D.6. Experiments with GAT, SAGE, GIN types of GNN

Table 9. Accuracy of GAT on the graph binary classification task on NCI1, MUTAGENICITY, AIDS and PROTEINS.

	NCI1	MUTAGENICITY	AIDS	PROTEINS
Training	0.788	0.845	0.991	0.780
Validation	0.741	0.802	0.973	0.820
Testing	0.748	0.781	0.973	0.730

Table 10. Accuracy of GraphSAGE on the graph binary classification task on NCI1, MUTAGENICITY, AIDS and PROTEINS.

	NCI1	MUTAGENICITY	AIDS	PROTEINS
Training	0.854	0.896	0.992	0.825
Validation	0.783	0.856	0.978	0.847
Testing	0.809	0.795	0.940	0.748

Table 11. Accuracy of GIN on the graph binary classification task on NCI1, MUTAGENICITY, AIDS and PROTEINS.

	NCI1	MUTAGENICITY	AIDS	PROTEINS
Training	0.863	0.849	0.999	0.810
Validation	0.826	0.800	0.951	0.847
Testing	0.789	0.784	0.946	0.748

Table 12. Results on the FCR problem for the task of explaining the GAT trained model. The parameters for recourse are the same as for the experiments in Section 4 and Table 3, in particular $\theta = 0.1$ and $\Delta = 0.02$.

	NCI1		MUTAGENICITY		AIDS		PROTEINS	
	Coverage	Cost	Coverage	Cost	Coverage	Cost	Coverage	Cost
GCFEXPLAINER	24.4%	5.26	47.3%	**5.82**	27.6%	7.12	42.6%	10.54
COMRECGC (Ours)	**35.6%**	**5.02**	**55.7%**	6.05	**30.7%**	**6.89**	**42.9%**	**10.27**

Table 13. Results on the FCR problem for the task of explaining the GraphSAGE trained model. The parameters for recourse are the same as for the experiments in Section 4 and Table 3, in particular $\theta = 0.1$ and $\Delta = 0.02$

	NCI1		MUTAGENICITY		AIDS		PROTEINS	
	Coverage	Cost	Coverage	Cost	Coverage	Cost	Coverage	Cost
GCFEXPLAINER	32.8%	4.86	46.5%	**5.46**	20.3%	7.38	68.6%	11.53
COMRECGC (Ours)	**47.9%**	**4.76**	**50.9%**	5.90	**21.5%**	**7.16**	**69.4%**	**11.51**

Table 14. Results on the FCR problem for the task of explaining the GIN trained model. The parameters for recourse are the same as for the experiments in Section 4 and Table 3, in particular $\theta = 0.1$ and $\Delta = 0.02$

	NCI1		MUTAGENICITY		AIDS		PROTEINS	
	Coverage	Cost	Coverage	Cost	Coverage	Cost	Coverage	Cost
GCFEXPLAINER	31.2%	5.13	30.4%	**6.05**	14.7%	7.68	47.3%	12.21
COMRECGC (Ours)	**45.6%**	**4.58**	**33.7%**	6.41	**16.6%**	**7.34**	**48.6%**	**11.32**

D.7. Additional Dataset

Table 15. Results on the FCR problem for the task of explaining the GIN trained model. The parameters for recourse are the same as for the experiments in Section 4 and Table 3, in particular $\Theta = 0.1$ and $\Delta = 0.02$.

	IMDB-BINARY (Yanardag & Vishwanathan, 2015)		**IMDB-MULTI**(Yanardag & Vishwanathan, 2015)	
	Coverage	Cost	Coverage	Cost
GCFEXPLAINER	76.5%	8.33	19.9%	**7.65**
COMRECGC	**80.9%**	**8.10**	**21.9%**	7.70