

Differentially Private Decoupled Graph Convolutions for Multigranular Topology Protection: Rebuttal

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1 Table 3 Revision

2 We change MLP to DP-MLP whenever it is trained with DP-SGD for clarity. We also clear some
3 typos in the table.

Table 1: Test accuracy (%) with 95% confidence interval. A bold font indicates the best performance one can achieve under the same GDP guarantee. Underlined entries indicate a result within the confidence interval when compared to the best possible. Note that for the k -neighbor (N_k) GDP setting, the results of GAP and DP-MLP are identical to those of node GDP.

		Squirrel	Chameleon	Facebook	Pubmed	Computers	Cora	Photo
none private	DPDGC	79.92 ± 0.26	79.24 ± 0.54	86.06 ± 0.24	88.34 ± 0.46	92.27 ± 0.15	82.44 ± 0.83	<u>94.98 ± 0.29</u>
	GAP	36.86 ± 1.35	50.35 ± 1.37	79.52 ± 0.24	89.75 ± 0.12	91.05 ± 0.16	86.53 ± 0.46	95.13 ± 0.16
	SAGE	35.47 ± 0.58	41.61 ± 0.86	84.62 ± 0.13	88.17 ± 0.98	91.76 ± 0.23	84.19 ± 0.76	94.05 ± 0.38
	MLP	34.14 ± 0.77	46.78 ± 1.39	51.16 ± 0.16	87.25 ± 0.19	85.27 ± 0.28	76.48 ± 0.91	91.35 ± 0.22
edge $\epsilon = 1$	DPDGC	38.18 ± 1.48	53.83 ± 1.11	62.04 ± 0.33	88.59 ± 0.16	87.74 ± 0.26	<u>77.71 ± 0.95</u>	<u>92.59 ± 0.41</u>
	GAP	35.15 ± 0.47	49.47 ± 0.88	69.75 ± 0.44	87.79 ± 0.22	87.74 ± 0.20	<u>76.95 ± 0.90</u>	92.94 ± 0.36
	RandEdge+SAGE	19.79 ± 0.69	21.70 ± 1.23	25.27 ± 2.00	87.88 ± 0.18	48.44 ± 1.48	59.95 ± 1.98	46.42 ± 0.55
	DP-MLP	34.14 ± 0.77	46.78 ± 1.39	51.16 ± 0.16	87.25 ± 0.19	85.27 ± 0.28	76.48 ± 0.91	91.35 ± 0.22
N_1 $\epsilon = 16$	DPDGC	42.71 ± 1.43	48.63 ± 1.78	80.94 ± 0.27	84.33 ± 0.40	83.49 ± 0.29	59.98 ± 0.81	88.38 ± 0.44
	GAP	33.82 ± 0.60	38.68 ± 0.59	51.57 ± 0.28	85.28 ± 0.14	77.50 ± 0.20	54.36 ± 1.14	81.27 ± 0.31
	DP-MLP	34.46 ± 1.09	38.19 ± 1.97	50.12 ± 0.22	85.72 ± 0.11	80.01 ± 0.37	64.29 ± 0.80	85.61 ± 0.42
N_5 $\epsilon = 16$	DPDGC	41.00 ± 1.19	47.22 ± 1.90	76.84 ± 0.36	84.31 ± 0.46	80.60 ± 0.44	59.56 ± 0.97	87.02 ± 0.49
	GAP	33.82 ± 0.60	38.68 ± 0.59	51.57 ± 0.28	85.28 ± 0.14	77.50 ± 0.20	54.36 ± 1.14	81.27 ± 0.31
	DP-MLP	34.46 ± 1.09	38.19 ± 1.97	50.12 ± 0.22	85.72 ± 0.11	80.01 ± 0.37	64.29 ± 0.80	85.61 ± 0.42
N_{25} $\epsilon = 16$	DPDGC	40.51 ± 0.85	46.32 ± 1.87	68.66 ± 0.32	84.27 ± 0.38	78.25 ± 0.31	59.26 ± 0.87	84.82 ± 0.54
	GAP	33.82 ± 0.60	38.68 ± 0.59	51.57 ± 0.28	85.28 ± 0.14	77.50 ± 0.20	54.36 ± 1.14	81.27 ± 0.31
	DP-MLP	34.46 ± 1.09	38.19 ± 1.97	50.12 ± 0.22	85.72 ± 0.11	80.01 ± 0.37	64.29 ± 0.80	85.61 ± 0.42
node $\epsilon = 16$	DPDGC	36.17 ± 0.62	46.43 ± 1.21	56.65 ± 0.64	84.55 ± 0.32	76.62 ± 0.47	58.97 ± 1.05	82.15 ± 0.54
	GAP	33.82 ± 0.60	38.68 ± 0.59	51.57 ± 0.28	85.28 ± 0.14	77.50 ± 0.20	54.36 ± 1.14	81.27 ± 0.31
	DP-SAGE	19.81 ± 0.99	20.96 ± 1.27	32.15 ± 0.78	39.68 ± 0.70	39.13 ± 0.52	15.86 ± 1.55	31.41 ± 0.93
	DP-MLP	34.46 ± 1.09	38.19 ± 1.97	50.12 ± 0.22	85.72 ± 0.11	80.01 ± 0.37	64.29 ± 0.80	85.61 ± 0.42