015	0.83717	0.85516	0.85591	0.84309	0.82907	0.86535	0.86694	0.83720	0.85974	0.85647	0.78725	0.78990
D25	0.90694	0.88913	0.88731	0.87914	0.87553	0.90410	0.88829	0.88791	0.89262	0.88421	0.88616	0.90357	0.88717	0.90228	0.89416	0.90233	0.89225	0.89627
D26	0.34188	0.50785	0.48871	0.48948	0.48071	0.39601	0.47180	0.48100	0.42690	0.49191	0.50589	0.47425	0.34484	0.43939	0.42087	0.37374	0.47589	0.51957
D27	0.77879	0.77995	0.81179	0.75916	0.80786	0.77879	0.81452	0.81143	0.78097	0.84636	0.78816	0.76431	0.80545	0.78962	0.82879	0.79266	0.83885	0.84081
D28	0.76420	0.71058	0.72161	0.68481	0.70427	0.75713	0.70063	0.72749	0.78278	0.73268	0.71235	0.77890	0.75763	0.77161	0.78094	0.77042	0.79820	0.80737
D29	0.62527	0.61309	0.62784	0.60599	0.61714	0.68967	0.60529	0.62181	0.70320	0.63581	0.61197	0.69641	0.64633	0.68965	0.64312	0.68904	0.71937	0.71447
D30	0.77015	0.75974	0.75529	0.69960	0.72594	0.77808	0.74574	0.75355	0.75013	0.75399	0.75930	0.74438	0.73992	0.72988	0.53127	0.72561	0.73419	0.73852
D31	0.72921	0.72101	0.74005	0.70507	0.72254	0.72151	0.72013	0.73666	0.82076	0.71584	0.70958	0.75473	0.76825	0.73699	0.76270	0.72678	0.66794	0.67876
D32	0.76644	0.72958	0.75636	0.74261	0.74699	0.76644	0.74161	0.75962	0.73393	0.75193	0.72911	0.74772	0.72648	0.75058	0.80390	0.76461	0.74037	0.75817
D33	0.78333	0.63831	0.65836	0.61942	0.63826	0.78333	0.62657	0.64744	0.67672	0.64882	0.63828	0.72992	0.63810	0.74653	0.81032	0.70436	0.76575	0.77127
D34	0.73397	0.76933	0.73752	0.70949	0.71022	0.73397	0.74057	0.73517	0.84054	0.71737	0.75235	0.75030	0.76306	0.75849	0.76540	0.76063	0.66576	0.69435
D35	0.00000	0.45914	0.46101	0.43524	0.36141	0.00000	0.39928	0.44113	0.00000	0.38910	0.43503	0.35767	0.40362	0.40141	0.00000	0.13399	0.06476	0.24952
D36	0.15897	0.25909	0.27563	0.25685	0.25486	0.15897	0.24810	0.28121	0.33330	0.25146	0.27036	0.29140	0.22890	0.29062	0.25070	0.32290	0.32440	0.33646
D37	0.28491	0.49306	0.47620	0.31156	0.48972	0.45065	0.41834	0.47856	0.52494	0.46817	0.50125	0.43176	0.35486	0.48016	0.39133	0.36588	0.53088	0.56241
D38	0.70063	0.75431	0.74815	0.72338	0.71874	0.69525	0.75211	0.74347	0.80935	0.74560	0.73527	0.73561	0.74162	0.74677	0.76342	0.73818	0.72396	0.72462
D39	0.73182	0.68691	0.69591	0.59450	0.70372	0.70426	0.68047	0.68743	0.80437	0.69673	0.71175	0.74467	0.76722	0.75064	0.77273	0.75287	0.74986	0.78343
D40	0.78810	0.61292	0.63544	0.60299	0.61782	0.75500	0.60370	0.64116	0.74599	0.62953	0.61128	0.71315	0.63737	0.71814	0.79378	0.72107	0.75607	0.76112
D41	0.60000	0.74844	0.74800	0.76133	0.62222	0.60000	0.76889	0.76222	0.57489	0.74222	0.76069	0.66667	0.64762	0.64762	0.52222	0.74121	0.77378	0.76578
D42	0.74921	0.76536	0.75545	0.73533	0.74254	0.74921	0.74137	0.76089	0.82438	0.76407	0.73226	0.74368	0.81293	0.76118	0.77683	0.75968	0.72365	0.72069
D43	0.65556	0.64363	0.63699	0.64541	0.62653	0.65556	0.63912	0.64310	0.66399	0.64583	0.63725	0.66988	0.61008	0.68201	0.63770	0.64841	0.66092	0.66648
D44	0.22339	0.44110	0.44303	0.44595	0.43280	0.45972	0.42445	0.43285	0.51760	0.43641	0.44892	0.45277	0.47876	0.47861	0.42160	0.46859	0.52827	0.57501
D45	0.90819	0.85898	0.86886	0.79953	0.84764	0.90153	0.86600	0.87154	0.90595	0.86652	0.86251	0.89863	0.86869	0.87874	0.89004	0.89749	0.89012	0.88932
D46	0.52865	0.59942	0.60534	0.60694	0.60799	0.51780	0.61051	0.60632	0.56799	0.60832	0.68136	0.52865	0.58748	0.58907	0.59542	0.59873	0.71864	0.75093
D47	0.82619	0.67775	0.70746	0.65573	0.64363	0.81286	0.67003	0.70695	0.67140	0.73635	0.65979	0.77781	0.66055	0.77636	0.79914	0.70304	0.75953	0.78672
D48	0.00000	0.40108	0.40096	0.41152	0.41965	0.00000	0.42773	0.40578	0.00000	0.42946	0.42150	0.36395	0.38346	0.39363	0.00000	0.05714	0.14626	0.35413
D49	0.60744	0.60778	0.63359	0.61388	0.66340	0.61906	0.64674	0.62494	0.64403	0.61335	0.61406	0.66066	0.59232	0.61413	0.70825	0.65101	0.72363	0.74547
D50	0.69806	0.56306	0.61060	0.60081	0.64731	0.69806	0.63675	0.60915	0.65167	0.63184	0.58315	0.70729	0.69806	0.69117	0.71714	0.71038	0.56715	0.56863
D51	0.85397	0.76695	0.76805	0.71204	0.80387	0.85397	0.76995	0.76694	0.85968	0.77018	0.75146	0.83397	0.83175	0.84730	0.83397	0.79942	0.77963	0.78504
D52	0.53333	0.86667	0.86667	0.86667	0.73333	0.53333	0.86667	0.8666										

D55	0.68333	0.70044	0.71111	0.64500	0.70222	0.68333	0.68418	0.71111	0.71289	0.70578	0.68508	0.71111	0.63889	0.69778	0.66378	0.72178	0.70879	0.73115
D56	0.20000	0.72667	0.67133	0.65333	0.50133	0.20000	0.69905	0.65333	0.49314	0.61400	0.74876	0.39333	0.72667	0.44333	0.49667	0.54133	0.47781	0.74390
D57	0.80143	0.75544	0.75821	0.71647	0.74095	0.80143	0.74035	0.75378	0.88048	0.76679	0.73620	0.81540	0.81476	0.83298	0.81940	0.76225	0.73449	0.72303
D58	0.21429	0.29175	0.32235	0.27565	0.32337	0.21429	0.28699	0.31509	0.42632	0.29572	0.31389	0.33927	0.24552	0.31126	0.20651	0.20987	0.49845	0.53141
D59	0.60762	0.75300	0.67528	0.67721	0.72010	0.60762	0.67339	0.66527	0.33778	0.71014	0.67558	0.67429	0.57429	0.68600	0.67571	0.70500	0.51589	0.59086
D60	0.77619	0.70217	0.72522	0.70138	0.72115	0.77619	0.74645	0.73098	0.78464	0.73720	0.75439	0.80734	0.80840	0.77293	0.76747	0.75941	0.73508	0.73873
D61	0.54401	0.61031	0.59208	0.76975	0.60362	0.56953	0.59706	0.61074	0.59000	0.79268	0.65785	0.69401	0.57238	0.59248	0.48100	0.58370	0.54800	0.54262
D62	0.12081	0.40348	0.40024	0.37687	0.37236	0.27771	0.31084	0.39389	0.11869	0.35586	0.37970	0.40538	0.27059	0.36580	0.12844	0.19654	0.45346	0.46871
D63	0.30000	0.48833	0.56667	0.56667	0.48476	0.30000	0.69667	0.56667	0.24000	0.56667	0.46909	0.63333	0.63333	0.63333	0.33571	0.46564	0.61101	0.65289
D64	0.20000	0.51990	0.57333	0.57333	0.49714	0.20000	0.53533	0.57333	0.16000	0.58000	0.48224	0.68000	0.68000	0.68000	0.21030	0.40714	0.48842	0.52132
D65	0.56000	0.59381	0.35984	0.10174	0.58533	0.56000	0.22726	0.36549	0.65778	0.36316	0.57403	0.65778	0.23314	0.30883	0.65778	0.65587	0.62444	0.62444
D66	0.00000	0.30529	0.31557	0.31112	0.31745	0.37474	0.28438	0.31674	0.42786	0.31926	0.28199	0.39745	0.37917	0.34523	0.00000	0.00000	0.45504	0.47282
D67	0.00000	0.18604	0.16078	0.14201	0.22714	0.00000	0.13227	0.15706	0.00000	0.16573	0.19995	0.28413	0.14173	0.11981	0.00000	0.00000	0.28808	0.28808
D68	0.52095	0.64348	0.67366	0.67070	0.65901	0.68588	0.63822	0.67813	0.70324	0.67158	0.61980	0.68144	0.67179	0.70014	0.52095	0.52095	0.57445	0.58204
D69	0.80000	0.34821	0.39527	0.61523	0.46105	0.80000	0.35971	0.39831	0.73333	0.48179	0.32883	0.74667	0.66154	0.80000	0.75467	0.75733	0.66667	0.66667
D70	0.34259	0.71607	0.79924	0.78232	0.80605	0.47759	0.76407	0.79359	0.58524	0.81061	0.69992	0.83064	0.81230	0.84468	0.34259	0.53188	0.34259	0.58392
AVG	0.57177	0.65305	0.65531	0.63921	0.64629	0.59595	0.64543	0.65410	0.61439	0.65687	0.65021	0.66538	0.64423	0.65946	0.59278	0.62359	0.63315	0.66774

Table 11: Experimental results (GM) of SVM and CIL approaches on 70 datasets.

No.	ORIG	Random	Synthetic sampling										Cluster based					
		ROS	S	AS	DS	SMPD	SENN	STL	NARS	GS	RWO	ANS	DBS	CS	KS	SOMO	AROS	AROSS
D1	0.97016	0.97359	0.97382	0.97192	0.97384	0.97016	0.96959	0.97493	0.96996	0.97586	0.97436	0.97472	0.97212	0.97442	0.96722	0.96993	0.95782	0.96437
D2	0.96783	0.97414	0.97330	0.97134	0.97437	0.96875	0.97133	0.97437	0.96938	0.97580	0.97596	0.97397	0.97285	0.97338	0.96797	0.97383	0.95594	0.96265
D3	0.70261	0.73272	0.73221	0.73942	0.72853	0.70311	0.73713	0.73367	0.69852	0.73580	0.73446	0.73128	0.71187	0.71859	0.72249	0.72414	0.71638	0.74858
D4	0.93594	0.94850	0.94777	0.93767	0.94305	0.92727	0.94138	0.94898	0.94739	0.94646	0.94648	0.93594	0.94007	0.92901	0.94302	0.93392	0.93859	0.95358
D5	0.89554	0.91712	0.90447	0.92352	0.90653	0.89277	0.90432	0.90729	0.90706	0.90578	0.91066	0.89787	0.89798	0.89211	0.90439	0.89947	0.90719	0.91672
D6	0.70910	0.76143	0.77759	0.71777	0.79800	0.77119	0.74138	0.77570	0.78895	0.77335	0.75143	0.79100	0.77419	0.79695	0.77914	0.80345	0.77718	0.79093
D7	0.75745	0.79122	0.78573	0.75161	0.80001	0.76852	0.72209	0.79058	0.75831	0.78652	0.78304	0.78107	0.78566	0.79252	0.77466	0.78197	0.74041	0.77091
D8	0.80435	0.78051	0.78275	0.76267	0.78423	0.79787	0.74955	0.78408	0.80268	0.78607	0.77800	0.78658	0.78437	0.80663	0.78045	0.81997	0.79293	0.81003
D9	0.63758	0.64941	0.64958	0.64056	0.64617	0.63758	0.65641	0.64671	0.63685	0.65264	0.64944	0.64150	0.61359	0.62986	0.64264	0.64384	0.64739	0.66449
D10	0.72976	0.83254	0.83461	0.83432	0.83548	0.72535	0.81832	0.83317	0.82996	0.83654	0.83387	0.83192	0.83312	0.82371	0.83186	0.81640	0.82552	0.82822
D11	0.58341	0.70632	0.70112	0.68842	0.71057	0.60294	0.69637	0.70129	0.66834	0.70149	0.70767	0.70446	0.69254	0.69263	0.61570	0.66036	0.66304	0.69240
D12	0.85161	0.88421	0.88748	0.87044	0.88532	0.85785	0.88168	0.88635	0.85729	0.88501	0.88193	0.86895	0.86693	0.87033	0.86386	0.87280	0.88064	0.88593
D13	0.40073	0.63409	0.59227	0.59686	0.58355	0.48200	0.61513	0.58471	0.48703	0.61372	0.62472	0.56657	0.54810	0.53593	0.49825	0.55557	0.61713	0.63773
D14	0.54669	0.60243	0.59692	0.63915	0.60435	0.55510	0.63190	0.58454	0.55708	0.59466	0.60258	0.60217	0.56653	0.59176	0.53192	0.65305	0.63034	0.65348
D15	0.83525	0.91923	0.91129	0.93066	0.87709	0.85553	0.92792	0.91257	0.68181	0.91868	0.91481	0.88067	0.82413	0.85286	0.81514	0.90107	0.85963	0.89749
D16	0.77141	0.81387	0.81394	0.82030	0.82499	0.80809	0.84123	0.82149	0.79334	0.81237	0.82378	0.81572	0.79722	0.80204	0.80132	0.81415	0.76614	0.80237
D17	0.86799	0.91109	0.91835	0.90883	0.94020	0.89656	0.91458	0.91704	0.88107	0.91384	0.90326	0.92615	0.91327	0.91457	0.62610	0.81538	0.89306	0.91642
D18	0.21806	0.59542	0.58970	0.64294	0.59166	0.25587	0.63330	0.59324	0.51329	0.57825	0.57102	0.50894	0.40794	0.49894	0.31772	0.33935	0.36481	0.45903
D19	0.70984	0.91944	0.91833	0.92150	0.92473	0.70214	0.91923	0.91930	0.91732	0.91763	0.91872	0.71081	0.92302	0.91759	0.87613	0.92612	0.81397	0.90819
D20	0.68119	0.84761	0.87599	0.89197	0.87119	0.69421	0.89576	0.87150	0.62875	0.81684	0.87207	0.89421	0.88972	0.71986	0.64400	0.68929	0.72258	0.72273
D21	0.59108	0.83500	0.83294	0.83614	0.84830	0.59932	0.83945	0.82811	0.69996	0.82998	0.83467	0.64336	0.82204	0.80728	0.69244	0.77639	0.74457	0.77845
D22	0.68401	0.92800	0.93643	0.92431	0.92767	0.86672	0.93443	0.93547	0.93293	0.93357	0.92703	0.88581	0.92006	0.94330	0.82292	0.88499	0.91139	0.92045
D23	0.93656	0.99441	0.99292	0.99441	0.98254	0.93936	0.98264	0.99118	0.98066	0.99469	0.99328	0.97512	0.96421	0.97299	0.94431	0.97477	0.98068	0.99524
D24	0.92608	0.92837	0.93655	0.90531	0.90260	0.92608	0.93217	0.93610	0.93110	0.93369	0.93002	0.93318	0.93361	0.92272	0.93342	0.93709	0.90572	0.90646
D25	0.94566	0.96774	0.96455	0.97135	0.96253	0.94158	0.96651	0.96342	0.95458	0.96566	0.96550	0.95552	0.95949	0.95928	0.96219	0.96005	0.96288	0.96749
D26	0.49379	0.74762	0.72540	0.73571	0.71337	0.55145	0.73281	0.72005	0.61262	0.72515	0.74734	0.67527	0.51823	0.63261	0.60069	0.54775	0.68631	0.73475
D27	0.81932	0.84925	0.87451	0.84935	0.87509	0.81932	0.87092	0.87299	0.81818	0.88264	0.86568	0.81981	0.84120	0.83719	0.85936	0.85336	0.92082	0.92173
D28	0.83212	0.90402	0.89908	0.89965	0.88944	0.82798	0.90790	0.90124	0.87285	0.90092	0.90584	0.89726	0.85007	0.87300	0.87736	0.86370	0.89868	0.91249
D29	0.73957	0.88257	0.87989	0.88348	0.87312	0.79784	0.88862	0.87219	0.85896	0.88528	0.89154	0.88077	0.86748	0.87707	0.86846	0.85926	0.89299	0.90983
D30	0.83543	0.91062	0.90950	0.92158	0.84485	0.84363	0.91489	0.90896	0.86721	0.90887	0.91234	0.89430	0.91647	0.83248	0.62476	0.81531	0.84994	0.85595
D31	0.83114	0.84013	0.85624	0.85924	0.85895	0.82852	0.83474	0.85820	0.89857	0.85367	0.83120	0.85632	0.86729	0.83741	0.86153	0.84090	0.79795	0.81012
D32	0.81084	0.88681	0.88863	0.90359	0.88578	0.81084	0.90418	0.89185	0.82006	0.88222	0.88786	0.83295	0.81474	0.85914	0.85111	0.82281	0.86275	0.88777
D33	0.82229	0.79620	0.82289	0.77839	0.79936	0.82229	0.77443	0.81343	0.77229	0.80714	0.79452	0.81516	0.78482	0.82474	0.84898	0.83415	0.90115	0.90569
D34	0.81194	0.88609	0.86298	0.86413	0.85867	0.81194	0.86372	0.86242	0.88934	0.85947	0.88610	0.83980	0.84833	0.84677	0.85648	0.86454	0.80860	0.83468
D35	0.00000	0.72397	0.73603	0.73260	0.61569	0.00000	0.75549	0.72983	0.00000	0.62971	0.72582	0.55944	0.57410	0.63093	0.00000	0.25753	0.12920	0.45037
D36	0.19899	0.61519	0.62682	0.60821	0.58313	0.19899	0.61431	0.63455	0.52029	0.59856	0.62659	0.59035	0.45530	0.57340	0.27614	0.47738	0.44966	0.50071
D37	0.44380	0.66817	0.64859	0.62748	0.67375	0.58968	0.64594	0.65389	0.68252	0.64482	0.67820	0.64625	0.51398	0.65318	0.53500	0.52543	0.71593	0.74857
D38	0.80442	0.87664	0.87157	0.87040	0.85064	0.80259	0.87441	0.87252	0.88726	0.87312	0.87373	0.83494	0.84841	0.84611	0.85930	0.85178	0.86492	0.86654
D39	0.79523	0.85767	0.85610	0.83379	0.86009	0.79225	0.86008	0.85383	0.85376	0.85671	0.87836	0.84823	0.85164	0.83096	0.83192	0.87172	0.88864	0.91567
D40	0.81097	0.78247	0.79956	0.75731	0.78337	0.80742	0.75239	0.80377	0.82081	0.79424	0.77856	0.80109	0.78085	0.80867	0.83497	0.84084	0.89003	0.89139
D41	0.66993	0.84250	0.83962	0.85376	0.70725	0.66993	0.86039	0.85453	0.69329	0.83453	0.81179	0.72850	0.72170	0.72170	0.61453	0.83579	0.81153	0.81034
D42	0.83652	0.88587	0.87345	0.87839	0.86750	0.83652	0.86063	0.87434	0.89097	0.88095	0.87519	0.83912	0.89206	0.84709	0.86762	0.86753	0.87435	0.87309
D43	0.66761	0.69895	0.69076	0.68710	0.68649	0.66761	0.69063	0.68816	0.72098	0.69587	0.71571	0.71473	0.65168	0.72889	0.70103	0.70380	0.82246	0.83571
D44	0.36446	0.71517	0.71024	0.73799	0.69071	0.60330	0.73498	0.70343	0.70358	0.70286	0.71799	0.68057	0.66220	0.69691	0.60786	0.64175	0.71103	0.77070
D45	0.95764	0.96761	0.96803	0.96622	0.97304	0.95679	0.97564	0.96839	0.97527	0.96778	0.97286	0.96978	0.96886	0.95700	0.96724	0.97187	0.97878	0.97869
D46	0.62301	0.72648	0.72740	0.72653	0.72779	0.61798	0.73056	0.72755	0.72603	0.72784	0.80749	0.62301	0.71199	0.71424	0.71439	0.71822	0.91146	0.94003
D47	0.85886	0.81112	0.82659	0.80150	0.79367	0.84914	0.80281	0.82367	0.77739	0.84405	0.81564	0.85263	0.79860	0.85073	0.85573	0.83936	0.89481	0.91947
D48	0.00000	0.71416	0.71550	0.73469	0.68177	0.00000	0.74968	0.72383	0.00000	0.70713	0.73907	0.58902	0.57446	0.63965	0.00000	0.09710	0.27205	0.55591
D49	0.69229	0.75892	0.76847	0.77207	0.80645	0.69258	0.80417	0.76783	0.73448	0.75956	0.76569	0.77618	0.68218	0.70359	0.80369	0.80324	0.85401	0.87271
D50	0.82834	0.77386	0.79039	0.78639	0.80938	0.82834	0.80721	0.78670	0.79353	0.79355	0.79394	0.83063	0.82834	0.81676	0.84298	0.84023	0.78442	0.78568
D51	0.88555	0.89871	0.89959	0.89101	0.90380	0.88555	0.89975	0.89942	0.90529	0.89988	0.89669	0.88349	0.88326	0.88486	0.88349	0.87861	0.92651	0.92745
D52	0.54142	0.88284	0.88284	0.88284	0.74142	0.54142	0.88284	0.88284	0.73518	0.85456								

D55	0.69158	0.71466	0.71554	0.70491	0.71482	0.69158	0.73206	0.71554	0.73111	0.71511	0.76734	0.71554	0.66633	0.70797	0.68788	0.81435	0.86664	0.88762
D56	0.23094	0.80464	0.74150	0.71621	0.51609	0.23094	0.77576	0.72024	0.57833	0.66955	0.84244	0.42019	0.80464	0.46101	0.55015	0.57291	0.58528	0.88853
D57	0.84474	0.89568	0.89720	0.89068	0.89549	0.84474	0.89070	0.89682	0.91027	0.89927	0.88920	0.86677	0.88227	0.87691	0.88159	0.83956	0.88961	0.88707
D58	0.27877	0.67068	0.70569	0.66988	0.66639	0.27877	0.73049	0.69704	0.55125	0.65707	0.70235	0.64527	0.54089	0.62458	0.27822	0.33146	0.66520	0.71589
D59	0.71900	0.93768	0.85313	0.86996	0.88615	0.71900	0.82948	0.85396	0.38540	0.84462	0.87698	0.77758	0.63793	0.73621	0.78147	0.81257	0.76601	0.84100
D60	0.87470	0.83155	0.84326	0.83565	0.84390	0.87470	0.85281	0.84742	0.89298	0.85386	0.86260	0.90407	0.90478	0.88291	0.88029	0.86973	0.88573	0.88588
D61	0.64883	0.77170	0.75386	0.89613	0.73788	0.68244	0.76117	0.77269	0.75261	0.95458	0.81571	0.80375	0.68359	0.74312	0.58455	0.69549	0.73265	0.73207
D62	0.20380	0.79605	0.77432	0.76749	0.77073	0.38786	0.75541	0.76651	0.20066	0.71434	0.78363	0.69932	0.59109	0.66836	0.21787	0.28680	0.62033	0.64381
D63	0.33939	0.71782	0.73071	0.73071	0.71626	0.33939	0.87184	0.73071	0.33680	0.73071	0.70530	0.73359	0.73359	0.73359	0.44912	0.70125	0.83636	0.86911
D64	0.20000	0.72671	0.73302	0.73302	0.72288	0.20000	0.72972	0.73302	0.19853	0.73327	0.71596	0.73793	0.73793	0.73793	0.26898	0.57263	0.74120	0.78432
D65	0.62426	0.72018	0.65050	0.43235	0.69935	0.62426	0.64060	0.65060	0.72319	0.65527	0.71935	0.72319	0.43462	0.55952	0.72319	0.72311	0.72164	0.72164
D66	0.00000	0.78446	0.77338	0.78225	0.76163	0.57902	0.78419	0.77912	0.61953	0.75914	0.78109	0.69742	0.62954	0.66993	0.00000	0.00000	0.71746	0.75420
D67	0.00000	0.63780	0.65753	0.62294	0.69736	0.00000	0.65945	0.65331	0.00000	0.64647	0.69060	0.61643	0.50765	0.44688	0.00000	0.00000	0.50108	0.50108
D68	0.63738	0.94900	0.94859	0.94968	0.95019	0.79317	0.94845	0.94912	0.91824	0.93830	0.94684	0.91718	0.84531	0.91056	0.63738	0.63738	0.94947	0.96717
D69	0.80000	0.73920	0.74582	0.95486	0.75885	0.80000	0.74110	0.74454	0.79817	0.74906	0.72700	0.79720	0.78257	0.80000	0.79776	0.79795	0.79443	0.79443
D70	0.41147	0.93039	0.93344	0.94575	0.94508	0.52313	0.93506	0.93050	0.78715	0.93918	0.95393	0.88755	0.95800	0.89984	0.41147	0.57086	0.41147	0.89364
AVG	0.63058	0.81231	0.80893	0.80768	0.79648	0.65955	0.81257	0.80820	0.70012	0.80589	0.81571	0.77534	0.76023	0.77250	0.66535	0.71165	0.76009	0.80846

Table 12: Experimental results (AUC) of SVM and CIL approaches on 70 datasets.

No.	ORIG	Synthetic sampling										Cluster based							
		Random	S	AS	DS	SMPD	SENN	STL	NARS	GS	RWO	ANS	DBS	CS	KS	SOMO	AROS	AROSS	
		ROS																	
D1	0.99591	0.99641	0.99634	0.99416	0.99616	0.99592	0.99545	0.99638	0.99450	0.99637	0.99636	0.99628	0.99582	0.99599	0.99480	0.99575	0.99334	0.99348	
D2	0.99567	0.99600	0.99600	0.99377	0.99581	0.99572	0.99543	0.99583	0.99444	0.99592	0.99598	0.99576	0.99571	0.99565	0.99463	0.99537	0.99355	0.99366	
D3	0.83154	0.82991	0.82743	0.81535	0.83004	0.83032	0.81963	0.82752	0.83691	0.83076	0.82992	0.82857	0.82741	0.83508	0.82972	0.82779	0.83548	0.83958	
D4	0.98776	0.98607	0.98531	0.98776	0.98694	0.98776	0.99209	0.98847	0.97987	0.98597	0.98719	0.98776	0.98505	0.97719	0.99087	0.98668	0.99510	0.99648	
D5	0.97500	0.97750	0.97577	0.97561	0.97633	0.97551	0.97219	0.97612	0.97964	0.97704	0.97740	0.97464	0.97786	0.97459	0.97584	0.97378	0.97168	0.97133	
D6	0.81512	0.84614	0.84639	0.85140	0.85049	0.81776	0.83014	0.84974	0.84228	0.85025	0.84255	0.84042	0.84109	0.83940	0.82468	0.84531	0.79758	0.81139	
D7	0.81677	0.85054	0.85273	0.83418	0.85369	0.81795	0.83605	0.85005	0.82156	0.84852	0.84665	0.84010	0.84695	0.84437	0.82246	0.83218	0.80683	0.83362	
D8	0.89986	0.91210	0.91143	0.90269	0.90795	0.89925	0.89806	0.90964	0.88374	0.90887	0.91244	0.90126	0.91290	0.90690	0.90345	0.91140	0.89274	0.89544	
D9	0.74664	0.73220	0.72631	0.73235	0.73289	0.74386	0.73287	0.72140	0.72143	0.72646	0.73628	0.73217	0.66851	0.73724	0.72116	0.73866	0.72808	0.72926	
D10	0.85829	0.92122	0.92404	0.92009	0.93004	0.86065	0.90792	0.92179	0.92229	0.92375	0.92089	0.92150	0.92023	0.92120	0.92243	0.88974	0.91386	0.91494	
D11	0.77015	0.77361	0.77393	0.76593	0.77694	0.76163	0.77713	0.77228	0.77520	0.77358	0.77456	0.77412	0.75688	0.77455	0.77066	0.77720	0.77513	0.77056	
D12	0.93116	0.93989	0.93921	0.94107	0.93562	0.93020	0.92465	0.93935	0.91776	0.93724	0.94235	0.93773	0.93773	0.93510	0.92501	0.93634	0.93797	0.93842	
D13	0.70501	0.73792	0.73524	0.75131	0.74435	0.69583	0.68304	0.73237	0.69223	0.73584	0.72854	0.72897	0.71941	0.72552	0.71980	0.70840	0.73279	0.72566	
D14	0.75308	0.77345	0.76669	0.80296	0.74561	0.74833	0.75518	0.75687	0.74194	0.76779	0.76935	0.73088	0.73462	0.76290	0.74465	0.74580	0.73637	0.73634	
D15	0.98163	0.98216	0.98207	0.97665	0.98229	0.98280	0.96960	0.98235	0.97844	0.98125	0.98184	0.98114	0.98102	0.98230	0.97970	0.98434	0.97974	0.98224	
D16	0.92471	0.91828	0.92412	0.92240	0.92920	0.92773	0.98674	0.92230	0.91054	0.92093	0.92049	0.93073	0.92232	0.93046	0.91860	0.92438	0.89273	0.91074	
D17	0.97523	0.98116	0.98255	0.97359	0.98756	0.97519	0.98259	0.98355	0.96257	0.98228	0.97718	0.98031	0.97687	0.97961	0.97363	0.97794	0.97350	0.97492	
D18	0.57407	0.66684	0.69598	0.67729	0.71222	0.56378	0.68874	0.68563	0.62423	0.67643	0.65903	0.66173	0.61947	0.65291	0.56471	0.59779	0.52272	0.54275	
D19	0.91528	0.96183	0.96085	0.95288	0.96734	0.93626	0.96253	0.96129	0.95898	0.96201	0.95849	0.92966	0.96051	0.95420	0.96143	0.95741	0.92687	0.93964	
D20	0.91449	0.93849	0.94316	0.91449	0.94806	0.91043	0.94765	0.94284	0.91078	0.94232	0.94232	0.95304	0.95026	0.93093	0.90101	0.92377	0.93249	0.92841	
D21	0.90300	0.91106	0.90941	0.91452	0.91469	0.90273	0.90741	0.91111	0.87513	0.90954	0.91141	0.89841	0.90341	0.90284	0.90103	0.88194	0.89659	0.89317	
D22	0.97862	0.98909	0.98982	0.98353	0.98967	0.99038	0.98963	0.98984	0.98911	0.98889	0.98949	0.98712	0.98878	0.99171	0.97564	0.95927	0.98677	0.98872	
D23	1.00000	0.99921	0.99921	0.99921	0.99952	1.00000	0.99897	0.99913	0.99952	0.99913	0.99929	0.99857	0.99746	0.99960	0.99937	0.99968	0.99937	0.99984	
D24	0.94996	0.94843	0.95202	0.94410	0.94262	0.94508	0.94809	0.95095	0.94837	0.94970	0.94680	0.94636	0.94714	0.93626	0.94999	0.94663	0.91485	0.91772	
D25	0.99411	0.99451	0.99486	0.98672	0.99257	0.99493	0.99427	0.99485	0.99163	0.99506	0.99478	0.99394	0.99469	0.99429	0.99438	0.99523	0.99538	0.99553	
D26	0.79965	0.85306	0.84356	0.86028	0.83894	0.78798	0.84700	0.84540	0.81298	0.85033	0.85446	0.83733	0.79546	0.85191	0.83198	0.81037	0.84379	0.84824	
D27	0.97820	0.97505	0.97414	0.96757	0.97622	0.97838	0.97351	0.97351	0.98524	0.97550	0.97595	0.97658	0.98009	0.98162	0.98045	0.97459	0.97618	0.97517	
D28	0.97029	0.96497	0.96412	0.96016	0.96438	0.96609	0.96273	0.96431	0.96977	0.96470	0.96532	0.96929	0.96552	0.96843	0.96776	0.97008	0.97362	0.97355	
D29	0.95332	0.95004	0.95359	0.95369	0.95128	0.95444	0.95389	0.95426	0.95969	0.95733	0.95511	0.95732	0.95130	0.96138	0.95714	0.96279	0.95970	0.96023	
D30	0.97421	0.96887	0.96670	0.95905	0.96503	0.97204	0.96685	0.96676	0.96138	0.96430	0.96992	0.97002	0.95631	0.94411	0.93813	0.95831	0.96231	0.96249	
D31	0.97361	0.96167	0.95611	0.94528	0.95431	0.97319	0.94444	0.95569	0.97514	0.96139	0.96403	0.97111	0.97500	0.97125	0.97292	0.96806	0.94806	0.95292	
D32	0.98082	0.98062	0.98000	0.97317	0.97755	0.98158	0.97673	0.97951	0.95221	0.97769	0.98045	0.97772	0.96781	0.97906	0.97552	0.97144	0.97072	0.97259	
D33	0.96375	0.92313	0.93455	0.89868	0.92075	0.96375	0.90943	0.93308	0.94455	0.93785	0.93035	0.95338	0.94450	0.94675	0.95745	0.93685	0.93313	0.93325	
D34	0.97237	0.97253	0.96792	0.95614	0.95079	0.97112	0.97202	0.96788	0.97733	0.96553	0.97264	0.97647	0.97622	0.97211	0.97288	0.97199	0.96289	0.96013	
D35	0.80430	0.80812	0.82075	0.81538	0.76978	0.80430	0.78349	0.81118	0.80430	0.77409	0.79849	0.68097	0.70591	0.72425	0.80129	0.62833	0.62500	0.62629	
D36	0.66597	0.62851	0.63307	0.65416	0.63294	0.66597	0.64319	0.63945	0.74562	0.65241	0.65135	0.66464	0.60519	0.67997	0.63176	0.72482	0.75623	0.74827	
D37	0.76437	0.75007	0.74938	0.67629	0.75355	0.75797	0.73895	0.75323	0.80187	0.73320	0.75407	0.73823	0.70258	0.73794	0.82624	0.78945	0.81407	0.80818	
D38	0.97535	0.96399	0.96415	0.95065	0.96169	0.97508	0.96735	0.96527	0.98023	0.95762	0.96315	0.97733	0.97643	0.97843	0.97797	0.96004	0.97270	0.97214	
D39	0.95364	0.95023	0.94823	0.93098	0.94973	0.95332	0.93707	0.94659	0.95209	0.95041	0.94932	0.95714	0.95505	0.95400	0.95491	0.96127	0.95055	0.94793	
D40	0.96875	0.93336	0.93974	0.90940	0.93587	0.96875	0.91492	0.94229	0.95181	0.94132	0.93824	0.95688	0.94883	0.95262	0.96463	0.94755	0.94773	0.94298	
D41	1.00000	0.98882	0.99412	1.00000	0.99412	1.00000	0.99824	0.99412	0.96228	0.99000	0.98824	0.98824	0.98824	0.98824	0.98691	0.98824	0.94063	0.93449	
D42	0.97162	0.97135	0.96581	0.95892	0.96486	0.97162	0.96432	0.96554	0.97824	0.96135	0.97095	0.97527	0.97973	0.97851	0.97608	0.97338	0.96311	0.96068	
D43	0.90788	0.79163	0.80545	0.78292	0.77521	0.90258	0.82915	0.80267	0.84531	0.80404	0.80084	0.83978	0.82338	0.85649	0.84172	0.88673	0.90080	0.90888	
D44	0.85824	0.85891	0.85178	0.85274	0.86022	0.86038	0.85493	0.85226	0.82463	0.85321	0.85938	0.84874	0.85843	0.85625	0.85173	0.84456	0.85161	0.86359	
D45	0.98936	0.99654	0.99674	0.99059	0.99510	0.99319	0.99718	0.99687	0.99729	0.99682	0.99652	0.99700	0.99686	0.99673	0.99710	0.99710	0.99726	0.99732	
D46	0.98451	0.98417	0.98444	0.98451	0.98438	0.98427	0.98412	0.98442	0.98364	0.98438	0.98401	0.98451	0.98344	0.98360	0.98556	0.98591	0.98108	0.98145	
D47	0.96063	0.92888	0.92763	0.93013	0.90963	0.96063	0.90738	0.92350	0.93025	0.93713	0.93325	0.94738	0.94025	0.94613	0.94775	0.94138	0.94563	0.94363	
D48	0.83776	0.82957	0.83948	0.84110	0.81876	0.83748	0.81929	0.83076	0.83776	0.81668	0.82819	0.74933	0.74952	0.74729	0.83157	0.71633	0.54514	0.65733	
D49	0.90252	0.83525	0.84708	0.80116	0.90031	0.88657	0.87254	0.85183	0.83573	0.83124	0.85836	0.87584	0.84698	0.87060	0.93810	0.92149	0.94670	0.94606	
D50	0.91811	0.87075	0.87191	0.87084	0.89515	0.91661	0.85584	0.86958	0.91913	0.87270	0.87764	0.89951	0.91724	0.88942	0.90391	0.91586	0.91732	0.92003	
D51	0.97500	0.98034	0.97330	0.96830	0.96977	0.97602	0.98045	0.97432	0.97352	0.97182	0.98182	0.97807	0.98045	0.97568	0.97534	0.97705	0.98136	0.97932	
D52	0.99000	0.98500	0.99000	0.99000	0.99000	0.99000	0.99000	0.99000	0.95650	0.99000	0.98850	0.98200	0.98500	0.98500	0.97750	0.98500	0.99797	0.99900	
D53	0.79860	0.82989	0.82029	0.83557	0.78982	0.78347	0.80669	0.82139	0.79878	0.78035	0.80969	0.71641	0.73236	0.74565	0.79878	0.64106	0.51228	0.63715	
D54	0.85812	0.83453	0.84798	0.86212	0.81872	0.84376	0.84556	0.84846	0.85799	0.8									

D55	0.89973	0.81052	0.82229	0.80005	0.79246	0.89986	0.82750	0.81590	0.83134	0.81642	0.82664	0.84307	0.82436	0.84715	0.83775	0.91259	0.90248	0.90411
D56	0.98510	0.97917	0.98063	0.98125	0.97813	0.98542	0.97229	0.98000	0.96000	0.97969	0.97750	0.98750	0.97917	0.98438	0.98188	0.98156	0.97615	0.98219
D57	0.96635	0.96625	0.96058	0.95577	0.95894	0.96635	0.95827	0.96000	0.95846	0.95404	0.96471	0.96163	0.96971	0.96760	0.96442	0.97519	0.97192	0.97240
D58	0.69425	0.79879	0.79982	0.75351	0.79725	0.69417	0.77863	0.79968	0.71874	0.79127	0.80313	0.79329	0.75565	0.78922	0.70259	0.71627	0.81148	0.80699
D59	0.90917	0.96983	0.96883	0.96250	0.92933	0.90917	0.94942	0.96683	0.85275	0.96958	0.93033	0.91567	0.87125	0.87708	0.93300	0.97250	0.83575	0.84458
D60	0.99526	0.99581	0.99558	0.96884	0.99447	0.99526	0.99620	0.99518	0.99119	0.99304	0.99700	0.99819	0.99604	0.99168	0.99604	0.99756	0.98018	0.98050
D61	0.99281	0.97398	0.97578	0.99281	0.97868	0.99103	0.97538	0.97566	0.97814	0.97760	0.98377	0.99281	0.99054	0.97255	0.97941	0.98327	0.97386	0.97408
D62	0.83353	0.87038	0.85735	0.83305	0.85459	0.80817	0.84821	0.85937	0.82272	0.84725	0.87833	0.84580	0.81881	0.84618	0.83670	0.86231	0.89749	0.89237
D63	0.96229	0.98286	0.98286	0.98000	0.98286	0.96286	0.98857	0.98286	0.93857	0.98286	0.98086	0.96971	0.96800	0.96571	0.96086	0.97829	0.96486	0.97400
D64	0.96341	0.95634	0.96366	0.97244	0.96098	0.96341	0.96829	0.96293	0.93122	0.96756	0.96073	0.94049	0.95366	0.95366	0.95878	0.93561	0.96000	0.96220
D65	0.84831	0.71888	0.71867	0.65871	0.74134	0.84831	0.70892	0.71543	0.78782	0.72623	0.73439	0.75075	0.61275	0.69960	0.80151	0.71572	0.78908	0.78656
D66	0.84916	0.90575	0.90030	0.90280	0.89142	0.82559	0.90511	0.89893	0.84800	0.89408	0.90915	0.87923	0.84414	0.87128	0.84915	0.84917	0.89029	0.88999
D67	0.62823	0.71572	0.71175	0.69904	0.73927	0.62823	0.70295	0.71086	0.65083	0.70328	0.74695	0.76453	0.67798	0.67722	0.62823	0.62823	0.73644	0.67125
D68	0.98053	0.98823	0.98876	0.98755	0.98820	0.98684	0.98778	0.98856	0.98524	0.98899	0.98904	0.98672	0.98395	0.98691	0.98053	0.98053	0.98565	0.98737
D69	0.92182	0.94909	0.96327	0.92182	0.95273	0.92182	0.93236	0.96400	0.96364	0.96727	0.96400	0.94182	0.98182	0.94182	0.98200	0.98200	0.98161	0.98235
D70	0.99611	0.99704	0.99747	0.99739	0.99728	0.99604	0.99740	0.99750	0.94997	0.99724	0.99751	0.99286	0.99694	0.99076	0.99611	0.99535	0.99611	0.96685
AVG	0.90386	0.90592	0.90701	0.89906	0.90492	0.90223	0.90148	0.90628	0.89853	0.90483	0.90759	0.90232	0.89385	0.90114	0.90333	0.89871	0.89499	0.89826

Table 13: Experimental results (Rec) of kNN and CIL approaches on 70 datasets.

No.	ORIG	Random	Synthetic sampling										Cluster based						
		ROS	S	AS	DS	SMPD	SENN	STL	NARS	GS	RWO	ANS	DBS	CS	KS	SOMO	AROS	AROSS	
D1	0.93400	0.94483	0.94959	0.96926	0.94677	0.93400	0.94539	0.95100	0.94303	0.95003	0.94391	0.94815	0.94203	0.94532	0.93400	0.95000	0.93400	0.93400	
D2	0.92924	0.94528	0.95003	0.97114	0.94724	0.92924	0.94207	0.95334	0.94398	0.95435	0.94762	0.94953	0.93731	0.94384	0.92924	0.94532	0.92924	0.92971	
D3	0.54857	0.69666	0.72013	0.77478	0.70444	0.56727	0.78506	0.71305	0.61203	0.70100	0.68544	0.70853	0.57069	0.65470	0.63704	0.66703	0.56541	0.64552	
D4	0.94286	0.96571	0.96857	0.97133	0.97143	0.94286	0.96571	0.96286	0.96429	0.95143	0.96714	0.94245	0.95714	0.94486	0.95571	0.94286	0.95857	0.97143	
D5	0.88571	0.91857	0.91453	0.92000	0.91429	0.88571	0.90429	0.91000	0.89429	0.90857	0.91571	0.90143	0.88571	0.89143	0.90286	0.92714	0.89143	0.92143	
D6	0.78571	0.88714	0.80000	0.91286	0.80571	0.78571	0.94286	0.88571	0.84714	0.88000	0.89000	0.87243	0.85714	0.88429	0.80000	0.82143	0.79000	0.85143	
D7	0.77143	0.82714	0.82429	0.84857	0.83286	0.77143	0.96143	0.82714	0.77143	0.82286	0.82429	0.81286	0.77143	0.81143	0.79857	0.75171	0.77571	0.80857	
D8	0.73000	0.81600	0.84000	0.88700	0.83300	0.74100	0.91300	0.84500	0.77400	0.85200	0.83000	0.77000	0.81500	0.79000	0.80000	0.75700	0.73800	0.81500	
D9	0.40054	0.57189	0.56448	0.59062	0.53756	0.40580	0.55493	0.55885	0.41804	0.55991	0.55520	0.52748	0.40368	0.50891	0.40841	0.48173	0.43233	0.46509	
D10	0.80000	0.88091	0.87030	0.91697	0.86366	0.80727	0.90727	0.87909	0.85545	0.87455	0.90121	0.81515	0.88182	0.83091	0.87333	0.89091	0.84758	0.87667	
D11	0.43382	0.64218	0.64640	0.69535	0.61362	0.44544	0.76178	0.65737	0.51461	0.63596	0.65059	0.67877	0.58182	0.60140	0.48462	0.52208	0.46529	0.52214	
D12	0.75367	0.84649	0.84980	0.90090	0.85912	0.74894	0.84886	0.85098	0.72451	0.85129	0.85391	0.79106	0.78736	0.77931	0.82053	0.79224	0.77818	0.80024	
D13	0.27426	0.52882	0.47037	0.51250	0.46162	0.29176	0.55056	0.47904	0.33184	0.52971	0.54949	0.43294	0.47279	0.41051	0.35213	0.33868	0.42529	0.46007	
D14	0.38000	0.61644	0.60911	0.66422	0.53289	0.52889	0.68133	0.59578	0.55667	0.53489	0.59000	0.38400	0.42444	0.54178	0.42222	0.44000	0.38000	0.38222	
D15	0.68182	0.80582	0.83982	0.87982	0.81382	0.68182	0.87182	0.82382	0.68382	0.83582	0.81625	0.77382	0.68182	0.73582	0.70782	0.87182	0.72382	0.76382	
D16	0.71667	0.85267	0.83875	0.85567	0.85917	0.77050	0.86208	0.83950	0.79933	0.85350	0.85825	0.80983	0.79050	0.81525	0.81400	0.78908	0.73125	0.81083	
D17	0.86405	0.93026	0.93471	0.96359	0.93915	0.86405	0.93235	0.93582	0.82020	0.93471	0.93582	0.91778	0.89582	0.88974	0.87961	0.88072	0.89209	0.91359	
D18	0.28571	0.60714	0.58286	0.61429	0.57286	0.30000	0.65711	0.57000	0.38286	0.52571	0.55857	0.45714	0.32857	0.45286	0.34000	0.34000	0.28714	0.33714	
D19	0.93500	0.96950	0.95450	0.97000	0.95000	0.93500	0.95450	0.95800	0.95550	0.95500	0.97100	0.93500	0.96850	0.94450	0.94800	0.96550	0.97650	0.98800	
D20	0.76667	0.99667	0.99667	1.00000	1.00000	0.76667	0.99667	1.00000	0.89667	1.00000	0.97333	0.96667	0.96667	0.94333	0.80000	0.79000	0.96667	0.96667	
D21	0.37000	0.70300	0.72000	0.77100	0.70900	0.37500	0.88900	0.72500	0.44600	0.69900	0.75900	0.42900	0.67500	0.54800	0.50500	0.48400	0.52300	0.57100	
D22	0.84000	0.92533	0.90667	0.91467	0.90800	0.84000	0.90933	0.90267	0.87600	0.89600	0.94133	0.84467	0.91867	0.86400	0.85733	0.87200	0.95600	0.98200	
D23	0.85714	0.99429	0.99429	1.00000	0.97714	0.85714	0.96286	0.98571	0.95714	0.98286	1.00000	0.92000	0.85714	0.90857	0.87714	0.86857	0.89714	0.95714	
D24	0.86545	0.92364	0.91818	0.92364	0.92364	0.87945	0.92364	0.91273	0.89545	0.92000	0.91455	0.91255	0.88345	0.88927	0.90255	0.88727	0.88345	0.90727	
D25	0.93043	0.99043	0.98261	0.99130	0.98261	0.93043	0.98174	0.97913	0.92435	0.97652	0.99130	0.93217	0.96696	0.94870	0.96435	0.95478	0.93217	0.95130	
D26	0.34915	0.64146	0.68218	0.69511	0.60719	0.38885	0.75904	0.67483	0.49434	0.63401	0.64419	0.59897	0.36744	0.50141	0.48998	0.42127	0.38977	0.51732	
D27	0.76000	0.83333	0.83000	0.83333	0.83333	0.76000	0.83000	0.83333	0.80000	0.83333	0.83333	0.80000	0.76000	0.78000	0.82333	0.83333	0.81000	0.83333	
D28	0.70019	0.83970	0.85004	0.85932	0.84506	0.70564	0.89116	0.85186	0.80915	0.83511	0.85134	0.85265	0.73833	0.78165	0.81655	0.76902	0.75875	0.80968	
D29	0.48571	0.80000	0.86857	0.87429	0.83143	0.61429	0.87429	0.85429	0.76857	0.82286	0.86286	0.80857	0.78286	0.80000	0.85143	0.74000	0.63143	0.84000	
D30	0.72500	0.84643	0.85500	0.87714	0.81482	0.72875	0.91250	0.85625	0.76821	0.84946	0.82589	0.86589	0.81589	0.76286	0.72804	0.75446	0.73839	0.75464	
D31	0.75000	0.85000	0.85000	0.85000	0.85000	0.75000	0.85000	0.85000	0.85000	0.85000	0.85000	0.85000	0.80000	0.82000	0.82500	0.85000	0.90000	0.90000	
D32	0.68909	0.82909	0.85600	0.86927	0.82709	0.68909	0.87073	0.85982	0.77673	0.84418	0.83418	0.76709	0.70909	0.80200	0.74909	0.74909	0.72509	0.77091	
D33	0.61000	0.83000	0.84200	0.85400	0.82600	0.61000	0.84600	0.83400	0.66800	0.83000	0.83000	0.66000	0.61000	0.65500	0.63100	0.75000	0.77400	0.79000	
D34	0.75000	0.85000	0.85000	0.85000	0.85000	0.75000	0.85000	0.85000	0.85000	0.85000	0.85000	0.85000	0.80000	0.82500	0.83000	0.85000	0.88000	0.90000	
D35	0.00000	0.65000	0.70500	0.74667	0.56833	0.00000	0.68167	0.72500	0.00000	0.61000	0.65500	0.33667	0.25000	0.46833	0.00000	0.20000	0.03333	0.29333	
D36	0.24000	0.56000	0.59800	0.61000	0.52200	0.24000	0.67400	0.58400	0.38400	0.59600	0.55800	0.56200	0.36000	0.51000	0.26200	0.30000	0.29200	0.40200	
D37	0.36105	0.66526	0.67326	0.68526	0.66526	0.37905	0.70126	0.66826	0.55574	0.64795	0.65816	0.51105	0.38105	0.50163	0.50974	0.40505	0.52274	0.59695	
D38	0.75000	0.85000	0.85000	0.85000	0.85000	0.75000	0.85000	0.85000	0.85000	0.85000	0.85000	0.85000	0.80000	0.82000	0.85000	0.85000	0.84500	0.85000	
D39	0.63000	0.88000	0.87600	0.83000	0.88000	0.67500	0.87200	0.88000	0.76000	0.87600	0.88000	0.76000	0.71000	0.74800	0.67900	0.87600	0.82000	0.88000	
D40	0.62000	0.81000	0.82500	0.85500	0.80500	0.63500	0.82500	0.82000	0.72000	0.81000	0.81000	0.72000	0.62000	0.67500	0.63500	0.76000	0.75500	0.76000	
D41	0.80000	0.90000	0.95000	1.00000	1.00000	0.80000	0.97000	1.00000	0.99000	1.00000	1.00000	0.90000	0.90000	0.90000	0.81000	0.90000	0.95000	1.00000	
D42	0.75000	0.85000	0.85000	0.85000	0.85000	0.75000	0.85000	0.85000	0.85000	0.85000	0.85000	0.85000	0.80000	0.83500	0.85000	0.85000	0.81000	0.85000	
D43	0.64000	0.88000	0.88400	0.90800	0.88000	0.68000	0.88000	0.88400	0.78800	0.91600	0.88000	0.76000	0.68000	0.73200	0.71600	0.76000	0.85200	0.88000	
D44	0.29455	0.62545	0.63382	0.62855	0.59509	0.39273	0.70655	0.63218	0.49764	0.62945	0.64345	0.57018	0.39455	0.55982	0.45909	0.39455	0.41109	0.57200	
D45	0.89545	0.96364	0.96197	0.96364	0.94697	0.89545	0.96364	0.95864	0.94333	0.94530	0.95530	0.92545	0.94697	0.91561	0.93409	0.94864	0.90212	0.91212	
D46	0.65556	0.77778	0.78667	0.74111	0.76111	0.67556	0.78556	0.78667	0.78556	0.78667	0.80333	0.65556	0.71111	0.75444	0.67889	0.74444	0.79667	0.88889	
D47	0.60000	0.80000	0.80500	0.84500	0.80000	0.65000	0.80000	0.80500	0.65000	0.78000	0.80000	0.70000	0.65000	0.67500	0.70000	0.70000	0.81500	0.85000	
D48	0.00000	0.65000	0.72333	0.76000	0.61833	0.00000	0.74500	0.75667	0.00000	0.63667	0.70000	0.40667	0.25000	0.46167	0.00000	0.05000	0.14500	0.43000	
D49	0.75333	0.82000	0.83067	0.88533	0.82000	0.75333	0.85733	0.82733	0.75333	0.87333	0.82333	0.82000	0.75333	0.76133	0.82000	0.82000	0.82000	0.82000	
D50	0.35714	0.37587	0.37571	0.45857	0.30000	0.32143	0.39857	0.37571	0.30000	0.39286	0.45786	0.33000	0.24286	0.47821	0.34143	0.40143	0.49214	0.69857	
D51	0.75000	0.85000	0.85000	0.80000	0.85000	0.75000	0.85000	0.85000	0.85000	0.85000	0.85000	0.80000	0.80000	0.82000	0.84500	0.85000	0.90000	0.90000	
D52	0.70000	0.90000	0.98000	1.00000	1.00000	0.70000	0.95000	0.96000	0.80000	1.00000	0.90000	0.80000	0.80000	0.80000	0.76000	0.90000	0.84000	0.90000	
D53	0.00000	0.62000	0.72000	0.75667	0.52167	0.00000	0.75333	0.77333	0.00000	0.67167	0.73333	0.37333	0.21667	0.42333	0.00000	0.00000	0.05333	0.19500	
D54	0.00000	0.60000	0.66167	0.70500	0.66333	0.00000	0.72833	0.66000	0.00000	0.71667	0.66167	0.32000	0.22667	0.46333	0.00000	0.06667			

D55	0.72000	0.88000	0.89200	0.91600	0.88000	0.74000	0.86800	0.88800	0.80000	0.88000	0.88000	0.75600	0.76000	0.74800	0.78400	0.88000	0.88000	0.88000
D56	0.53333	0.80000	0.90000	0.90000	0.90000	0.53333	1.00000	0.90000	0.90000	0.80000	0.90000	0.66667	0.80000	0.80000	0.86000	0.80000	0.53333	0.76667
D57	0.80000	0.85000	0.85000	0.85000	0.85000	0.80000	0.85000	0.85000	0.85000	0.85000	0.85000	0.85000	0.85000	0.85000	0.85000	0.85000	0.85000	0.85000
D58	0.16667	0.63333	0.69667	0.69667	0.64667	0.16667	0.70333	0.70000	0.27667	0.62333	0.68667	0.57000	0.46667	0.60333	0.20000	0.16667	0.34333	0.51333
D59	0.46667	0.70000	0.84667	0.84667	0.70000	0.46667	0.84000	0.84000	0.47667	0.85333	0.75333	0.53333	0.46667	0.46667	0.61333	0.70000	0.61000	0.71000
D60	0.80000	0.85000	0.85000	0.85000	0.85000	0.80000	0.85000	0.85000	0.90000	0.85000	0.85000	0.85000	0.85000	0.85000	0.85000	0.85000	0.84000	0.85000
D61	0.62667	0.93333	0.93333	0.93333	0.93333	0.69000	0.93333	0.93333	0.93000	0.93333	0.98000	0.86267	0.62667	0.92667	0.69600	0.66000	0.89000	0.92333
D62	0.11389	0.38056	0.46778	0.48000	0.47222	0.22111	0.52083	0.48306	0.16389	0.47222	0.45111	0.46278	0.28056	0.47806	0.12889	0.13611	0.18611	0.30222
D63	0.60000	0.90000	1.00000	1.00000	0.94000	0.60000	1.00000	1.00000	0.80000	1.00000	0.90000	0.80000	0.70000	0.70000	0.74000	0.80000	0.89000	0.90000
D64	0.60000	0.90000	1.00000	1.00000	0.90000	0.60000	1.00000	1.00000	0.80000	0.97000	0.90000	0.80000	0.70000	0.70000	0.62000	0.80000	0.88000	0.96000
D65	0.55000	0.65000	0.65000	0.66500	0.65000	0.55000	0.70000	0.65000	0.55000	0.62000	0.66000	0.55000	0.60000	0.64000	0.55000	0.55000	0.55000	0.55000
D66	0.15818	0.53818	0.64800	0.65164	0.61455	0.28436	0.71691	0.64418	0.40655	0.61764	0.62055	0.52836	0.35636	0.47836	0.15818	0.15818	0.29618	0.51836
D67	0.06667	0.46667	0.57333	0.57333	0.53333	0.06667	0.59667	0.57667	0.10000	0.51667	0.61000	0.40000	0.13333	0.40667	0.06667	0.06667	0.17667	0.26000
D68	0.59444	0.91111	0.92444	0.92889	0.88889	0.75000	0.97778	0.91778	0.92167	0.92222	0.94889	0.91278	0.61667	0.85444	0.59444	0.59444	0.81500	0.95111
D69	0.80000	0.80000	0.80000	1.00000	0.80000	0.80000	0.80000	0.80000	0.80000	0.80000	0.80000	0.80000	0.80000	0.80000	0.80000	0.80000	0.80000	0.80000
D70	0.35714	0.66571	0.75505	0.75771	0.73238	0.37143	0.76305	0.75638	0.40762	0.70571	0.77905	0.68571	0.66571	0.63505	0.35714	0.37048	0.35714	0.69638
AVG	0.58932	0.78564	0.80778	0.82697	0.78606	0.60671	0.83231	0.80860	0.67328	0.79695	0.80355	0.72095	0.66877	0.72064	0.64556	0.66723	0.67730	0.74269

Table 14: Experimental results (F_1) of kNN and CIL approaches on 70 datasets.

No.	ORIG	Random	Synthetic sampling										Cluster based					
		ROS	S	AS	DS	SMPD	SENN	STL	NARS	GS	RWO	ANS	DBS	CS	KS	SOMO	AROS	AROSS
D1	0.95181	0.94079	0.94457	0.92785	0.94876	0.95181	0.94441	0.94828	0.94977	0.94833	0.94353	0.95208	0.95223	0.95137	0.95181	0.94568	0.95181	0.95181
D2	0.95159	0.94588	0.94761	0.92760	0.94677	0.95159	0.94205	0.94753	0.94847	0.94916	0.94644	0.95074	0.94964	0.95197	0.95159	0.94616	0.95159	0.95184
D3	0.59135	0.63597	0.64752	0.64563	0.64146	0.60325	0.64777	0.64353	0.62564	0.63906	0.63211	0.65342	0.59947	0.64002	0.62533	0.64093	0.60062	0.64499
D4	0.90707	0.88756	0.90133	0.88734	0.89637	0.90707	0.89516	0.89474	0.90511	0.88516	0.89341	0.90707	0.91054	0.89059	0.89796	0.89562	0.90338	0.91864
D5	0.88700	0.86923	0.87743	0.84632	0.87830	0.88700	0.87008	0.87744	0.88825	0.87880	0.87004	0.89405	0.87936	0.88131	0.88004	0.88199	0.88739	0.90264
D6	0.67978	0.67055	0.69362	0.68482	0.69911	0.67978	0.67899	0.68303	0.68546	0.68478	0.66062	0.69922	0.68294	0.69822	0.68350	0.66993	0.65390	0.69201
D7	0.68779	0.66233	0.66319	0.67138	0.68209	0.68779	0.66919	0.66730	0.66070	0.66613	0.66429	0.67535	0.64505	0.66926	0.67091	0.69418	0.65102	0.67388
D8	0.70420	0.70209	0.72156	0.73255	0.71213	0.70774	0.72386	0.72425	0.71288	0.72714	0.71445	0.70878	0.73556	0.71814	0.70546	0.70571	0.69775	0.72330
D9	0.50450	0.53799	0.52814	0.51164	0.52457	0.50926	0.52656	0.52215	0.53311	0.53175	0.52855	0.53905	0.48369	0.53517	0.50319	0.55234	0.52533	0.55072
D10	0.78799	0.79798	0.80533	0.80866	0.79271	0.79275	0.78712	0.81069	0.80614	0.81122	0.80965	0.79350	0.80111	0.80143	0.81569	0.80441	0.78063	0.79980
D11	0.48556	0.52788	0.53514	0.53927	0.52416	0.49335	0.55444	0.54669	0.51915	0.53260	0.53710	0.56295	0.52261	0.54879	0.50811	0.52551	0.49955	0.53262
D12	0.79383	0.79722	0.80684	0.81683	0.81045	0.78869	0.79244	0.80558	0.77858	0.80828	0.80983	0.79576	0.79908	0.79355	0.79827	0.80407	0.79067	0.80016
D13	0.31974	0.40844	0.39167	0.40429	0.39520	0.32937	0.42165	0.39487	0.38003	0.42490	0.42666	0.36705	0.38817	0.37708	0.38875	0.32024	0.42993	0.45336
D14	0.42353	0.52181	0.50868	0.53328	0.46462	0.49098	0.53852	0.49996	0.47352	0.47384	0.51297	0.42810	0.43473	0.47868	0.41984	0.46854	0.41569	0.41752
D15	0.75169	0.79355	0.81416	0.83197	0.80225	0.74255	0.82242	0.80844	0.70374	0.81416	0.80009	0.77659	0.73509	0.77138	0.75145	0.86451	0.76063	0.78794
D16	0.72022	0.73319	0.73335	0.72350	0.76552	0.75217	0.75875	0.74140	0.76086	0.76641	0.73652	0.76160	0.75308	0.76979	0.75295	0.75721	0.71290	0.75931
D17	0.88176	0.87111	0.89216	0.87545	0.88771	0.88176	0.88514	0.89096	0.84312	0.86564	0.88516	0.89624	0.87366	0.87662	0.88451	0.88573	0.90050	0.90101
D18	0.26991	0.39390	0.39314	0.39300	0.39560	0.27423	0.38489	0.38207	0.30723	0.36440	0.37547	0.32966	0.27406	0.33639	0.27185	0.30189	0.26932	0.30143
D19	0.85847	0.85237	0.85523	0.85974	0.85168	0.85847	0.84732	0.85670	0.85079	0.85243	0.85306	0.85434	0.85527	0.85997	0.85611	0.86302	0.82545	0.83625
D20	0.66667	0.78956	0.79130	0.81707	0.82321	0.66510	0.76176	0.79236	0.71656	0.80349	0.79616	0.79810	0.79810	0.79165	0.67834	0.66354	0.81984	0.79854
D21	0.42623	0.52733	0.55122	0.56936	0.54876	0.43147	0.61084	0.55520	0.47033	0.54373	0.54377	0.46179	0.53066	0.49861	0.49817	0.46284	0.48023	0.52189
D22	0.86391	0.79742	0.81292	0.79909	0.81261	0.86391	0.80848	0.81248	0.81567	0.82021	0.77733	0.83575	0.80208	0.86186	0.79886	0.79751	0.76543	0.78380
D23	0.92051	0.94605	0.95045	0.93219	0.94781	0.92051	0.91752	0.93640	0.92909	0.94615	0.94277	0.90406	0.89789	0.93364	0.92503	0.90190	0.91685	0.95991
D24	0.79198	0.66565	0.70764	0.64977	0.64992	0.80113	0.68789	0.69898	0.75558	0.71630	0.66022	0.78566	0.79351	0.76720	0.74936	0.76368	0.76474	0.78348
D25	0.93503	0.92647	0.92675	0.92362	0.92203	0.93503	0.92595	0.92450	0.91722	0.92428	0.92879	0.92626	0.92604	0.93981	0.92767	0.92853	0.93104	0.94187
D26	0.36661	0.41958	0.42753	0.41547	0.42989	0.39382	0.41296	0.42311	0.41295	0.40826	0.41546	0.44787	0.37279	0.42027	0.44600	0.40568	0.37004	0.45523
D27	0.77515	0.78626	0.78797	0.76190	0.78114	0.77515	0.78842	0.78637	0.78598	0.79417	0.78953	0.78953	0.77515	0.77613	0.80710	0.79838	0.78625	0.80427
D28	0.74381	0.66083	0.67829	0.64666	0.68503	0.74777	0.64924	0.67868	0.77750	0.68555	0.66015	0.73633	0.74494	0.72992	0.77266	0.76541	0.76679	0.79004
D29	0.57143	0.54693	0.59679	0.58106	0.61405	0.64982	0.56574	0.59726	0.64178	0.58876	0.56880	0.66697	0.65050	0.63689	0.64808	0.63923	0.62515	0.71880
D30	0.76357	0.75771	0.75103	0.72099	0.75646	0.76636	0.74895	0.75291	0.76490	0.75056	0.77933	0.75560	0.74830	0.76475	0.76514	0.77244	0.76920	0.77668
D31	0.75397	0.73889	0.74000	0.71966	0.73397	0.75397	0.73489	0.73637	0.75873	0.71966	0.73830	0.79895	0.76032	0.78449	0.75932	0.78921	0.78860	0.79148
D32	0.80059	0.73219	0.73642	0.71236	0.76193	0.78229	0.71221	0.73526	0.76902	0.70583	0.71492	0.75822	0.78144	0.74884	0.80295	0.76309	0.78520	0.80913
D33	0.67698	0.61545	0.63380	0.58762	0.64220	0.64622	0.63261	0.61035	0.60997	0.63048	0.64074	0.61418	0.56675	0.61490	0.67142	0.69316	0.71070	0.72844
D34	0.76306	0.71984	0.71740	0.70128	0.70921	0.76306	0.71962	0.71487	0.74201	0.71164	0.72332	0.78595	0.75036	0.78034	0.74924	0.77587	0.77540	0.79138
D35	0.00000	0.35837	0.36466	0.38916	0.34434	0.00000	0.26856	0.37489	0.00000	0.34880	0.34491	0.25381	0.24992	0.30737	0.00000	0.10927	0.02002	0.26132
D36	0.28048	0.30861	0.29146	0.27897	0.28260	0.28048	0.27332	0.28156	0.38161	0.32526	0.30161	0.29911	0.30150	0.30355	0.29430	0.32679	0.32073	0.38918
D37	0.42053	0.42424	0.39052	0.35629	0.43246	0.42450	0.34712	0.38290	0.53730	0.37749	0.43526	0.39012	0.44086	0.40759	0.52434	0.46245	0.52306	0.55980
D38	0.73397	0.71889	0.71833	0.69384	0.71433	0.73397	0.71687	0.71255	0.73574	0.72608	0.72673	0.77007	0.74032	0.75268	0.74660	0.74453	0.74791	0.74495
D39	0.73810	0.72693	0.74157	0.65471	0.76418	0.75600	0.71814	0.73568	0.77837	0.74129	0.76851	0.78071	0.79531	0.79237	0.73525	0.85605	0.78002	0.83358
D40	0.69385	0.60749	0.62486	0.60661	0.61909	0.67100	0.60111	0.62061	0.65121	0.61468	0.63973	0.68382	0.58087	0.64535	0.67504	0.70355	0.70135	0.70728
D41	0.75556	0.80606	0.83818	0.86909	0.87273	0.75556	0.85236	0.87285	0.82121	0.88173	0.86410	0.82222	0.81689	0.80897	0.74679	0.81188	0.80806	0.85277
D42	0.73397	0.71889	0.70490	0.69820	0.70195	0.73397	0.72432	0.70850	0.73477	0.71687	0.71642	0.76332	0.74032	0.77172	0.74412	0.76675	0.74377	0.75976
D43	0.66222	0.65193	0.65927	0.63736	0.64817	0.68444	0.66529	0.66072	0.72432	0.70067	0.65682	0.69449	0.65433	0.69166	0.67291	0.73098	0.77085	0.78625
D44	0.30887	0.39578	0.38456	0.37972	0.38819	0.41012	0.38277	0.38265	0.43293	0.38889	0.38761	0.39635	0.36967	0.40121	0.39042	0.36060	0.37603	0.47658
D45	0.92792	0.84819	0.85015	0.82604	0.82186	0.92792	0.85147	0.85519	0.92192	0.85822	0.83986	0.92234	0.85884	0.89602	0.91576	0.91722	0.88920	0.89543
D46	0.69213	0.74005	0.72154	0.66758	0.71177	0.65875	0.70948	0.72261	0.69714	0.74940	0.72454	0.69213	0.73858	0.71727	0.68811	0.68476	0.72256	0.77037
D47	0.63175	0.62003	0.61352	0.58771	0.61566	0.65410	0.60626	0.62024	0.59879	0.64694	0.60190	0.66066	0.60151	0.63571	0.67448	0.59619	0.73196	0.76066
D48	0.00000	0.39064	0.38485	0.39699	0.37827	0.00000	0.32181	0.41362	0.00000	0.35886	0.37130	0.34307	0.25303	0.34337	0.00000	0.05714	0.10056	0.29831
D49	0.77055	0.63096	0.62799	0.58957	0.60268	0.75754	0.64414	0.63954	0.72304	0.62679	0.67491	0.73469	0.72643	0.73494	0.79643	0.77603	0.77040	0.77290
D50	0.33228	0.29106	0.29001	0.34389	0.25455	0.26825	0.28798	0.29261	0.26030	0.32308	0.30096	0.26368	0.18683	0.39717	0.25538	0.33067	0.35848	0.51536
D51	0.84762	0.82032	0.79841	0.72573	0.80127	0.84762	0.76880	0.79175	0.84787	0.79330	0.79569	0.84286	0.85397	0.86317	0.85968	0.83810	0.82887	0.82869
D52	0.80000	0.89333	0.94667	0.96000	0.96000	0.80000	0.92133	0.9										

D55	0.75487	0.70833	0.73207	0.68805	0.72455	0.76598	0.66245	0.72769	0.74698	0.69853	0.70967	0.72403	0.73333	0.73367	0.75605	0.81417	0.77377	0.77328
D56	0.66000	0.61667	0.60562	0.61362	0.60695	0.66000	0.65277	0.61519	0.54909	0.59429	0.63795	0.71000	0.61667	0.63881	0.66771	0.65857	0.65667	0.77490
D57	0.80022	0.70286	0.69884	0.66933	0.69639	0.80022	0.69173	0.69536	0.77140	0.72089	0.68834	0.79271	0.76778	0.80204	0.77527	0.77275	0.75842	0.75842
D58	0.24762	0.39713	0.31031	0.29579	0.35589	0.24762	0.24297	0.31288	0.33195	0.30453	0.29172	0.36583	0.38985	0.34409	0.28112	0.22338	0.43706	0.55002
D59	0.45778	0.45830	0.55562	0.55532	0.54847	0.45778	0.52618	0.55307	0.40437	0.59153	0.46989	0.43048	0.43778	0.40860	0.50200	0.51385	0.43930	0.47283
D60	0.74892	0.75238	0.75253	0.75099	0.75429	0.74892	0.74419	0.75280	0.78009	0.75453	0.73676	0.77112	0.78701	0.76125	0.75300	0.75212	0.75213	0.76144
D61	0.56496	0.78885	0.75609	0.75015	0.75775	0.59933	0.75376	0.75656	0.73190	0.75453	0.79080	0.78496	0.56020	0.77710	0.59803	0.54238	0.76737	0.79391
D62	0.17675	0.29257	0.27715	0.27528	0.27955	0.30545	0.24372	0.27864	0.23829	0.30450	0.29821	0.36260	0.27467	0.32895	0.19760	0.18667	0.26453	0.39894
D63	0.38571	0.65152	0.65552	0.66352	0.63552	0.38571	0.65018	0.65818	0.54218	0.64485	0.54869	0.55238	0.45152	0.45160	0.50027	0.53352	0.60396	0.61713
D64	0.49167	0.65905	0.66516	0.68490	0.61905	0.49167	0.64683	0.66933	0.64718	0.69238	0.55601	0.61833	0.52500	0.52500	0.47712	0.65484	0.62001	0.65845
D65	0.65778	0.50490	0.31680	0.27719	0.38256	0.65778	0.27394	0.31270	0.65778	0.38117	0.45725	0.60641	0.61095	0.41713	0.65778	0.62444	0.61333	0.61333
D66	0.24974	0.32936	0.30027	0.29610	0.33938	0.32496	0.27413	0.29984	0.39647	0.31931	0.29039	0.38406	0.33890	0.30371	0.24974	0.24974	0.33156	0.48699
D67	0.11429	0.25278	0.17613	0.17048	0.20644	0.11429	0.13860	0.17606	0.15065	0.18594	0.17514	0.25339	0.10543	0.17469	0.11429	0.11429	0.25257	0.32851
D68	0.62969	0.66669	0.63490	0.63047	0.64189	0.75323	0.60375	0.63050	0.70516	0.65890	0.60101	0.64717	0.59897	0.66826	0.62969	0.62969	0.64985	0.69616
D69	0.66667	0.38059	0.35420	0.55238	0.35619	0.66667	0.33751	0.35962	0.60000	0.39232	0.36950	0.66667	0.59487	0.66667	0.66667	0.66667	0.66667	0.66667
D70	0.48160	0.62662	0.54710	0.53006	0.62698	0.49022	0.49324	0.54873	0.38763	0.59153	0.49289	0.65863	0.65419	0.61316	0.48160	0.48669	0.48160	0.40867
AVG	0.60565	0.63775	0.63528	0.62809	0.63755	0.61456	0.62255	0.63544	0.62043	0.64104	0.62982	0.65016	0.62630	0.64483	0.61657	0.62689	0.63584	0.67415

Table 15: Experimental results (GM) of kNN and CIL approaches on 70 datasets.

No.	ORIG	Random	Synthetic sampling										Cluster based					
		ROS	S	AS	DS	SMPD	SENN	STL	NARS	GS	RWO	ANS	DBS	CS	KS	SOMO	AROS	AROSS
D1	0.95793	0.95251	0.95588	0.94713	0.95810	0.95793	0.95538	0.95864	0.95818	0.95837	0.95416	0.96051	0.95956	0.95963	0.95793	0.95667	0.95793	0.95793
D2	0.95695	0.95596	0.95803	0.94746	0.95686	0.95695	0.95338	0.95860	0.95762	0.95979	0.95683	0.96001	0.95712	0.95978	0.95695	0.95645	0.95695	0.95719
D3	0.67669	0.71560	0.72480	0.72097	0.72045	0.68667	0.71812	0.72153	0.70628	0.71821	0.71246	0.73041	0.68433	0.71890	0.70698	0.71970	0.68461	0.72253
D4	0.93280	0.92036	0.93155	0.91992	0.92824	0.93280	0.92649	0.92594	0.93369	0.91752	0.92556	0.93280	0.93726	0.92184	0.92744	0.92468	0.93104	0.94474
D5	0.91345	0.90600	0.91043	0.88886	0.91113	0.91345	0.90484	0.91060	0.91572	0.91182	0.90599	0.92051	0.90829	0.91047	0.91161	0.91626	0.91460	0.92935
D6	0.75572	0.73565	0.75952	0.73961	0.76641	0.75572	0.73121	0.75204	0.76049	0.75310	0.72779	0.76481	0.74634	0.76382	0.75773	0.74510	0.73581	0.76573
D7	0.75289	0.72674	0.72649	0.73031	0.74301	0.75289	0.69225	0.73091	0.72812	0.73052	0.72849	0.73633	0.71325	0.73322	0.73652	0.75730	0.72404	0.74282
D8	0.75295	0.73951	0.75877	0.75925	0.75786	0.75654	0.73161	0.76424	0.76493	0.76196	0.75058	0.75475	0.77350	0.76545	0.74841	0.75870	0.74833	0.76870
D9	0.60433	0.65192	0.64405	0.62896	0.63993	0.60820	0.64234	0.63940	0.62277	0.64745	0.64459	0.64900	0.59450	0.64445	0.60532	0.65071	0.62370	0.64509
D10	0.84228	0.86282	0.86574	0.87575	0.85786	0.84643	0.86092	0.87044	0.86283	0.86972	0.87346	0.84824	0.86540	0.85610	0.87180	0.86647	0.84288	0.85946
D11	0.60763	0.65857	0.66484	0.66568	0.65630	0.61473	0.67260	0.67502	0.64382	0.66306	0.66633	0.68853	0.65412	0.67437	0.63111	0.64928	0.62250	0.65331
D12	0.84416	0.87145	0.87692	0.89592	0.88067	0.84048	0.86919	0.87657	0.82899	0.87798	0.87950	0.85606	0.85635	0.85175	0.86521	0.86003	0.85025	0.86057
D13	0.46545	0.55170	0.54070	0.54754	0.53945	0.47412	0.56300	0.54254	0.51977	0.56317	0.56986	0.50743	0.53890	0.52499	0.53360	0.47558	0.56894	0.58804
D14	0.51711	0.67191	0.65994	0.69018	0.61782	0.59249	0.69020	0.64973	0.59441	0.62669	0.66194	0.52825	0.53489	0.61605	0.53280	0.60385	0.51426	0.51589
D15	0.80323	0.85973	0.87901	0.89781	0.86536	0.80038	0.89007	0.87145	0.78319	0.87758	0.86374	0.84257	0.79731	0.82924	0.81153	0.90949	0.82050	0.84401
D16	0.79039	0.82608	0.82141	0.81910	0.84532	0.82079	0.84002	0.82696	0.82169	0.84148	0.82718	0.82904	0.82290	0.83829	0.82774	0.82043	0.78064	0.82162
D17	0.91648	0.93553	0.94368	0.94782	0.94392	0.91648	0.94088	0.94382	0.88807	0.94167	0.94203	0.93785	0.92452	0.92364	0.92250	0.92388	0.92914	0.93999
D18	0.41719	0.60085	0.60170	0.60149	0.60489	0.42274	0.58686	0.59090	0.51302	0.57382	0.58318	0.53749	0.47376	0.52779	0.43057	0.45181	0.41744	0.45336
D19	0.92377	0.92752	0.92469	0.93298	0.92245	0.92377	0.92033	0.92650	0.92314	0.92407	0.92700	0.92025	0.92784	0.92669	0.92279	0.93384	0.90714	0.91504
D20	0.74660	0.92518	0.92616	0.93488	0.93824	0.74559	0.91517	0.92735	0.83523	0.93315	0.91960	0.92421	0.92421	0.89849	0.75959	0.74841	0.92969	0.92068
D21	0.58110	0.74832	0.76359	0.78505	0.75975	0.58573	0.83685	0.76644	0.63397	0.75404	0.77020	0.62427	0.74097	0.68603	0.66908	0.64635	0.67088	0.70491
D22	0.90653	0.92008	0.91890	0.91749	0.91909	0.90653	0.91902	0.91753	0.90864	0.91738	0.91843	0.90221	0.91938	0.91567	0.89652	0.89460	0.91574	0.93073
D23	0.92452	0.98632	0.98728	0.98510	0.97991	0.92452	0.96708	0.98065	0.96748	0.98161	0.98766	0.94697	0.93189	0.94824	0.93377	0.92572	0.94017	0.97389
D24	0.89257	0.86762	0.87906	0.86013	0.86131	0.90066	0.86795	0.87287	0.88522	0.88253	0.86185	0.90432	0.90070	0.89078	0.88545	0.89100	0.87706	0.89282
D25	0.95878	0.98097	0.97802	0.98050	0.97692	0.95878	0.97752	0.97617	0.95286	0.97513	0.98179	0.95782	0.97203	0.96709	0.97090	0.96643	0.95865	0.96870
D26	0.55040	0.68900	0.70394	0.69899	0.68486	0.57851	0.70786	0.69895	0.63679	0.68141	0.68707	0.68759	0.56174	0.63884	0.64524	0.60047	0.57174	0.66140
D27	0.84837	0.88176	0.87826	0.87058	0.87938	0.84837	0.88003	0.88143	0.86775	0.88386	0.88327	0.86587	0.84837	0.85553	0.88203	0.88401	0.87173	0.88674
D28	0.82626	0.87495	0.88321	0.87922	0.88265	0.82968	0.89190	0.88402	0.88385	0.87865	0.87947	0.89609	0.84506	0.86325	0.88631	0.86296	0.85859	0.88593
D29	0.68519	0.83012	0.87110	0.86868	0.86058	0.76298	0.87576	0.86570	0.83923	0.85138	0.85977	0.86356	0.84870	0.85479	0.87799	0.82048	0.77035	0.88684
D30	0.84094	0.89752	0.90014	0.90427	0.88335	0.84329	0.90849	0.90099	0.86182	0.89761	0.89151	0.90458	0.88247	0.85933	0.84256	0.85645	0.84829	0.85754
D31	0.84576	0.88299	0.88397	0.87987	0.88573	0.84576	0.88344	0.88337	0.89163	0.87987	0.88267	0.89658	0.86976	0.88148	0.88089	0.89133	0.91138	0.91269
D32	0.82601	0.88323	0.89545	0.89643	0.88596	0.82420	0.89727	0.89686	0.86481	0.88383	0.88311	0.85722	0.83477	0.87357	0.85648	0.85159	0.84231	0.86736
D33	0.75358	0.84616	0.85346	0.83742	0.84649	0.74997	0.83414	0.84202	0.76805	0.84223	0.85070	0.76370	0.73570	0.76360	0.76699	0.83245	0.84762	0.85978
D34	0.84833	0.88116	0.88155	0.87834	0.88141	0.84833	0.88248	0.88092	0.89070	0.88034	0.88202	0.89716	0.87043	0.88389	0.88232	0.88995	0.89968	0.91304
D35	0.00000	0.70110	0.72122	0.74392	0.65957	0.00000	0.64377	0.73237	0.00000	0.67972	0.69618	0.48968	0.42570	0.60920	0.00000	0.18316	0.05140	0.44424
D36	0.36369	0.64095	0.64715	0.64146	0.61576	0.36369	0.64549	0.63584	0.56212	0.66717	0.63921	0.64300	0.48796	0.62284	0.37706	0.46157	0.45308	0.54871
D37	0.54709	0.72147	0.70749	0.69346	0.72504	0.55658	0.68149	0.70092	0.70489	0.68971	0.71848	0.62196	0.57113	0.63065	0.67153	0.59378	0.67962	0.72418
D38	0.83786	0.87013	0.87125	0.86597	0.87041	0.83786	0.87162	0.87043	0.88059	0.87089	0.87302	0.88433	0.86194	0.86998	0.87962	0.87585	0.87030	0.87113
D39	0.77249	0.90084	0.90247	0.86235	0.91176	0.79753	0.89005	0.90197	0.85321	0.90297	0.91184	0.85352	0.83122	0.84508	0.80893	0.92534	0.88605	0.92395
D40	0.76362	0.82917	0.83410	0.83922	0.83041	0.77074	0.81336	0.83521	0.80815	0.83648	0.84006	0.81500	0.74320	0.78336	0.76825	0.83048	0.83288	0.83729
D41	0.84867	0.89142	0.91899	0.94485	0.95000	0.84867	0.93148	0.94995	0.93629	0.95966	0.93685	0.90725	0.90262	0.89467	0.83951	0.89791	0.89588	0.92754
D42	0.83845	0.87123	0.87004	0.86791	0.86912	0.83845	0.87374	0.87194	0.88173	0.87125	0.87107	0.88426	0.86253	0.88020	0.88217	0.87956	0.85881	0.87538
D43	0.76698	0.86061	0.85800	0.84198	0.85530	0.78994	0.84338	0.85506	0.85570	0.87729	0.85877	0.83171	0.78825	0.82025	0.80854	0.84311	0.89295	0.90881
D44	0.45707	0.68380	0.68118	0.67628	0.66963	0.58316	0.70574	0.68083	0.65214	0.68665	0.68635	0.66353	0.56260	0.66846	0.60643	0.55746	0.58096	0.69357
D45	0.94445	0.96572	0.96494	0.96257	0.95482	0.94445	0.96578	0.96424	0.96556	0.95868	0.96105	0.95763	0.96001	0.95007	0.96077	0.96771	0.94320	0.94859
D46	0.79122	0.85989	0.86179	0.82790	0.84815	0.79735	0.85886	0.86224	0.85543	0.86732	0.86979	0.79122	0.82883	0.84677	0.80260	0.83524	0.86692	0.91622
D47	0.68242	0.83650	0.83211	0.83236	0.83424	0.77440	0.81552	0.83423	0.76270	0.83641	0.82380	0.79604	0.76454	0.78071	0.80280	0.78075	0.87029	0.89374
D48	0.00000	0.71375	0.72936	0.74850	0.68617	0.00000	0.69321	0.75393	0.00000	0.68609	0.72426	0.58481	0.42729	0.61257	0.00000	0.09710	0.19811	0.52405
D49	0.85279	0.81977	0.81445	0.82561	0.81669	0.84874	0.83084	0.81421	0.82674	0.83957	0.83367	0.85716	0.82972	0.84004	0.88557	0.87821	0.87741	0.87712
D50	0.46272	0.48301	0.48227	0.52735	0.44668	0.42053	0.48328	0.48303	0.45407	0.50369	0.53857	0.42467	0.31153	0.56845	0.40687	0.51553	0.56434	0.70888
D51	0.86104	0.90546	0.90351	0.87121	0.90384	0.86104	0.89901	0.90252	0.90875	0.90282	0.90277	0.88440	0.88555	0.89604	0.90760	0.90777	0.93346	0.93378
D52	0.82426	0.93609	0.98295	0.99467	0.99467	0.82426	0.96428	0.97123	0.86874	<								

D55	0.83418	0.86614	0.87234	0.85945	0.86311	0.84474	0.85214	0.86397	0.85615	0.85751	0.86613	0.84054	0.83794	0.83749	0.85557	0.91751	0.90438	0.90376
D56	0.72234	0.85477	0.89990	0.90071	0.90023	0.72234	0.95549	0.90113	0.88650	0.84915	0.90532	0.80052	0.85477	0.85766	0.89061	0.85798	0.72212	0.85961
D57	0.88030	0.88058	0.88252	0.87469	0.87910	0.88030	0.87997	0.88179	0.89986	0.88656	0.87775	0.90089	0.89707	0.90186	0.89828	0.89291	0.89132	0.89132
D58	0.30472	0.74767	0.74392	0.73681	0.74067	0.30472	0.70313	0.74638	0.44923	0.71608	0.73078	0.70943	0.58700	0.71658	0.36101	0.30307	0.56621	0.70514
D59	0.65550	0.75997	0.82239	0.81138	0.77789	0.65550	0.80465	0.80870	0.63870	0.86148	0.76248	0.68525	0.65405	0.64260	0.72802	0.77634	0.68676	0.73710
D60	0.86421	0.85531	0.85549	0.85151	0.85991	0.86421	0.84329	0.85620	0.87972	0.86033	0.84652	0.88445	0.89600	0.87087	0.86155	0.85460	0.87008	0.87576
D61	0.68989	0.93571	0.93288	0.93228	0.93507	0.72544	0.93169	0.93274	0.92309	0.93289	0.96092	0.90890	0.68880	0.93443	0.72699	0.69400	0.91959	0.94051
D62	0.25243	0.57674	0.63436	0.64156	0.63565	0.43414	0.65118	0.64288	0.35134	0.64274	0.62967	0.64928	0.45154	0.64794	0.29447	0.26948	0.40044	0.53964
D63	0.61023	0.86452	0.91762	0.91850	0.88474	0.61023	0.91704	0.91792	0.80277	0.91646	0.85370	0.80820	0.66452	0.66495	0.76023	0.80205	0.84153	0.84338
D64	0.64514	0.88198	0.93420	0.93442	0.87952	0.64514	0.91785	0.93512	0.81563	0.92154	0.86799	0.84095	0.70199	0.70199	0.63918	0.83464	0.84806	0.89513
D65	0.72319	0.77186	0.74441	0.74396	0.75661	0.72319	0.76279	0.74355	0.72319	0.74094	0.77277	0.72024	0.75000	0.75523	0.72319	0.72166	0.72089	0.72089
D66	0.39114	0.68235	0.75600	0.75778	0.74445	0.51914	0.78691	0.75349	0.62401	0.74524	0.73834	0.69567	0.56025	0.65694	0.39114	0.39114	0.52427	0.70457
D67	0.16330	0.65013	0.68496	0.68272	0.67501	0.16330	0.66883	0.68658	0.24405	0.66416	0.70422	0.59086	0.27271	0.58473	0.16330	0.16330	0.35053	0.50017
D68	0.74542	0.94034	0.94488	0.94666	0.92715	0.86024	0.96816	0.94113	0.94840	0.94536	0.95440	0.93975	0.76423	0.91221	0.74542	0.74542	0.89110	0.96229
D69	0.79443	0.74071	0.73624	0.93475	0.73681	0.79443	0.72294	0.73615	0.79224	0.74294	0.73569	0.79443	0.78075	0.79443	0.79443	0.79443	0.79443	0.79443
D70	0.56325	0.80236	0.85529	0.85641	0.84542	0.57113	0.85734	0.85620	0.61017	0.82769	0.86542	0.80978	0.80293	0.77813	0.56325	0.57258	0.56325	0.81074
AVG	0.68458	0.81135	0.82237	0.82521	0.81512	0.69860	0.81954	0.82264	0.73767	0.82049	0.81937	0.78511	0.74488	0.78578	0.71365	0.73012	0.74580	0.79678

Table 16: Experimental results (AUC) of kNN and CIL approaches on 70 datasets.

No.	ORIG	Random	Synthetic sampling										Cluster based					
		ROS	S	AS	DS	SMPD	SENN	STL	NARS	GS	RWO	ANS	DBS	CS	KS	SOMO	AROS	AROSS
D1	0.99159	0.99044	0.99010	0.98236	0.99082	0.99159	0.98522	0.98886	0.98449	0.99065	0.99037	0.99106	0.99129	0.99137	0.99158	0.99111	0.99159	0.99159
D2	0.99079	0.98959	0.99070	0.98012	0.99032	0.99079	0.98471	0.98864	0.98431	0.98955	0.99000	0.99071	0.99017	0.99054	0.99078	0.98987	0.99079	0.99079
D3	0.78246	0.77224	0.77723	0.76442	0.77951	0.78488	0.77140	0.77687	0.77545	0.77993	0.77419	0.79421	0.78071	0.78736	0.78175	0.78855	0.78412	0.79364
D4	0.98163	0.97128	0.97457	0.98163	0.96987	0.98189	0.96003	0.97235	0.97459	0.97166	0.97566	0.98163	0.97888	0.96758	0.98010	0.97722	0.98059	0.98145
D5	0.97577	0.97143	0.97010	0.96324	0.96918	0.97577	0.95939	0.96895	0.97023	0.96791	0.97291	0.97436	0.97235	0.97352	0.96875	0.96967	0.97597	0.97648
D6	0.86094	0.84375	0.86039	0.86752	0.86678	0.86105	0.82452	0.86021	0.84720	0.86467	0.83637	0.87334	0.85866	0.86338	0.85336	0.84251	0.83028	0.84496
D7	0.84970	0.83070	0.84247	0.82203	0.84780	0.84970	0.81142	0.83919	0.83058	0.83760	0.83348	0.85514	0.84747	0.83436	0.82632	0.83676	0.81465	0.82588
D8	0.86571	0.84767	0.86177	0.84662	0.86032	0.86648	0.83451	0.85946	0.83502	0.86190	0.85432	0.86094	0.85827	0.86804	0.85896	0.87043	0.86321	0.86501
D9	0.69835	0.69367	0.68666	0.67697	0.69098	0.70023	0.68916	0.69469	0.69928	0.69667	0.69853	0.71372	0.68510	0.70914	0.69757	0.71102	0.70300	0.70889
D10	0.92601	0.92291	0.92439	0.91325	0.91966	0.92721	0.92017	0.92525	0.91391	0.92557	0.92799	0.92584	0.92302	0.92636	0.92790	0.92057	0.91798	0.92269
D11	0.73045	0.71154	0.72571	0.70780	0.72200	0.73472	0.73269	0.72534	0.71962	0.72528	0.72295	0.74858	0.71684	0.74587	0.73434	0.73850	0.72985	0.73862
D12	0.94511	0.95056	0.95192	0.95120	0.95354	0.94390	0.89518	0.95236	0.88521	0.95157	0.95460	0.94831	0.94761	0.94728	0.95105	0.94597	0.94459	0.94666
D13	0.61696	0.62128	0.61151	0.61822	0.61160	0.61849	0.61520	0.60334	0.61963	0.62056	0.62077	0.63354	0.60750	0.62233	0.62273	0.60095	0.64377	0.64722
D14	0.76143	0.75754	0.75428	0.74846	0.75179	0.80867	0.75576	0.74516	0.76683	0.74504	0.76400	0.75695	0.76331	0.75109	0.75329	0.76961	0.75965	0.75887
D15	0.94528	0.94198	0.95260	0.95081	0.95453	0.94221	0.94275	0.95140	0.90091	0.95405	0.96165	0.95223	0.94444	0.95841	0.94947	0.96819	0.94739	0.95180
D16	0.90386	0.88161	0.90194	0.88127	0.90765	0.90110	0.87119	0.89813	0.88429	0.90654	0.89093	0.90019	0.88917	0.90320	0.89250	0.89813	0.90290	0.90659
D17	0.96443	0.96119	0.96229	0.95652	0.96503	0.96438	0.95828	0.96253	0.91172	0.96519	0.96688	0.95930	0.95726	0.96154	0.96459	0.96544	0.96630	0.96582
D18	0.59696	0.62126	0.61970	0.60586	0.63593	0.60548	0.65050	0.61597	0.56140	0.60802	0.61996	0.60521	0.59123	0.62659	0.56889	0.59765	0.59196	0.60399
D19	0.95542	0.95020	0.95199	0.95434	0.95299	0.95542	0.95014	0.95139	0.95031	0.95084	0.95174	0.95518	0.95030	0.95484	0.94964	0.95915	0.94513	0.94580
D20	0.95957	0.94786	0.95964	0.95957	0.96957	0.95957	0.96017	0.95836	0.92204	0.96625	0.94481	0.97159	0.96681	0.95452	0.94142	0.93890	0.95325	0.95409
D21	0.84805	0.83120	0.83994	0.83741	0.83556	0.84820	0.85415	0.84405	0.76418	0.84795	0.86022	0.84206	0.83759	0.85084	0.85123	0.84423	0.84415	0.84814
D22	0.96829	0.94834	0.95494	0.95744	0.95163	0.96943	0.95152	0.95439	0.94572	0.95711	0.95800	0.96404	0.94902	0.96577	0.95225	0.94889	0.95638	0.95971
D23	0.99603	0.99706	0.99671	0.99960	0.99655	0.99603	0.99639	0.99675	0.99766	0.99817	0.99615	0.99179	0.99524	0.99548	0.99706	0.99563	0.99528	0.99627
D24	0.91936	0.89834	0.90498	0.89733	0.89339	0.91897	0.91184	0.90970	0.91622	0.90362	0.90375	0.91937	0.92486	0.91952	0.91231	0.91815	0.90954	0.90545
D25	0.99219	0.98985	0.99058	0.98911	0.98993	0.99219	0.98230	0.99045	0.96977	0.99115	0.98987	0.99174	0.99033	0.99173	0.99070	0.99191	0.99237	0.99247
D26	0.75593	0.74814	0.75739	0.75431	0.75417	0.75811	0.76529	0.76329	0.72008	0.76068	0.77693	0.78991	0.75622	0.77178	0.78269	0.77086	0.76237	0.79198
D27	0.94063	0.92814	0.93160	0.92847	0.93423	0.94063	0.92959	0.93079	0.92453	0.92989	0.93261	0.94160	0.93695	0.93827	0.94018	0.92928	0.94564	0.94218
D28	0.91712	0.90490	0.91758	0.90303	0.92275	0.91734	0.91894	0.91767	0.91458	0.91748	0.91152	0.93489	0.91497	0.91839	0.91969	0.91903	0.92400	0.92648
D29	0.89771	0.87787	0.89649	0.87467	0.90106	0.90234	0.89734	0.89397	0.91691	0.89301	0.88923	0.90163	0.88976	0.90916	0.89783	0.91836	0.89930	0.92084
D30	0.92627	0.92046	0.92867	0.92097	0.93028	0.92646	0.92751	0.92862	0.89853	0.92848	0.93135	0.95610	0.91949	0.93124	0.92995	0.92644	0.92679	0.92771
D31	0.90556	0.89583	0.89528	0.88806	0.90069	0.90833	0.89535	0.89590	0.90299	0.89528	0.89847	0.90347	0.90556	0.90465	0.90347	0.89653	0.91896	0.91924
D32	0.91379	0.90412	0.93921	0.92103	0.93248	0.91182	0.92927	0.93345	0.89204	0.92053	0.94098	0.93131	0.91227	0.91477	0.92060	0.92183	0.92226	0.92866
D33	0.89313	0.87769	0.90375	0.88363	0.88543	0.88981	0.87949	0.90758	0.84925	0.90786	0.89748	0.89300	0.88375	0.89094	0.89325	0.88819	0.89520	0.89579
D34	0.91115	0.89518	0.89462	0.88665	0.89934	0.91393	0.89469	0.89580	0.91033	0.89282	0.89761	0.91101	0.90907	0.90920	0.90844	0.89879	0.92733	0.92782
D35	0.65833	0.71731	0.78019	0.77323	0.77000	0.65833	0.73024	0.77368	0.65833	0.70930	0.75524	0.66008	0.67003	0.71099	0.65672	0.65651	0.64344	0.66632
D36	0.70721	0.69710	0.69978	0.69390	0.68649	0.70721	0.68720	0.69922	0.67003	0.72584	0.70307	0.68767	0.68966	0.68541	0.70895	0.70447	0.70422	0.71313
D37	0.78033	0.78112	0.75464	0.72997	0.76082	0.78148	0.74304	0.75660	0.78368	0.74517	0.77694	0.75396	0.77788	0.75184	0.80034	0.78009	0.80160	0.80617
D38	0.90143	0.88303	0.88154	0.87469	0.88901	0.90351	0.88140	0.88291	0.90400	0.88203	0.88255	0.89643	0.90081	0.89754	0.89421	0.88275	0.89699	0.89699
D39	0.92898	0.91423	0.91970	0.90219	0.92370	0.92792	0.90788	0.91933	0.87267	0.91606	0.92457	0.91952	0.92523	0.92545	0.92152	0.92716	0.92936	0.93536
D40	0.88469	0.86742	0.89966	0.87889	0.87253	0.88219	0.86991	0.89917	0.85214	0.87454	0.89060	0.88166	0.87519	0.88177	0.88525	0.87380	0.89354	0.89171
D41	0.90938	0.91875	0.96875	0.92500	0.96875	0.90938	0.96875	0.96875	0.96813	0.97250	0.96719	0.90938	0.92500	0.92500	0.91875	0.91563	0.94625	0.94439
D42	0.90473	0.88784	0.88993	0.87764	0.89831	0.90608	0.88432	0.88757	0.90824	0.88642	0.88601	0.90507	0.90338	0.90453	0.90284	0.88730	0.90351	0.90649
D43	0.88482	0.87438	0.89014	0.85578	0.86039	0.88952	0.90104	0.89069	0.85679	0.90051	0.88336	0.86165	0.85612	0.87078	0.85665	0.88586	0.91438	0.92026
D44	0.76326	0.75091	0.77672	0.75602	0.75999	0.76449	0.78535	0.77149	0.75300	0.76310	0.78215	0.77416	0.76118	0.78241	0.77071	0.75801	0.77764	0.79428
D45	0.97958	0.97233	0.97472	0.97111	0.97247	0.97959	0.97896	0.97487	0.96802	0.97398	0.98166	0.97870	0.97474	0.97830	0.97655	0.98422	0.98351	0.98364
D46	0.88283	0.88351	0.88343	0.88283	0.88277	0.88776	0.88242	0.88348	0.88177	0.88307	0.89660	0.88283	0.88327	0.88507	0.88216	0.87884	0.92759	0.94147
D47	0.88563	0.87063	0.89200	0.84813	0.87894	0.88069	0.85806	0.88738	0.83456	0.87744	0.88181	0.88075	0.87563	0.88019	0.88131	0.87369	0.91000	0.91444
D48	0.75405	0.76021	0.80052	0.78248	0.78019	0.75405	0.75986	0.79421	0.75405	0.76229	0.77998	0.71852	0.71693	0.73305	0.75405	0.76595	0.68398	0.72507
D49	0.88068	0.84380	0.88176	0.82330	0.87950	0.87541	0.89414	0.88379	0.83060	0.89418	0.88839	0.88607	0.84680	0.86047	0.89678	0.88981	0.88798	0.89919
D50	0.70142	0.60063	0.58163	0.63728	0.61945	0.61940	0.57147	0.57924	0.59087	0.61986	0.64584	0.60781	0.58841	0.74489	0.61176	0.65182	0.65006	0.72289
D51	0.92443	0.91818	0.91528	0.90966	0.91557	0.92443	0.91574	0.91585	0.92045	0.91466	0.91574	0.92210	0.92159	0.92284	0.92182	0.91932	0.95500	0.95006
D52	0.94750	0.95000	0.99684	0.99395	0.99842	0.94750	0.99789	0.99737	0.9									

D55	0.89019	0.89348	0.88805	0.87198	0.86512	0.89025	0.90242	0.88281	0.85893	0.86973	0.89823	0.87261	0.86592	0.87514	0.87061	0.92297	0.91866	0.91928
D56	0.98073	0.97292	0.97365	0.96901	0.97083	0.98073	0.97188	0.97323	0.94172	0.97057	0.97286	0.97979	0.97292	0.97708	0.97339	0.97047	0.98073	0.98354
D57	0.92163	0.90769	0.90952	0.90149	0.91298	0.92163	0.89288	0.90986	0.91649	0.91000	0.90519	0.91861	0.91490	0.91899	0.91832	0.91010	0.91409	0.91510
D58	0.78568	0.78394	0.77290	0.76095	0.77926	0.78568	0.75181	0.77040	0.75810	0.75012	0.77149	0.77281	0.78770	0.75957	0.78556	0.78332	0.80388	0.80710
D59	0.90750	0.90667	0.90729	0.86367	0.90433	0.90750	0.87954	0.89908	0.81117	0.91354	0.88588	0.89433	0.89875	0.88583	0.89438	0.93417	0.84954	0.87288
D60	0.94802	0.93532	0.93477	0.93690	0.93334	0.94690	0.90132	0.93262	0.95481	0.94040	0.93497	0.94318	0.94802	0.94056	0.93747	0.93135	0.94492	0.94453
D61	0.97505	0.96970	0.97027	0.97505	0.97197	0.98288	0.96335	0.97038	0.98576	0.97152	0.98634	0.97527	0.97486	0.97561	0.98388	0.96890	0.97994	0.98447
D62	0.68291	0.68480	0.70346	0.68402	0.70192	0.69583	0.69760	0.70600	0.66814	0.71547	0.74071	0.75590	0.68568	0.74997	0.68211	0.68521	0.71820	0.71795
D63	0.89000	0.91143	0.95914	0.91857	0.95857	0.89000	0.95643	0.95900	0.91029	0.96086	0.94243	0.88714	0.91571	0.91571	0.90943	0.91057	0.93043	0.91671
D64	0.91463	0.91585	0.96573	0.91829	0.96317	0.91463	0.96159	0.96634	0.91829	0.96634	0.93915	0.91463	0.92195	0.92341	0.91976	0.92512	0.94451	0.95293
D65	0.81119	0.80903	0.81228	0.82306	0.82006	0.81119	0.82539	0.81239	0.77368	0.79476	0.83511	0.81010	0.80849	0.79821	0.81173	0.81065	0.80849	0.80849
D66	0.78580	0.78506	0.82756	0.79109	0.82841	0.78375	0.82949	0.82691	0.73108	0.81183	0.83809	0.81949	0.78789	0.78601	0.78580	0.78580	0.81614	0.81800
D67	0.68997	0.68898	0.72102	0.72670	0.72132	0.68997	0.70103	0.71793	0.67535	0.70489	0.72221	0.69701	0.67815	0.69207	0.68997	0.68997	0.70488	0.68253
D68	0.95882	0.95687	0.96608	0.95687	0.96699	0.96329	0.97523	0.96650	0.99215	0.95596	0.98607	0.96748	0.95774	0.96492	0.95882	0.95882	0.97651	0.98564
D69	0.89448	0.87987	0.88041	0.89448	0.87987	0.89448	0.85441	0.88059	0.89448	0.88444	0.88371	0.89485	0.89077	0.89448	0.89522	0.89466	0.89466	0.89503
D70	0.85617	0.85611	0.89355	0.86058	0.89047	0.85624	0.89134	0.89230	0.72439	0.88141	0.90853	0.88203	0.85609	0.86197	0.85617	0.85614	0.85617	0.89266
AVG	0.86675	0.86051	0.87277	0.86177	0.87097	0.86678	0.86462	0.87177	0.84763	0.87018	0.87432	0.86734	0.86062	0.86898	0.86397	0.86555	0.86852	0.87480