

Table III The performance of **seven** LPI prediction methods on CV_{lp}

Metric	Dataset	LPI-SKF	LPI-NRLMF	Capsule-LPI	LPI-CNNCP	LPLNP	LPBNI	LPI-HyADBS
Precision	Dataset 1	0.7979 $\pm$ 0.0337	0.8252 $\pm$ 0.0107	0.8473 $\pm$ 0.0112	0.7636 $\pm$ 0.1614	0.4448 $\pm$ 0.0738	0.5448 $\pm$ 0.0542	0.8654$\pm$0.0123
	Dataset 2	0.7902 $\pm$ 0.0059	0.8420 $\pm$ 0.0081	0.8495 $\pm$ 0.0094	0.7647 $\pm$ 0.2231	0.4689 $\pm$ 0.0944	0.5537 $\pm$ 0.0883	0.8762$\pm$0.0130
	Dataset 3	0.7631$\pm$0.0095	0.7333 $\pm$ 0.0077	0.7183 $\pm$ 0.0152	0.6415 $\pm$ 0.2759	0.5211 $\pm$ 0.0571	0.7500 $\pm$ 0.0354	0.7592 $\pm$ 0.0125
	Dataset 4	0.7948 $\pm$ 0.0070	0.7591 $\pm$ 0.0144	0.7586 $\pm$ 0.0241	0.5710 $\pm$ 0.2977	0.6469 $\pm$ 0.0259	0.7575 $\pm$ 0.0662	0.8413$\pm$0.0269
	Dataset 5	0.8248 $\pm$ 0.0011	0.8133 $\pm$ 0.0043	0.8685 $\pm$ 0.0076	0.7458 $\pm$ 0.0986	0.7666 $\pm$ 0.0025	0.8661 $\pm$ 0.0468	0.8903$\pm$0.0055
	Ave.	0.7942	0.7945	0.8084	0.6973	0.5697	0.6944	0.8465
Recall	Dataset 1	0.9379 $\pm$ 0.0283	0.7623 $\pm$ 0.0162	0.9532$\pm$0.0113	0.7905 $\pm$ 0.2850	0.4590 $\pm$ 0.0934	0.2439 $\pm$ 0.1292	0.9406 $\pm$ 0.0101
	Dataset 2	0.6910 $\pm$ 0.0092	0.7893 $\pm$ 0.0174	0.9525 $\pm$ 0.0118	0.7048 $\pm$ 0.3640	0.4508 $\pm$ 0.0516	0.1645 $\pm$ 0.0412	0.9565$\pm$0.0101
	Dataset 3	0.6745 $\pm$ 0.0065	0.6810 $\pm$ 0.0132	0.8316$\pm$0.0258	0.5001 $\pm$ 0.4367	0.4069 $\pm$ 0.0291	0.0525 $\pm$ 0.0391	0.8192 $\pm$ 0.0194
	Dataset 4	0.7007 $\pm$ 0.0052	0.7041 $\pm$ 0.0307	0.8520 $\pm$ 0.0319	0.5437 $\pm$ 0.4280	0.5949 $\pm$ 0.0391	0.4143 $\pm$ 0.0354	0.8561$\pm$0.0291
	Dataset 5	0.7304 $\pm$ 0.0006	0.8134 $\pm$ 0.0050	0.8890 $\pm$ 0.0104	0.8049 $\pm$ 0.2272	0.7171 $\pm$ 0.0055	0.6716 $\pm$ 0.0215	0.9219$\pm$0.0058
	Ave.	0.7469	0.7500	0.8956	0.6688	0.5257	0.3094	0.8989
Accuracy	Dataset 1	0.8488 $\pm$ 0.0136	0.7726 $\pm$ 0.0115	0.8906 $\pm$ 0.0076	0.7161 $\pm$ 0.1420	0.9845$\pm$0.0030	0.9389 $\pm$ 0.0251	0.8970 $\pm$ 0.0075
	Dataset 2	0.6965 $\pm$ 0.0057	0.7948 $\pm$ 0.0096	0.8918 $\pm$ 0.0077	0.7056 $\pm$ 0.1415	0.9902$\pm$0.0013	0.9592 $\pm$ 0.0006	0.9106 $\pm$ 0.0094
	Dataset 3	0.6745 $\pm$ 0.0065	0.6812 $\pm$ 0.0078	0.7524 $\pm$ 0.0117	0.5589 $\pm$ 0.0725	0.9652$\pm$0.0033	0.8453 $\pm$ 0.0018	0.7795 $\pm$ 0.0101
	Dataset 4	0.7007 $\pm$ 0.0052	0.7087 $\pm$ 0.0160	0.7897 $\pm$ 0.0176	0.5617 $\pm$ 0.0800	0.9546$\pm$0.0021	0.8296 $\pm$ 0.0038	0.8467 $\pm$ 0.0185
	Dataset 5	0.7304 $\pm$ 0.0006	0.7850 $\pm$ 0.0044	0.8771 $\pm$ 0.0031	0.7386 $\pm$ 0.0826	0.9588$\pm$0.0001	0.8690 $\pm$ 0.0089	0.9041 $\pm$ 0.0029
	Ave.	0.7302	0.7484	0.8403	0.6561	0.9707	0.8884	0.8676
F1-score	Dataset 1	0.8614 $\pm$ 0.0077	0.7924 $\pm$ 0.0105	0.8971 $\pm$ 0.0068	0.7098 $\pm$ 0.2050	0.4397 $\pm$ 0.0105	0.3370 $\pm$ 0.0512	0.9013$\pm$0.0068
	Dataset 2	0.6565 $\pm$ 0.0071	0.8147 $\pm$ 0.0097	0.8980 $\pm$ 0.0073	0.6450 $\pm$ 0.2713	0.4515 $\pm$ 0.0152	0.2536 $\pm$ 0.2411	0.9145$\pm$0.0087
	Dataset 3	0.6359 $\pm$ 0.0072	0.7061 $\pm$ 0.0096	0.7705 $\pm$ 0.0111	0.4126 $\pm$ 0.2938	0.4540 $\pm$ 0.0104	0.0981 $\pm$ 0.2588	0.7879$\pm$0.0103
	Dataset 4	0.6636 $\pm$ 0.0057	0.7303 $\pm$ 0.0198	0.8020 $\pm$ 0.0160	0.4394 $\pm$ 0.3053	0.6187 $\pm$ 0.0185	0.5357 $\pm$ 0.0984	0.8481$\pm$0.0180
	Dataset 5	0.6923 $\pm$ 0.0007	0.8133 $\pm$ 0.0035	0.8785 $\pm$ 0.0033	0.7365 $\pm$ 0.1441	0.7409 $\pm$ 0.0019	0.7566 $\pm$ 0.0469	0.9058$\pm$0.0027
	Ave.	0.7019	0.7713	0.8492	0.5886	0.5410	0.3962	0.8715
AUC	Dataset 1	0.9293 $\pm$ 0.0120	0.9222 $\pm$ 0.0071	0.9380 $\pm$ 0.0065	0.9197 $\pm$ 0.0287	0.9622$\pm$0.0019	0.8459 $\pm$ 0.0851	0.9488 $\pm$ 0.0057
	Dataset 2	0.8893 $\pm$ 0.0136	0.9401 $\pm$ 0.0058	0.9404 $\pm$ 0.0065	0.9210 $\pm$ 0.0792	0.9734$\pm$0.0013	0.8306 $\pm$ 0.0045	0.9583 $\pm$ 0.0063
	Dataset 3	0.8493 $\pm$ 0.0130	0.8138 $\pm$ 0.0105	0.8343 $\pm$ 0.0099	0.7500 $\pm$ 0.1003	0.9104$\pm$0.0057	0.7518 $\pm$ 0.0542	0.8593 $\pm$ 0.0095
	Dataset 4	0.9024 $\pm$ 0.0105	0.8501 $\pm$ 0.0166	0.8518 $\pm$ 0.0155	0.7677 $\pm$ 0.0485	0.9370$\pm$0.0064	0.8228 $\pm$ 0.0085	0.9162 $\pm$ 0.0155
	Dataset 5	0.9609 $\pm$ 0.0013	0.9247 $\pm$ 0.0031	0.9474 $\pm$ 0.0020	0.8597 $\pm$ 0.0359	0.9735$\pm$0.0030	0.9318 $\pm$ 0.0063	0.9672 $\pm$ 0.0014
	Ave.	0.9062	0.8901	0.9023	0.8436	0.9513	0.8366	0.9300
AUPR	Dataset 1	0.9290 $\pm$ 0.0155	0.9115 $\pm$ 0.0103	0.9121 $\pm$ 0.0107	0.9014 $\pm$ 0.0255	0.4459 $\pm$ 0.0092	0.3997 $\pm$ 0.0454	0.9300$\pm$0.0090
	Dataset 2	0.8956 $\pm$ 0.0128	0.9358 $\pm$ 0.0087	0.9139 $\pm$ 0.0118	0.9122 $\pm$ 0.0556	0.4610 $\pm$ 0.0176	0.3184 $\pm$ 0.0566	0.9423$\pm$0.0103
	Dataset 3	0.8560$\pm$0.0162	0.8035 $\pm$ 0.0138	0.8084 $\pm$ 0.0111	0.7268 $\pm$ 0.1177	0.4592 $\pm$ 0.0100	0.4317 $\pm$ 0.0841	0.8354 $\pm$ 0.0128
	Dataset 4	0.6683 $\pm$ 0.0061	0.8467 $\pm$ 0.0266	0.8181 $\pm$ 0.0246	0.7571 $\pm$ 0.0492	0.6349 $\pm$ 0.0309	0.6698 $\pm$ 0.0152	0.9098$\pm$0.0188
	Dataset 5	0.9596 $\pm$ 0.0021	0.9294 $\pm$ 0.0034	0.9409 $\pm$ 0.0030	0.8382 $\pm$ 0.0377	0.8207 $\pm$ 0.0027	0.8694 $\pm$ 0.0784	0.9653$\pm$0.0016
	Ave.	0.8617	0.8853	0.8786	0.8271	0.5643	0.5378	0.9166