Table 4: Test accuracy of the original tasks for Graphsage & GIN architectures on six different datasets.

Dataset	Paper AUC for Graphsage	Reproduced AUC for Graphsage	Δ
Cora	0.773	0.7601	**0.0129**
Pubmed	0.871	0.8575	**0.0135**
DBLP	0.739	0.7184	**0.0206**
Amazon Photo	0.935	0.9163	**0.0187**
Amazon CS	0.85	0.8656	**-0.0156**
LastFM	0.752	0.7274	**0.0246**

Dataset	Paper AUC for GIN	Reproduced AUC for GIN	Δ
Cora	0.757	0.7417	**0.0153**
Pubmed	0.855	0.8474	**0.0076**
DBLP	0.727	0.7054	**0.0216**
Amazon Photo	0.877	0.7307	**0.1463**
Amazon CS	0.778	0.6664	**0.1116**
LastFM	0.738	0.699	**0.039**

Table 4: Test accuracy of the original tasks for GAT & GCN architectures on six different datasets.

Dataset	Paper AUC for GAT	Reproduced AUC for GAT	Δ
Cora	0.737	0.7675	**-0.0305**
Pubmed	0.865	0.8413	**0.0237**
DBLP	0.746	0.7195	**0.0265**
Amazon Photo	0.859	0.8627	**-0.0037**
Amazon CS	0.82	0.8096	**0.0104**
LastFM	0.721	0.709	**0.012**

Dataset	Paper AUC for GCN	Reproduced AUC for GCN	Δ
Cora	0.763	0.7638	**-0.0008**
Pubmed	0.857	0.8398	**0.0172**
DBLP	0.746	0.7297	**0.0163**
Amazon Photo	0.855	0.766	**0.089**
Amazon CS	0.805	0.806	**-0.001**
LastFM	0.76	0.7235	**0.0365**

Table 4: Test accuracy of the original tasks for Baseline architecture on six different datasets.

Dataset	Paper AUC for Baseline	Reproduced AUC for Baseline	Δ
Cora	0.747	0.747	**0**
Pubmed	0.85	0.8545	**-0.0045**
DBLP	0.726	0.7178	**0.0082**
Amazon Photo	0.79	0.8967	**-0.1067**
Amazon CS	0.774	0.8307	**-0.0567**
LastFM	0.718	0.6763	**0.0417**

Table5: Attack Performance for Baseline models.

Datasets	Original AUC for Baseline0	Reproduced AUC for Baseline0	Δ
Cora	0.748	0.766	**-0.018**
Pubmed	0.876	0.893	**-0.017**
DBLP	0.692	0.705	**-0.013**
Amazon_photo	0.813	0.82	**-0.007**
Amazon_cs	0.821	0.828	**-0.007**
Lastfm	0.798	0.835	**-0.037**

Datasets	Original AUC for Baseline1	Reproduced AUC for Baseline1	Δ
Cora	0.82	0.698	**0.122**
Pubmed	0.82	0.84	**-0.02**
DBLP	0.787	0.814	**-0.027**
Amazon_photo	0.93	0.926	**0.004**
Amazon_cs	0.932	0.928	**0.004**
Lastfm	0.786	0.829	**-0.043**

The average AUC score of five runs is reported. Both the target model and the shadow model are GraphSAGE.

Table5: Attack Performance for Baseline model.

Datasets	Original AUC for Baseline2	Reproduced AUC for Baseline2	Δ
Cora	0.769	0.754	**0.015**
Pubmed	0.889	0.935	**-0.046**
DBLP	0.804	0.877	**-0.073**
Amazon_photo	0.878	0.821	**0.057**
Amazon_cs	0.863	0.95	**-0.087**
Lastfm	0.866	0.822	**0.044**

Table: The average AUC score of five runs for baseline 2 model. Both the target model and the shadow model are GraphSAGE.

Table5: Attack Performance on all six datasets where both the target model and shadow model are graphsage.

Dataset	A0	A1	A2	A3	A4	A5	A6	A7	A8	A9
Cora	0.827	0.832	0.817	0.844	0.851	0.863	0.847	0.847	0.88	0.881
Pubmed	0.776	0.812	0.812	0.899	0.909	0.91	0.81	0.768	0.5	0.5
DBLP	0.77	0.828		0.829	0.872		0.801		0.819	
Photo	0.874			0.889	0.91					
CS	0.773			0.867						
LastFM	0.874	0.887		0.874	0.898		0.896		0.922	

Table6: Attack Performance for Cora Dataset for Graphsage and GIN architecture.

Method	Original AUC for Graphsage	Reproduced AUC for Graphsage	Δ for Graphsage	Original AUC for GIN	Reproduced AUC for GIN	Δ for GIN
A0	0.859	0.828	**0.031**	0.866	0.809	**0.057**
A1	0.849	0.832	**0.017**	0.852	0.818	**0.034**
A2	0.849	0.817	**0.032**	0.858	0.83	**0.028**
A3	0.876	0.844	**0.032**	0.875	0.848	**0.027**
A4	0.876	0.851	**0.025**	0.865	0.853	**0.012**
A5	0.875	0.863	**0.012**	0.868	0.852	**0.016**
A6	0.882	0.847	**0.035**	0.887	0.83	**0.057**
A7	0.884	0.85	**0.034**	0.88	0.838	**0.042**
A8	0.882	0.88	**0.002**	0.882	0.881	**0.001**
A9	0.909	0.883	**0.026**	0.914	0.876	**0.038**

Table6: Attack Performance for Cora Dataset for GAT and GCN architecture.

Method	Original AUC for GAT	Reproduced AUC for GAT	Δ for GAT	Original AUC for GCN	Reproduced AUC for GCN	Δ for GCN
A0	0.882	0.824	**0.058**	0.893	0.832	**0.061**
A1	0.884	0.846	**0.038**	0.871	0.827	**0.044**
A2	0.878	0.843	**0.035**	0.868	0.849	**0.019**
A3	0.880	0.858	**0.022**	0.881	0.852	**0.029**
A4	0.879	0.852	**0.027**	0.879	0.848	**0.031**
A5	0.873	0.851	**0.022**	0.879	0.85	**0.029**
A6	0.881	0.861	**0.02**	0.888	0.857	**0.031**
A7	0.881	0.863	**0.018**	0.888	0.857	**0.031**
A8	0.882	0.889	**-0.007**	0.878	0.878	**0**
A9	0.915	0.878	**0.036**	0.914	0.873	**0.041**

Table6: Attack Performance for Pubmed Dataset for Graphsage and GIN architecture.

Method	Original AUC for Graphsage	Reproduced AUC for Graphsage	Δ for Graphsage	Original AUC for GIN	Reproduced AUC for GIN	Δ for GIN
A0	0.768	0.776	**-0.008**	0.764	0.776	**-0.012**
A1	0.806	0.812	**-0.006**	0.805	0.808	**-0.003**
A2	0.809	0.812	**-0.003**	0.81	0.809	**0.001**
A3	0.889	0.899	**-0.01**	0.896	0.906	**-0.01**
A4	0.895	0.908	**-0.013**	0.889	0.908	**-0.019**
A5	0.897	0.909	**-0.012**	0.892	0.908	**-0.016**
A6	0.881	0.812	**0.069**	0.878	0.761	**0.117**
A7	0.892	0.765	**0.127**	0.891	0.766	**0.125**
A8	0.939	0.5	**0.439**	0.938	0.5	**0.438**
A9	0.939	0.5	**0.439**	0.938	0.5	**0.438**

Table6: Attack Performance for Pubmed Dataset for GAT and GCN architecture.

Method	Original AUC for GAT	Reproduced AUC for GAT	Δ for GAT	Original AUC for GCN	Reproduced AUC for GCN	Δ for GCN
A0	0.763	0.7777	**-0.0147**	0.765	0.777	**-0.012**
A1	0.8	0.81	**-0.01**	0.801	0.802	**-0.001**
A2	0.805	0.813	**-0.008**	0.806	0.808	**-0.002**
A3	0.887	0.904	**-0.017**	0.891	0.904	**-0.013**
A4	0.894	0.909	**-0.015**	0.888	0.906	**-0.018**
A5	0.892	0.908	**-0.016**	0.893	0.906	**-0.013**
A6	0.877	0.794	**0.083**	0.876	0.8	**0.076**
A7	0.89	0.769	**0.121**	0.889	0.773	**0.116**
A8	0.938	0.5	**0.438**	0.937	0.5	**0.437**
A9	0.939	0.5	**0.439**	0.938	0.5	**0.438**

Table6: Attack Performance for DBLP Dataset for Graphsage and GIN architecture.

Method	Original AUC for Graphsage	Reproduced AUC for Graphsage	Δ for Graphsage	Original AUC for GIN	Reproduced AUC for GIN	Δ for GIN
A0	0.781	0.77	**0.011**	0.779	0.766	**0.013**
A1	0.821	0.828	**-0.007**	0.82	0.819	**0.001**
A2	0.822			0.824		
A3	0.834	0.829	**0.005**	0.835	0.823	**0.012**
A4	0.873	0.872	**0.001**	0.878	0.869	**0.009**
A5	0.872			0.872		
A6	0.879	0.801	**0.078**	0.883	0.799	**0.084**
A7	0.903			0.879		
A8	0.924	0.819	**0.105**	0.927	0.832	**0.095**
A9	0.929			0.926		

Table6: Attack Performance for DBLP Dataset for GAT and GCN architecture.

Method	Original AUC for GAT	Reproduced AUC for GAT	Δ for GAT	Original AUC for GCN	Reproduced AUC for GCN	Δ for GCN
A0	0.782	0.774	**0.008**	0.779	0.737	0.042
A1	0.818	0.82	**-0.002**	0.824	0.82	**0.004**
A2	0.821			0.829		
A3	0.839	0.832	**0.007**	0.837	0.769	**0.068**
A4	0.878	0.864	**0.014**	0.873	0.868	**0.005**
A5	0.878			0.874		
A6	0.894	0.797	**0.097**	0.879	0.826	**0.053**
A7	0.876			0.882		
A8	0.926	0.852	**0.074**	0.917	0.817	**0.1**
A9	0.925			0.921		

Table6: Attack Performance for LastFM Dataset for Graphsage and GIN architecture.

Method	Original AUC for Graphsage	Reproduced AUC for Graphsage	Δ for Graphsage	Original AUC for GIN	Reproduced AUC for GIN	Δ for GIN
A0	0.85	0.874	**-0.024**	0.804	0.835	**-0.031**
A1	0.869	0.887	**-0.018**	0.855	0.875	**-0.02**
A2	0.867			0.867		
A3	0.883	0.874	**0.009**	0.876	0.878	**-0.002**
A4	0.909	0.898	**0.011**	0.897	0.887	**0.01**
A5	0.911			0.91		
A6	0.919	0.896	**0.023**	0.891	0.899	**-0.008**
A7	0.921			0.899		**0.899**
A8	0.929	0.922	**0.007**	0.924	0.882	**0.042**
A9	0.93			0.927		

Table6: Attack Performance for LastFM Dataset for GAT and GCN architecture.

Method	Original AUC for GAT	Reproduced AUC for GAT	Δ for GAT	Original AUC for GCN	Reproduced AUC for GCN	Δ for GCN
A0	0.836	0.869	**-0.033**	0.794	0.835	**-0.041**
A1	0.87	0.886	**-0.016**	0.833	0.886	**-0.053**
A2	0.871			0.831		
A3	0.88	0.884	**-0.004**	0.878	0.866	**0.012**
A4	0.91	0.902	**0.008**	0.89	0.894	**-0.004**
A5	0.909			0.907		
A6	0.911	0.901	**0.01**	0.886	0.892	**-0.006**
A7	0.913			0.874		
A8	0.923	0.926	**-0.003**	0.914	0.912	**0.002**
A9	0.927			0.912		

Table6: Attack Performance for Amazon Photo Dataset for Graphsage and GIN architecture.

Method	Original AUC for Graphsage	Reproduced AUC for Graphsage	Δ for Graphsage	Original AUC for GIN	Reproduced AUC for GIN	Δ for GIN
A0	0.877	0.874	**0.003**	0.722	0.775	**-0.053**
A1	0.898			0.785		
A2	0.898			0.786		
A3	0.892	0.889	**0.003**	0.871	0.87	**0.001**
A4	0.916	0.91	**0.006**	0.89	0.891	**-0.001**
A5	0.915			0.9		
A6	0.967			0.92		
A7	0.968			0.909		
A8	0.946			0.925		
A9	0.946			0.927		

Table6: Attack Performance for Amazon Photo Dataset for GAT and GCN architecture.

Method	Original AUC for GAT	Reproduced AUC for GAT	Δ for GAT	Original AUC for GCN	Reproduced AUC for GCN	Δ for GCN
A0	0.783	0.823	**-0.04**	0.75	0.868	**-0.118**
A1	0.801			0.81		
A2	0.821			0.828		
A3	0.863	0.864	**-0.001**	0.875	0.835	**0.04**
A4	0.896			0.899		
A5	0.902			0.902		
A6	0.956			0.968		
A7	0.952			0.966		
A8	0.936			0.941		
A9	0.935			0.943		

Table6: Attack Performance for Amazon CS Dataset for Graphsage and GIN architecture.

Method	Original AUC for Graphsage	Reproduced AUC for Graphsage	Δ for Graphsage	Original AUC for GIN	Reproduced AUC for GIN	Δ for GIN
A0	0.817	0.773	**0.044**	0.77	0.856	**-0.086**
A1	0.838			0.84		
A2	0.845			0.837		
A3	0.869	0.867	**0.002**	0.872	0.5	**0.372**
A4	0.89			0.881		
A5	0.893			0.875		
A6	0.955			0.913		
A7	0.932			0.919		
A8	0.945			0.94		
A9	0.94			0.936		

Table6: Attack Performance for Amazon CS Dataset for GAT and GCN architecture.

Method	Original AUC for GAT	Reproduced AUC for GAT	Δ for GAT	Original AUC for GCN	Reproduced AUC for GCN	Δ for GCN
A0	0.798	0.79	**0.008**	0.785	0.788	**-0.003**
A1	0.837			0.823		
A2	0.839			0.81		
A3	0.85	0.848	**0.002**	0.843	0.852	**-0.009**
A4	0.884			0.874		
A5	0.885			0.879		
A6	0.917			0.935		
A7	0.921			0.929		
A8	0.943			0.939		
A9	0.94			0.935		

Table 8: Effect of the shadow datasets' sizes. Both the target and shadow architectures are GraphSAGE.

Dataset	100%	50%	30%	20%	10%
Cora	0.858	0.846	0.815	0.79	0.712
Pubmed	0.799	0.79	0.781	0.751	0.781
DBLP	0.812	0.8	0.799	0.791	0.749
Photo	0.869	0.882	0.875	0.874	0.882
LastFM	0.881	0.87	0.881	0.88	0.857