

Table 1: Results of RR-GNN on Node Regression Datasets

Dataset	GraphSAGE		SGC		GCN		GATS	
Metrics	cover [±]	ineff	cover [±]	ineff	cover [±]	ineff	cover [±]	ineff
Anaheim: CF-GNN	0.9523 \pm 0.0678	1.9231 \pm 0.0445	0.9583 \pm 0.0657	2.2054 \pm 0.0224	0.9522 \pm 0.0535	2.3748 \pm 0.0534	0.9526 \pm 0.0383	2.1487 \pm 0.0472
Anaheim: Cluster-GNN	0.9528 \pm 0.0413	1.8953 \pm 0.0328	0.9567 \pm 0.0348	2.1428 \pm 0.0313	0.9530 \pm 0.0411	2.2434 \pm 0.0239	0.9548 \pm 0.0274	2.0374 \pm 0.0228
Anaheim: RR-GAE	0.9539 \pm 0.0381	1.8739 \pm 0.0385	0.9568 \pm 0.0318	2.0974 \pm 0.0257	0.9528 \pm 0.0429	2.1937 \pm 0.0243	0.9538 \pm 0.0228	1.9653 \pm 0.0285
Anaheim: Cluster-RR-GAE	0.9547 \pm 0.0372	1.9645 \pm 0.0198	0.9575 \pm 0.0659	2.0189 \pm 0.0258	0.9588 \pm 0.0413	2.2180 \pm 0.0228	0.9638 \pm 0.0358	1.8938 \pm 0.0239
Chicago: CF-GNN	0.9452 \pm 0.0520	2.3427 \pm 0.0384	0.9425 \pm 0.0242	1.042423 \pm 0.0344	0.9505 \pm 0.0447	2.0456 \pm 0.0443	0.9508 \pm 0.0569	1.1396 \pm 0.0686
Chicago: Cluster-GNN	0.9462 \pm 0.0394	2.2894 \pm 0.0364	0.9526 \pm 0.0324	1.1852 \pm 0.0287	0.9514 \pm 0.0324	1.8745 \pm 0.031	0.9521 \pm 0.042	1.1236 \pm 0.045
Chicago: RR-GAE	0.9435 \pm 0.035	2.2673 \pm 0.029	0.9493 \pm 0.028	1.2567 \pm 0.026	0.9519 \pm 0.033	1.6923 \pm 0.027	0.9519 \pm 0.038	1.1489 \pm 0.039
Chicago: Cluster-RR-GAE	0.9476 \pm 0.0426	2.2246 \pm 0.0325	0.9546 \pm 0.0328	1.0408 \pm 0.0225	0.9556 \pm 0.0356	1.5524 \pm 0.0252	0.9563 \pm 0.0314	1.1583 \pm 0.0256
Election: CF-GNN	0.9465 \pm 0.0298	0.9252 \pm 0.0280	0.9492 \pm 0.0224	0.9280 \pm 0.0293	0.9532 \pm 0.0223	0.9012 \pm 0.0278	0.9456 \pm 0.0332	0.9183 \pm 0.0652
Election: Cluster-GNN	0.9512 \pm 0.0132	0.9135 \pm 0.0332	0.9505 \pm 0.0227	0.9153 \pm 0.0243	0.9522 \pm 0.0328	0.8914 \pm 0.0242	0.9503 \pm 0.0212	0.8954 \pm 0.0414
Election: RR-GAE	0.9504 \pm 0.0273	0.9035 \pm 0.0288	0.9533 \pm 0.0225	0.8963 \pm 0.0277	0.9512 \pm 0.0306	0.9224 \pm 0.0126	0.9515 \pm 0.0305	0.8654 \pm 0.0312
Election: Cluster-RR-GAE	0.9559 \pm 0.0226	0.9104 \pm 0.0273	0.9563 \pm 0.0226	0.9493 \pm 0.0265	0.9523 \pm 0.0443	0.9342 \pm 0.0314	0.9573 \pm 0.0324	0.7123 \pm 0.0225
Income: CF-GNN	0.9523 \pm 0.0315	2.7520 \pm 0.0324	0.9515 \pm 0.0423	2.4893 \pm 0.0312	0.9512 \pm 0.0251	2.5273 \pm 0.0318	0.9518 \pm 0.0329	2.4383 \pm 0.0321
Income: Cluster-GNN	0.9521 \pm 0.0315	2.6732 \pm 0.0414	0.9523 \pm 0.0381	2.3728 \pm 0.0327	0.9516 \pm 0.0332	2.4183 \pm 0.0316	0.9508 \pm 0.0342	2.3149 \pm 0.0343
Income: RR-GAE	0.9532 \pm 0.0243	2.4832 \pm 0.0432	0.9503 \pm 0.0352	2.1432 \pm 0.0314	0.9543 \pm 0.0235	2.1923 \pm 0.0314	0.9218 \pm 0.0325	2.1817 \pm 0.0334
Income: Cluster-RR-GAE	0.9453 \pm 0.0618	2.1001 \pm 0.0432	0.9523 \pm 0.0442	1.9354 \pm 0.0314	0.9236 \pm 0.0423	1.9214 \pm 0.0352	0.9543 \pm 0.0346	1.8733 \pm 0.0332
Unemploy: CF-GNN	0.9533 \pm 0.0114	2.2356 \pm 0.0448	0.9520 \pm 0.0124	2.4578 \pm 0.0493	0.9522 \pm 0.0235	2.5013 \pm 0.0365	0.9512 \pm 0.0324	2.4342 \pm 0.0378
Unemploy: Cluster-GNN	0.9523 \pm 0.0224	2.1914 \pm 0.0145	0.9522 \pm 0.0226	2.3243 \pm 0.0124	0.9512 \pm 0.0314	2.3653 \pm 0.0238	0.9512 \pm 0.0317	2.2883 \pm 0.0332
Unemploy: RR-GAE	0.9542 \pm 0.0332	2.1413 \pm 0.0393	0.9524 \pm 0.0333	2.1924 \pm 0.0367	0.9528 \pm 0.0325	2.2567 \pm 0.035	0.9553 \pm 0.031	2.1584 \pm 0.0254
Unemploy: Cluster-RR-GAE	0.9596 \pm 0.0325	2.0726 \pm 0.0218	0.9518 \pm 0.0489	2.0542 \pm 0.0372	0.9526 \pm 0.0387	2.0408 \pm 0.0127	0.9526 \pm 0.0442	1.9533 \pm 0.0314
Twitch: CF-GNN	0.9528 \pm 0.0249	2.6649 \pm 0.0372	0.9539 \pm 0.0329	2.6828 \pm 0.0392	0.9529 \pm 0.0228	2.5419 \pm 0.0403	0.9525 \pm 0.0275	2.6241 \pm 0.0462
Twitch: Cluster-GNN	0.9531 \pm 0.039	2.5894 \pm 0.042	0.9528 \pm 0.037	2.5321 \pm 0.040	0.9534 \pm 0.034	2.4892 \pm 0.038	0.9535 \pm 0.0326	2.4725 \pm 0.0425
Twitch: RR-GAE	0.9542 \pm 0.036	2.4987 \pm 0.039	0.9532 \pm 0.035	2.4545 \pm 0.0384	0.9541 \pm 0.0365	2.3721 \pm 0.0323	0.9529 \pm 0.0342	2.3264 \pm 0.0314
Twitch: Cluster-RR-GAE	0.9518 \pm 0.0363	2.5023 \pm 0.0515	0.9546 \pm 0.0273	2.1003 \pm 0.0173	0.9562 \pm 0.0229	2.2398 \pm 0.0254	0.9535 \pm 0.0225	2.1314 \pm 0.0254