Statistical Benchmark Report

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This report provides quantitative evaluation results for NDCG@k and faithfulness, correlation diagnostics, outlier detection, and statistical visualizations.

1. Summary Statistics

files	100.0000
ndcg@k mean	0.9997
ndcg@k ci95 lo	0.9991
ndcg@k ci95 hi	1.0000
faith mean	0.5262
faith ci95 lo	0.4903
faith ci95 hi	0.5614
ndcg@k median	1.0000
faith median	0.5239
ndcg@k std	0.0026
faith std	0.1807
bootstrap iters	2000.0000
iqr k	1.5000
z thresh	3.0000
faith high thr	0.5000
faith mid thr	0.2500

2. Correlation and Outlier Analysis

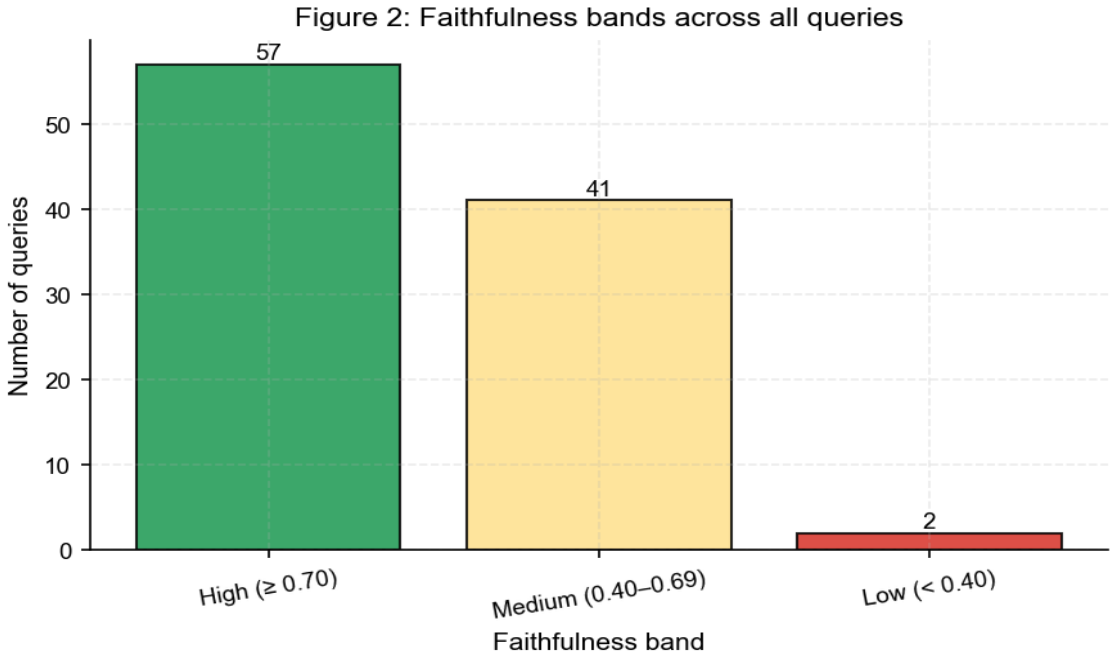
Metric Pair	Correlation	p-value
Pearson r	-0.013	8.962e-01
Spearman ρ	0.012	9.070e-01

Detected Outliers

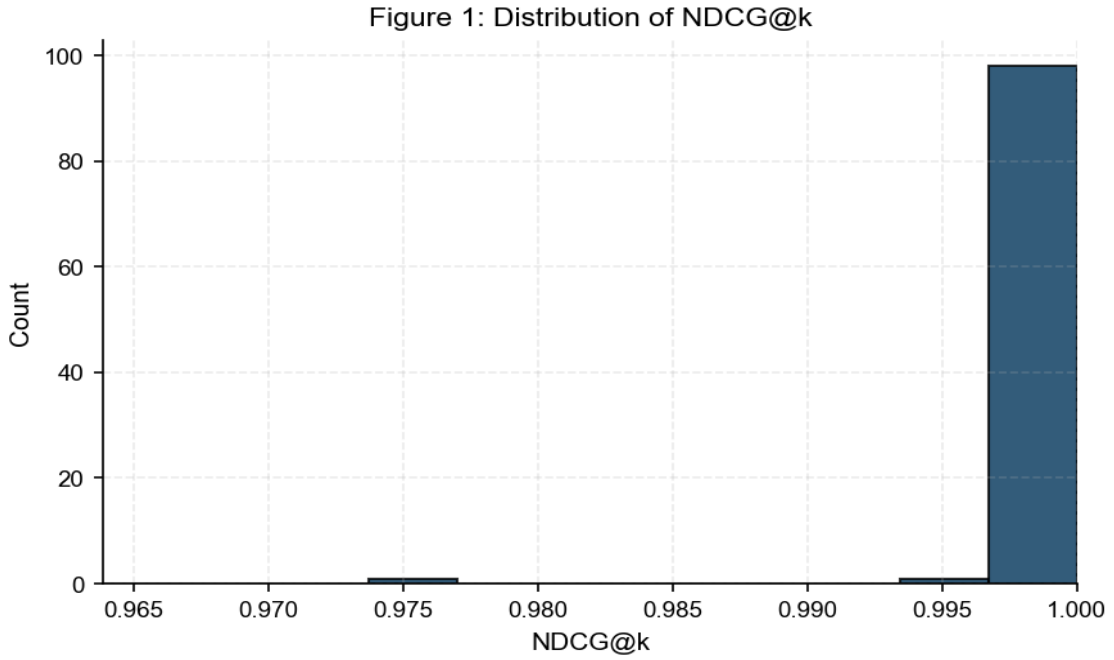
Query	NDCG@k	Faithfulness	z_ndcg	z_faith
Define_describe_the_notion_of_transparency_in_ai_decision_processes___describe_i	0.974	0.566	-9.82	0.22

3. Visual Analytics

faithfulness bands global.png

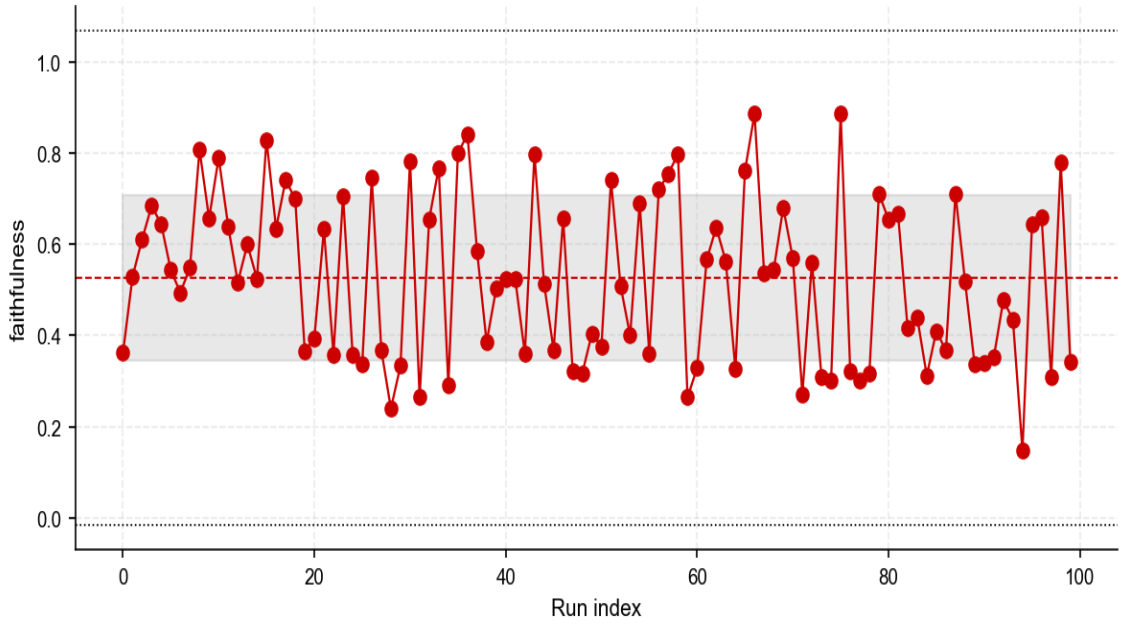


hist ndcg.png



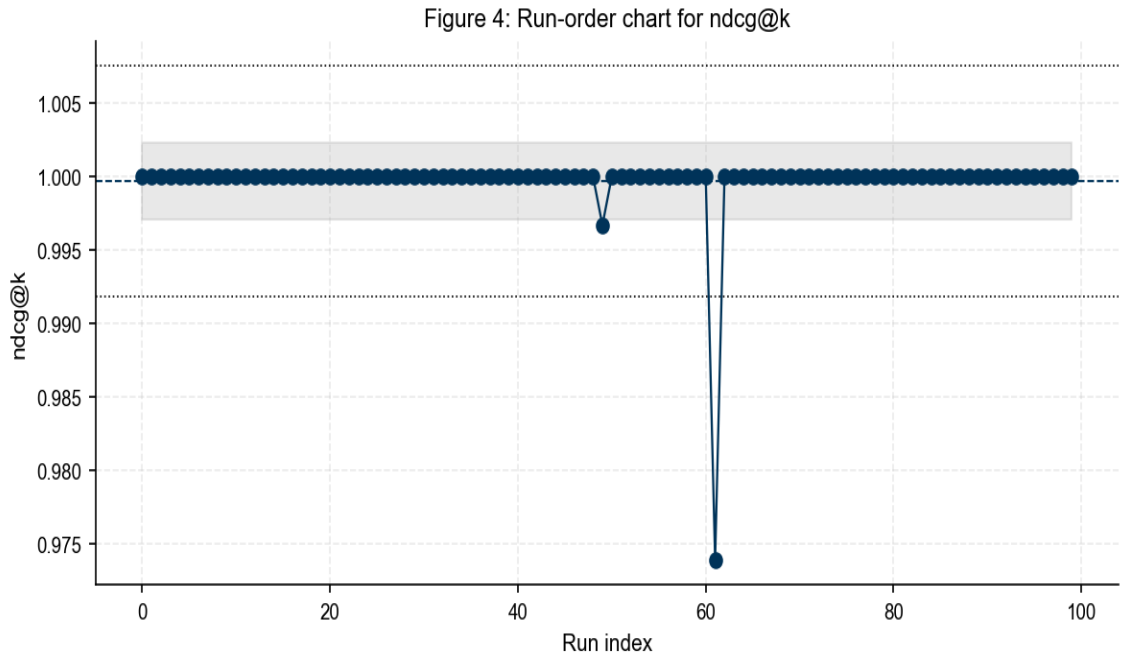
run order faithfulness.png

Figure 5: Run-order chart for faithfulness



run order ndcg@k.png

Figure 4: Run-order chart for ndcg@k



scatter ndcg vs faithfulness.png

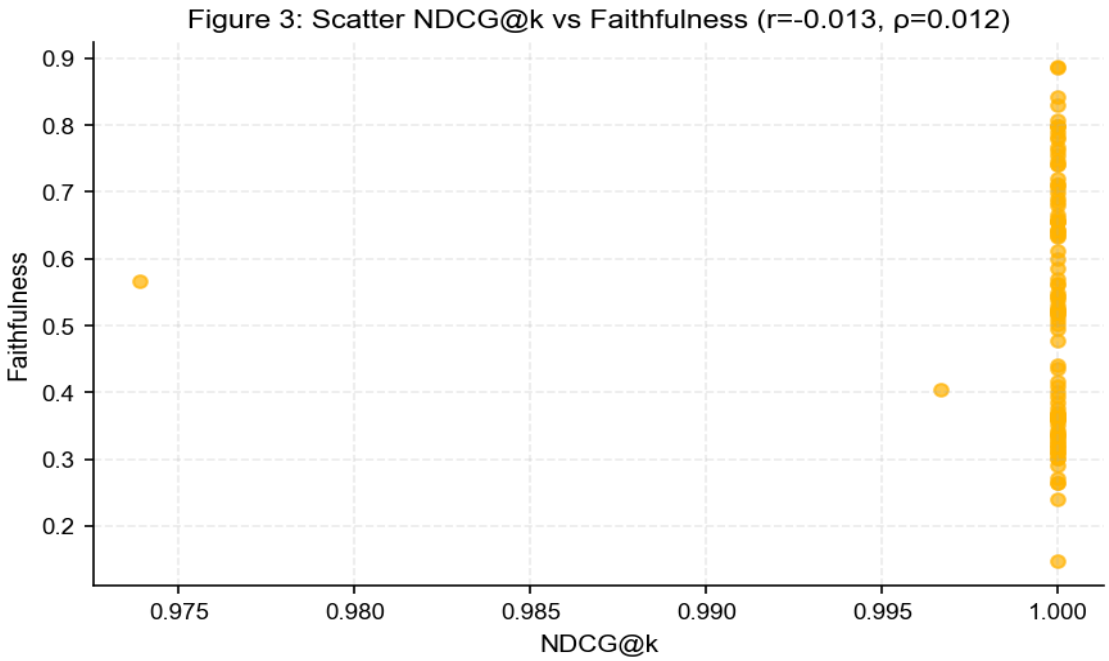


Figure 3: Scatter NDCG@k vs Faithfulness (r=-0.013, ρ=0.012)
Faithfulness
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.975
0.980
0.985
0.990
0.995
1.000
NDCG@k