

If you find our supplementary experiments acceptable, we would be pleased to include them in the appendix.

## 1 Different Dataset

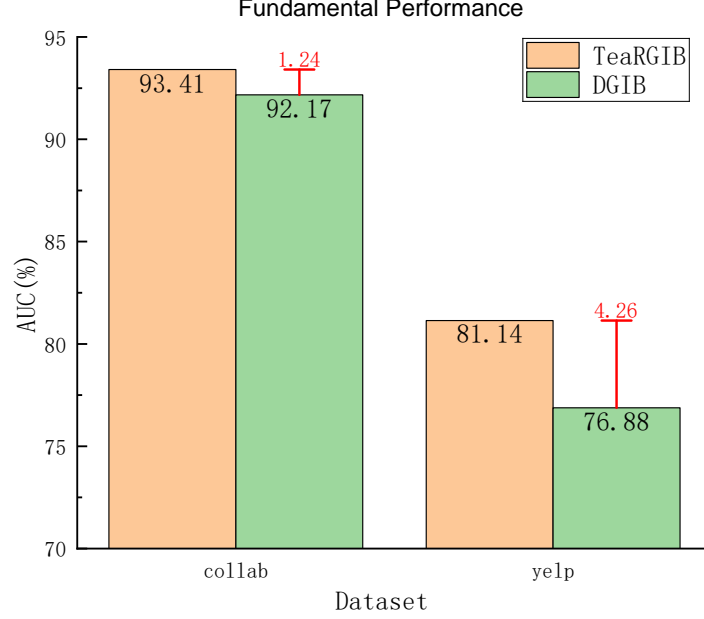


Figure 1: The figure shows the Fundamental Performance on collab and yelp

Dataset	Model	Clean	Feature Interference			Structure Interference			Temporal Interference		
			10%	20%	50%	5%	10%	20%	$n = 1$	$n = 2$	$n = 5$
collab	DGIB	92.17±0.2	78.95±0.3	73.72±0.3	64.18±0.6	87.47±0.1	80.73±0.2	74.43±0.3	83.32±0.2	80.73±0.2	59.46±0.5
	TeaRGIB	<b>93.41±0.3</b>	<b>90.26±0.3</b>	<b>85.06±0.3</b>	<b>74.92±0.3</b>	<b>91.19±0.4</b>	<b>85.07±0.2</b>	<b>78.72±0.4</b>	<b>84.42±0.3</b>	<b>82.31±0.2</b>	<b>73.11±0.3</b>
yelp	DGIB	76.88±0.2	71.54±0.4	67.34±0.5	<b>62.98±0.4</b>	75.27±0.4	74.51±0.2	73.43±0.3	75.39±0.3	72.11±0.3	65.22±0.6
	TeaRGIB	<b>80.17±0.3</b>	<b>76.05±0.2</b>	<b>69.37±0.3</b>	62.53±0.3	<b>78.76±0.2</b>	<b>75.66±0.1</b>	<b>73.57±0.2</b>	<b>79.79±0.2</b>	<b>76.37±0.3</b>	<b>72.02±0.3</b>

Table 1: Robustness results(AUC) on collab and yelp datasets with data perturbation at different levels.

## 2 Advanced Ablation on Von Neumann entropy

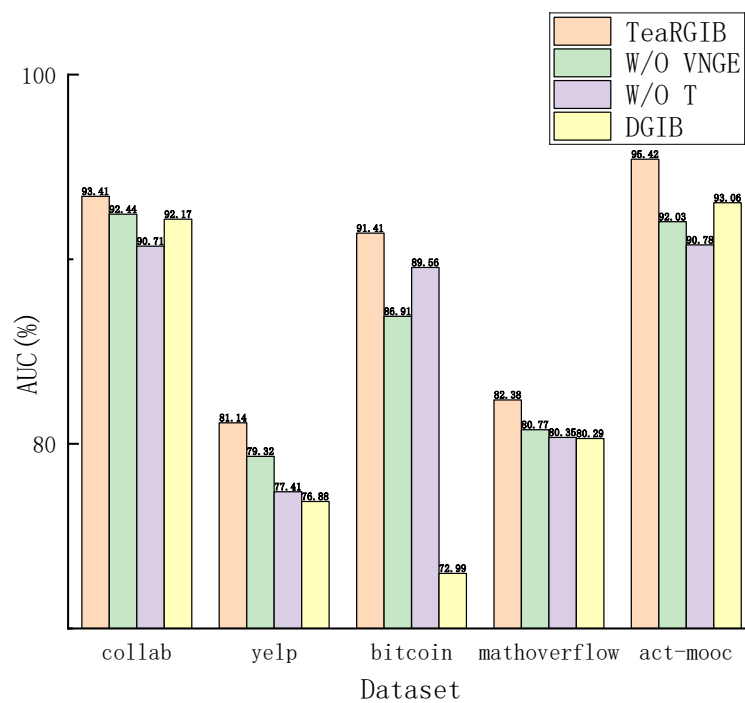


Figure 2: The figure shows the Fundamental Performance on datasets

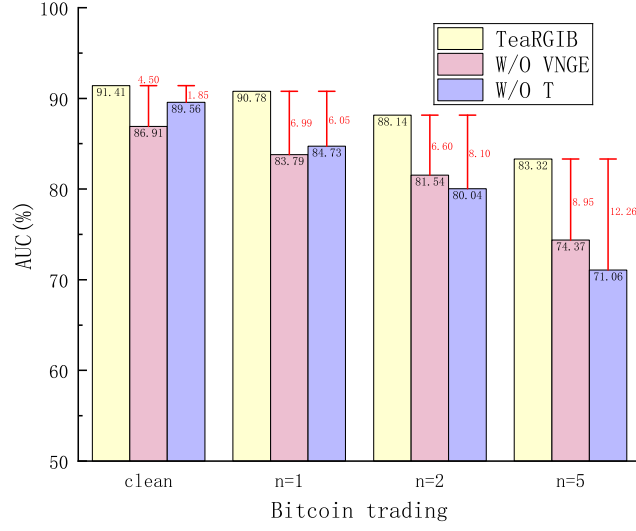


Figure 3: The figure shows ablation the Robust Performance on Bitcoin trading

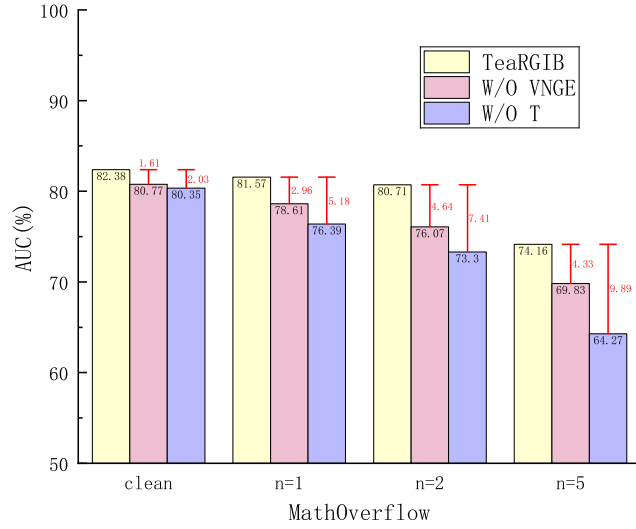


Figure 4: The figure shows ablation the Robust Performance on MathOverflow

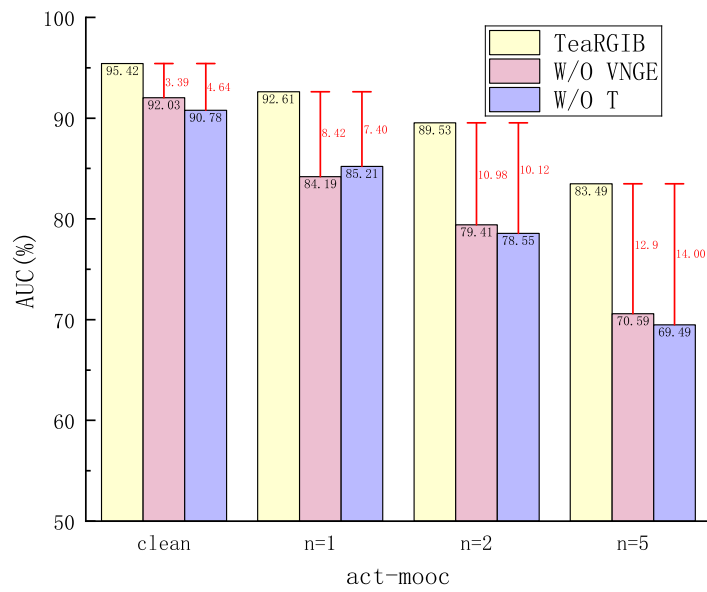


Figure 5: The figure shows ablation the Robust Performance on act-mooc