LLM Evaluation

17 pages summary

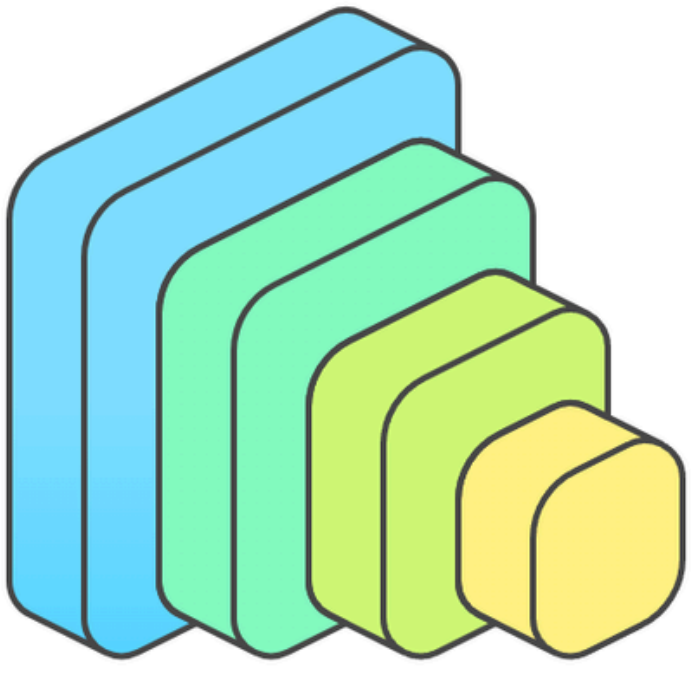
Refining Language Model Evaluation

Scenario and Metric Taxonomy

Organizing use cases and metrics

Multi-Metric Measurement

Evaluating models across multiple metrics



Targeted Evaluation

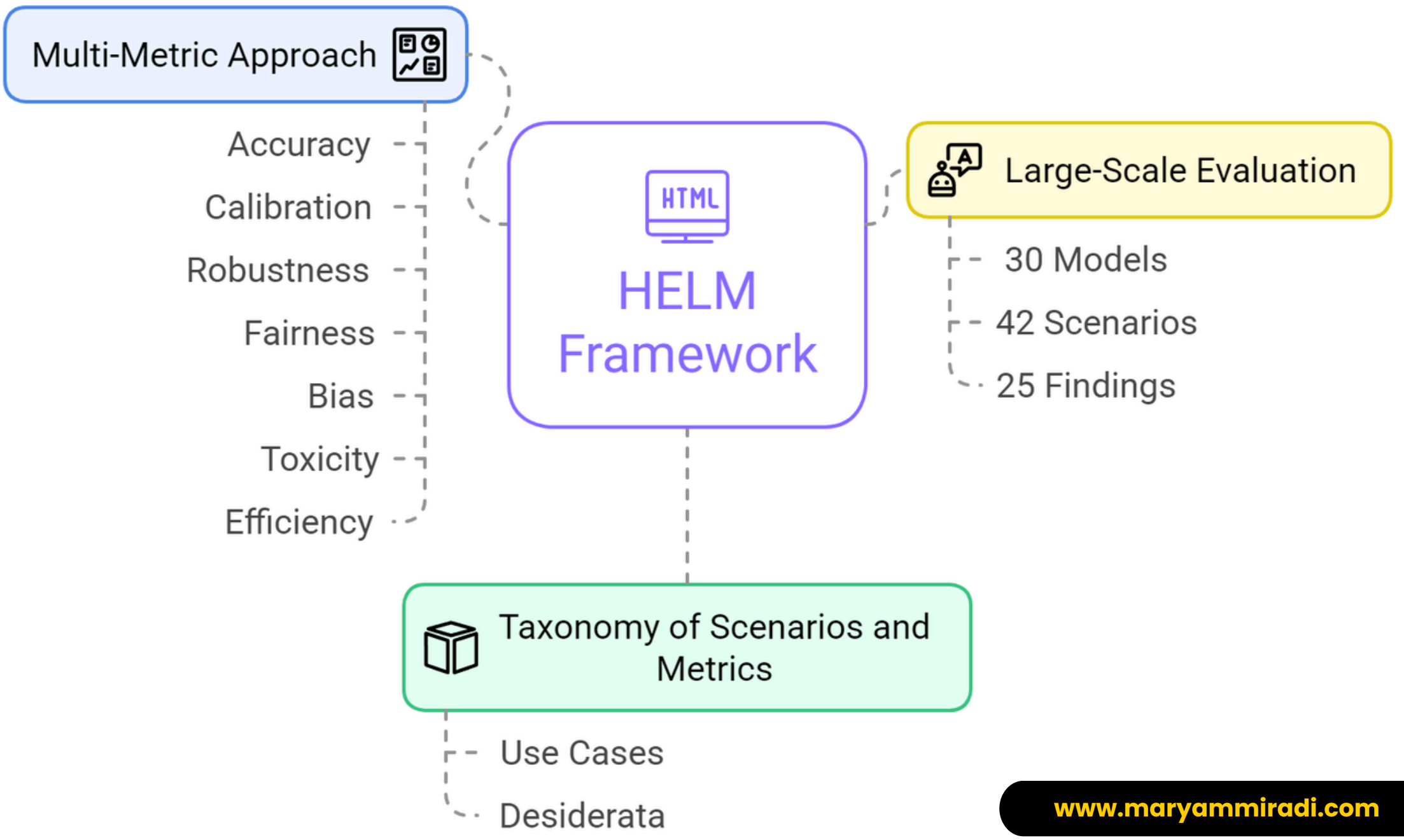
Deep analysis of specific aspects

Large-Scale Model Evaluation

Comprehensive assessment of models

LLM Evaluation

Overview HELM



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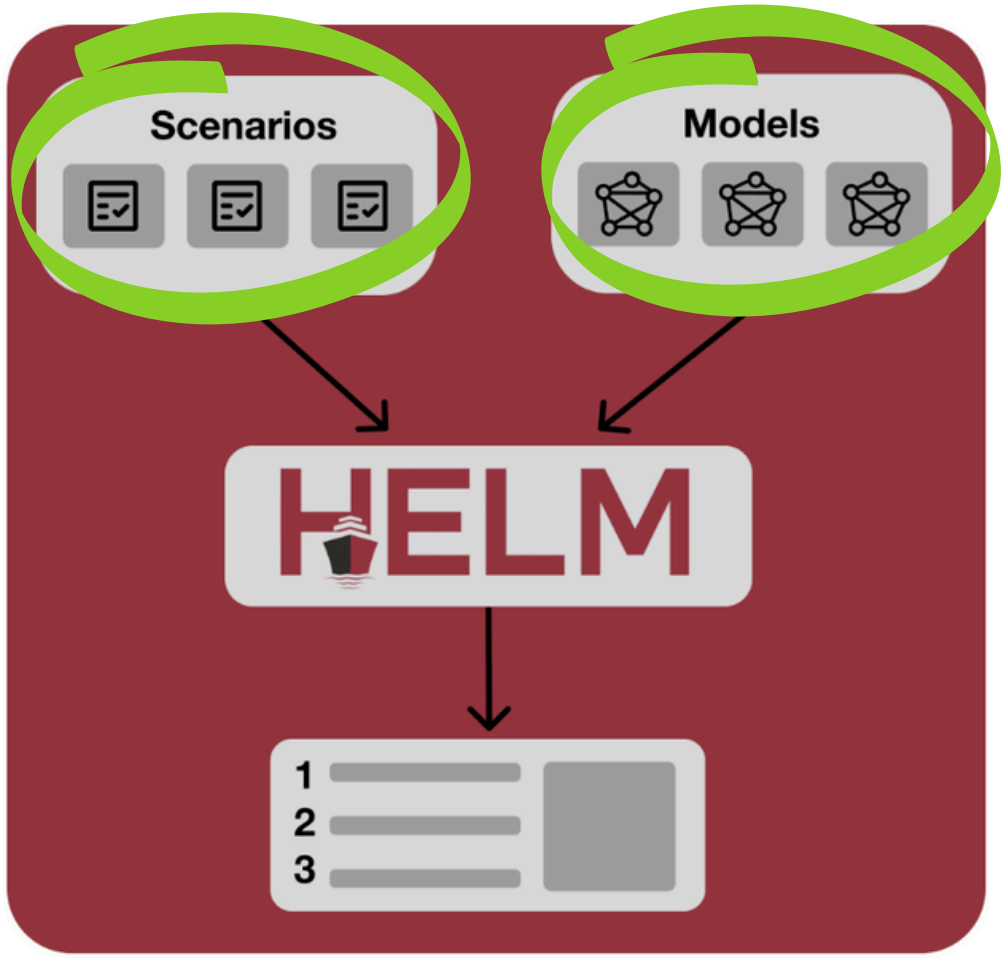
Winning Models HELM



Model	Mean win rate
GPT-4o (2024-05-13)	**0.938**
GPT-4o (2024-08-06)	0.928
DeepSeek v3	0.908
Claude 3.5 Sonnet (20240620)	0.885
Amazon Nova Pro	0.885
GPT-4 (0613)	0.867
GPT-4 Turbo (2024-04-09)	0.864
Llama 3.1 Instruct Turbo (405B)	0.854
Claude 3.5 Sonnet (20241022)	0.846
Gemini 1.5 Pro (002)	

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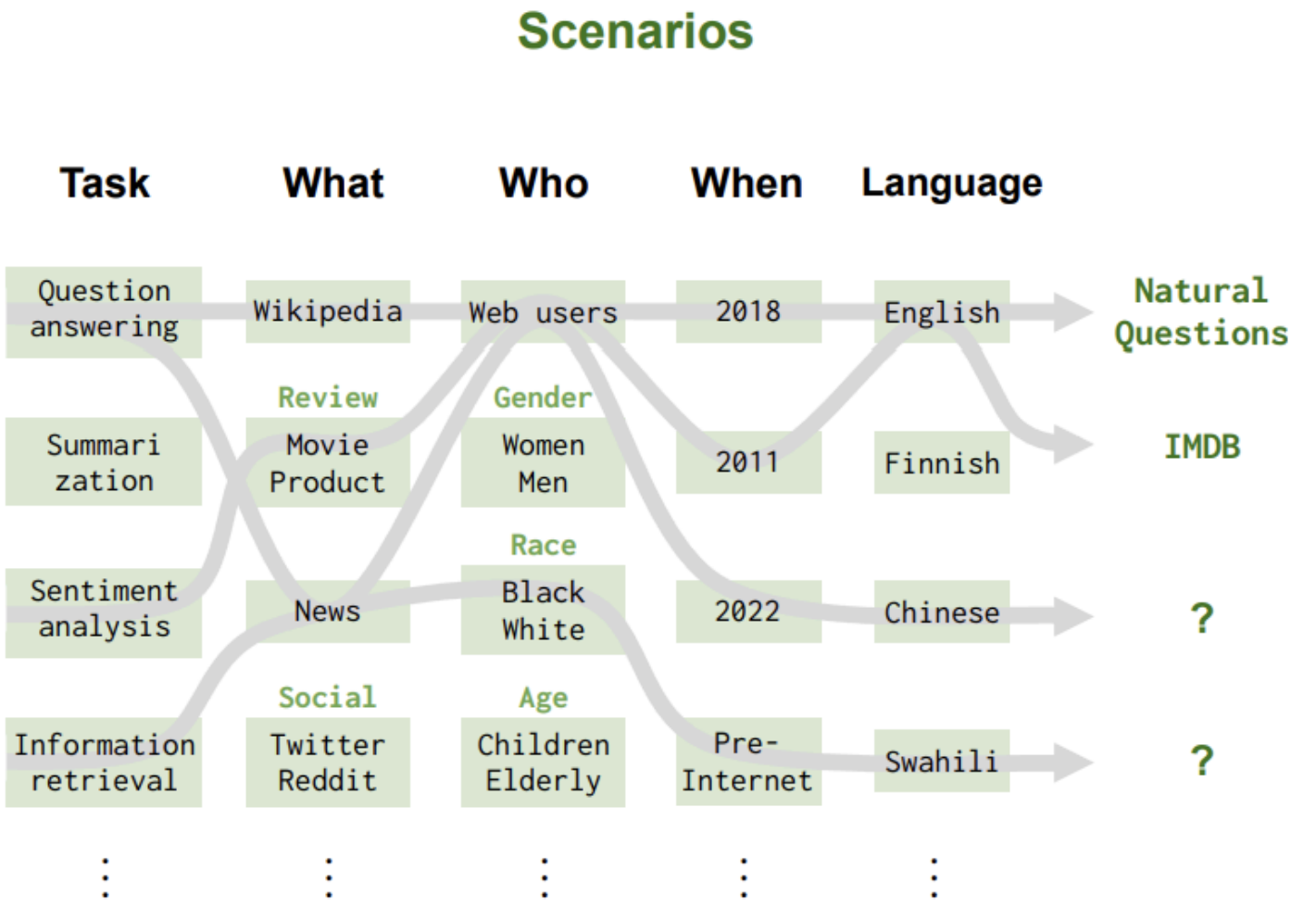
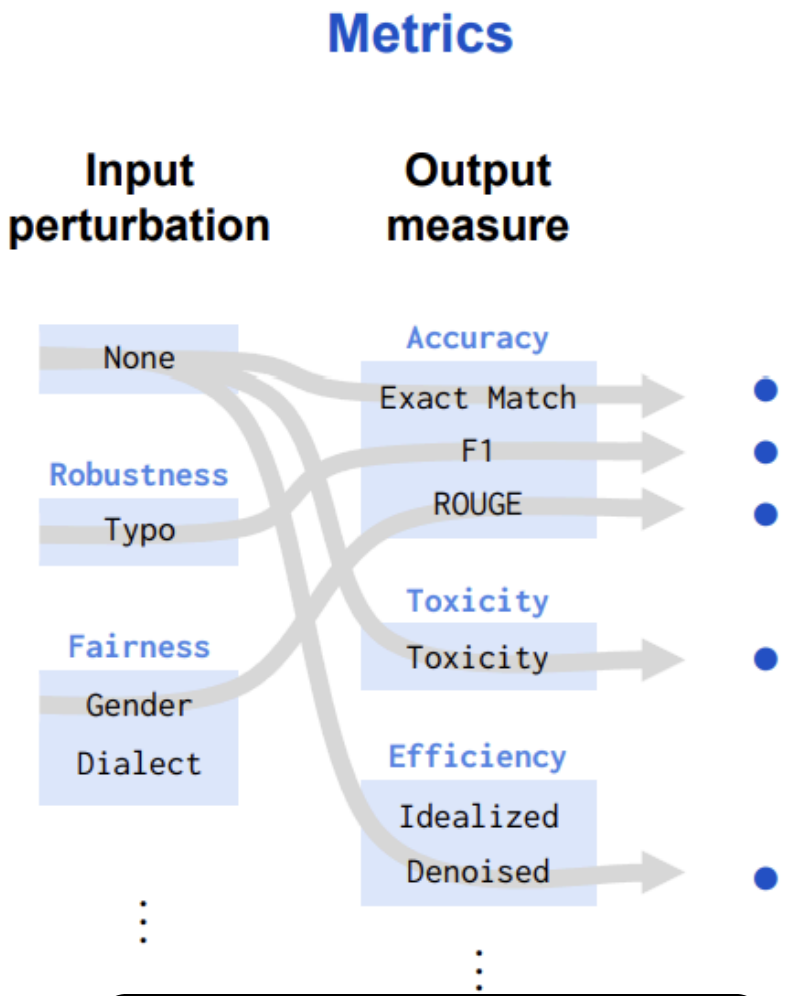
Scenarios & Models





LLM Evaluation

Metrics

Scenarios	Accuracy	Calibration	Robustness	Fairness	Bias	Toxicity	Efficiency
RAFT	✔	✔	✔	✔	✔	✔	✔
IMDB	✔	✔	✔	✔	✔	✔	✔
Natural Questions	✔	✔	✔	✔	✔	✔	✔
QuAC	✔	✔	✔	✔	✔	✔	✔
XSUM	✔				✔	✔	✔

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6000 World Languages

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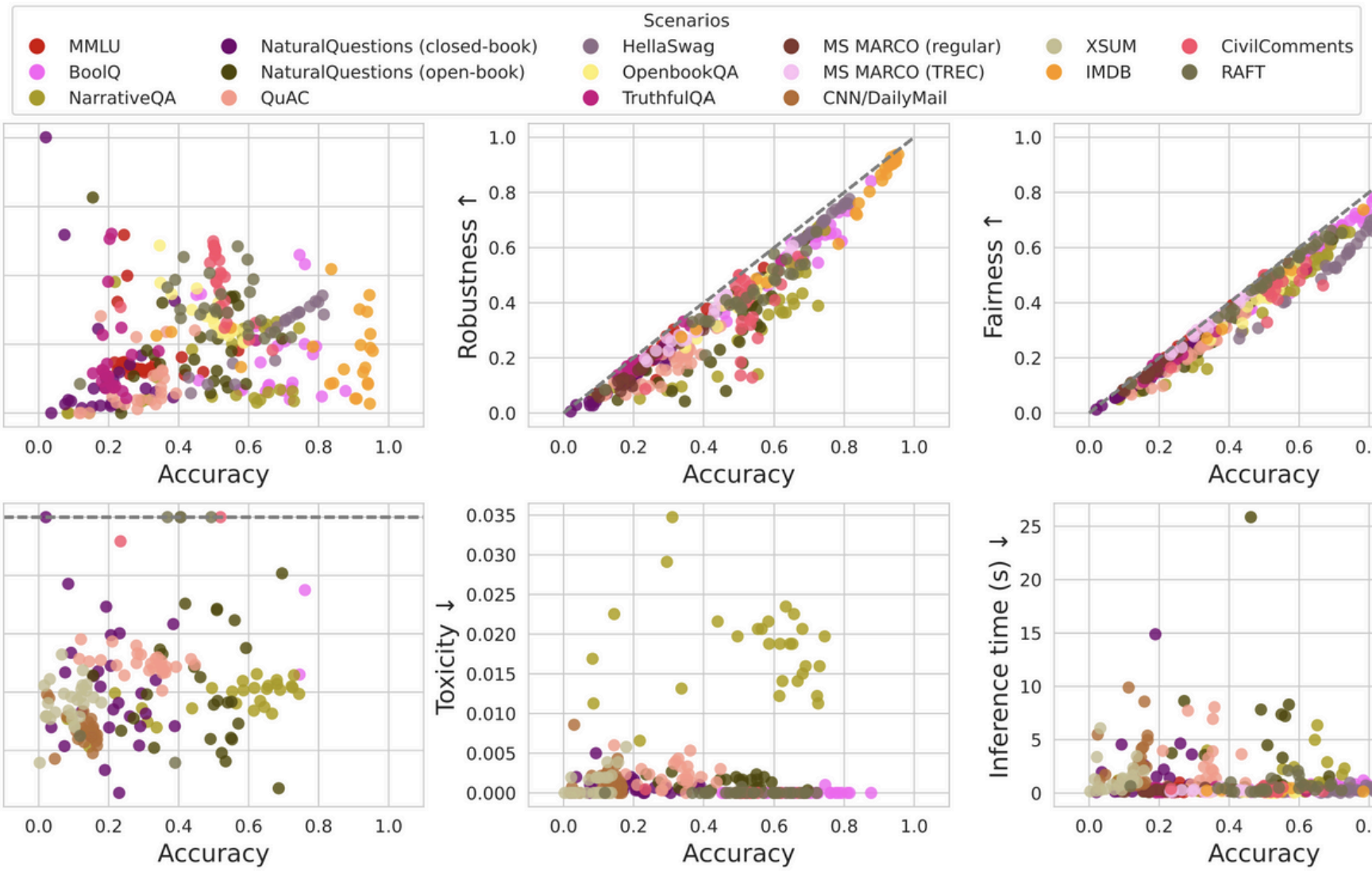
Accuracy of Metrics



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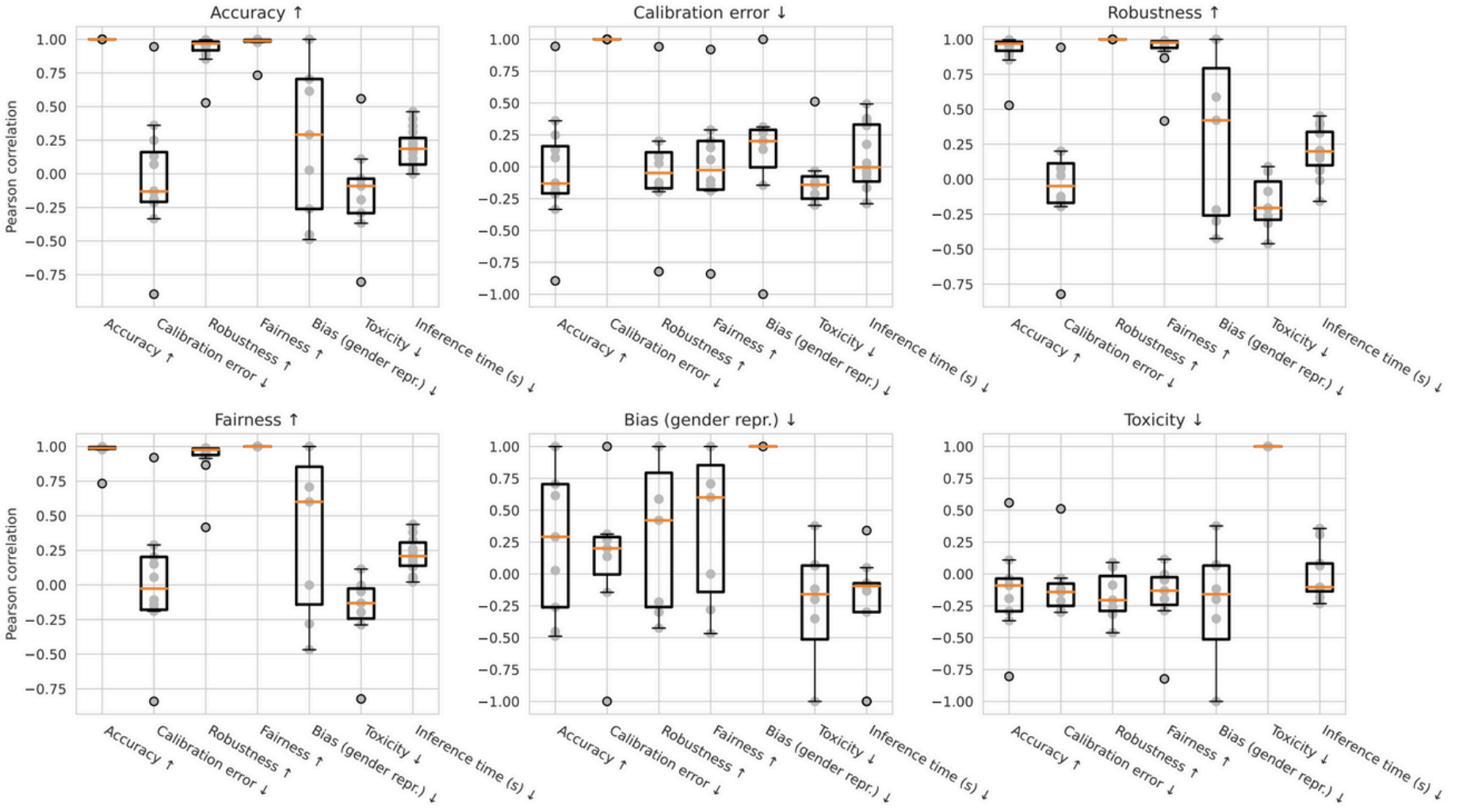
Correlation between Metrics



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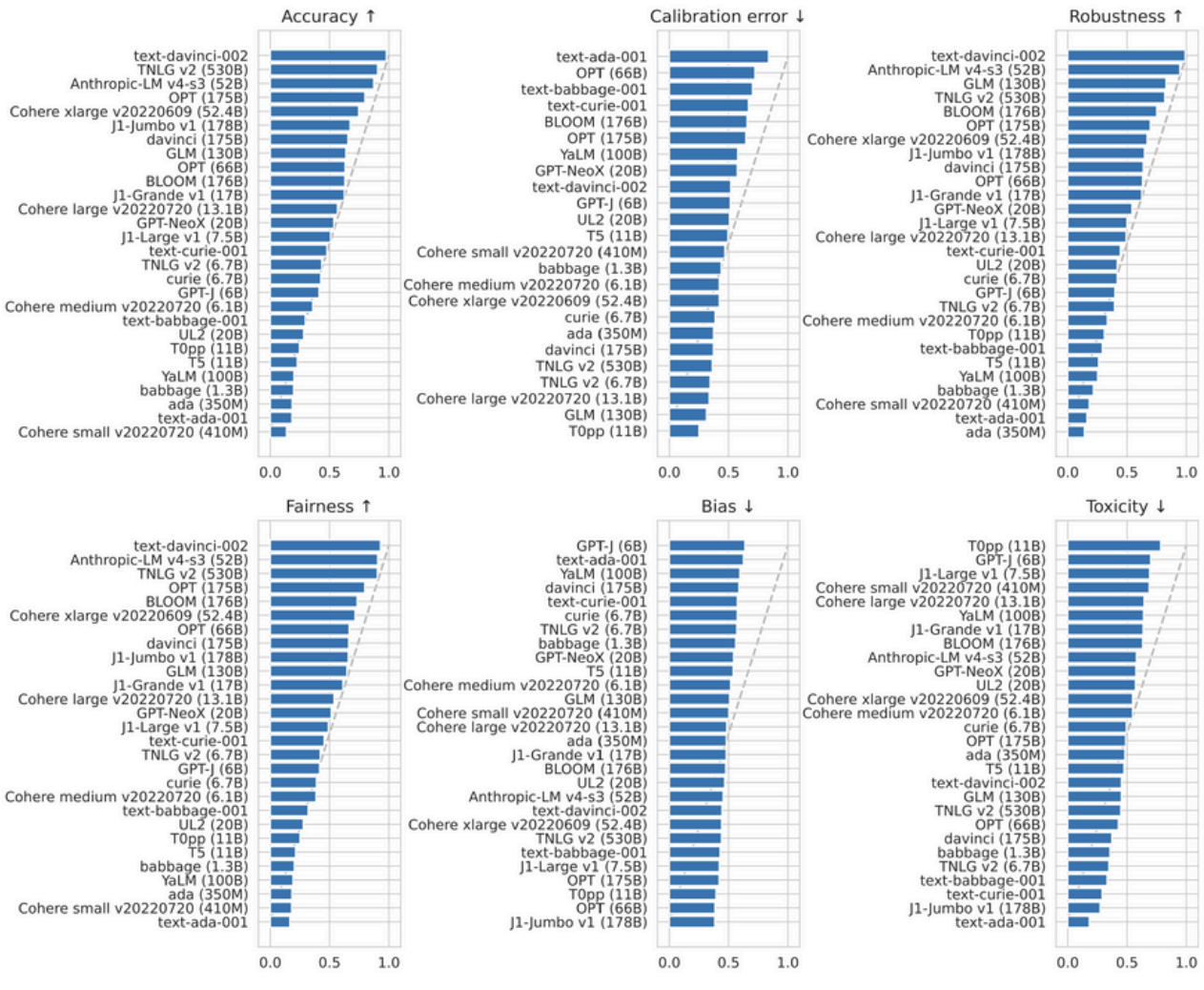
Win Rate per LLM



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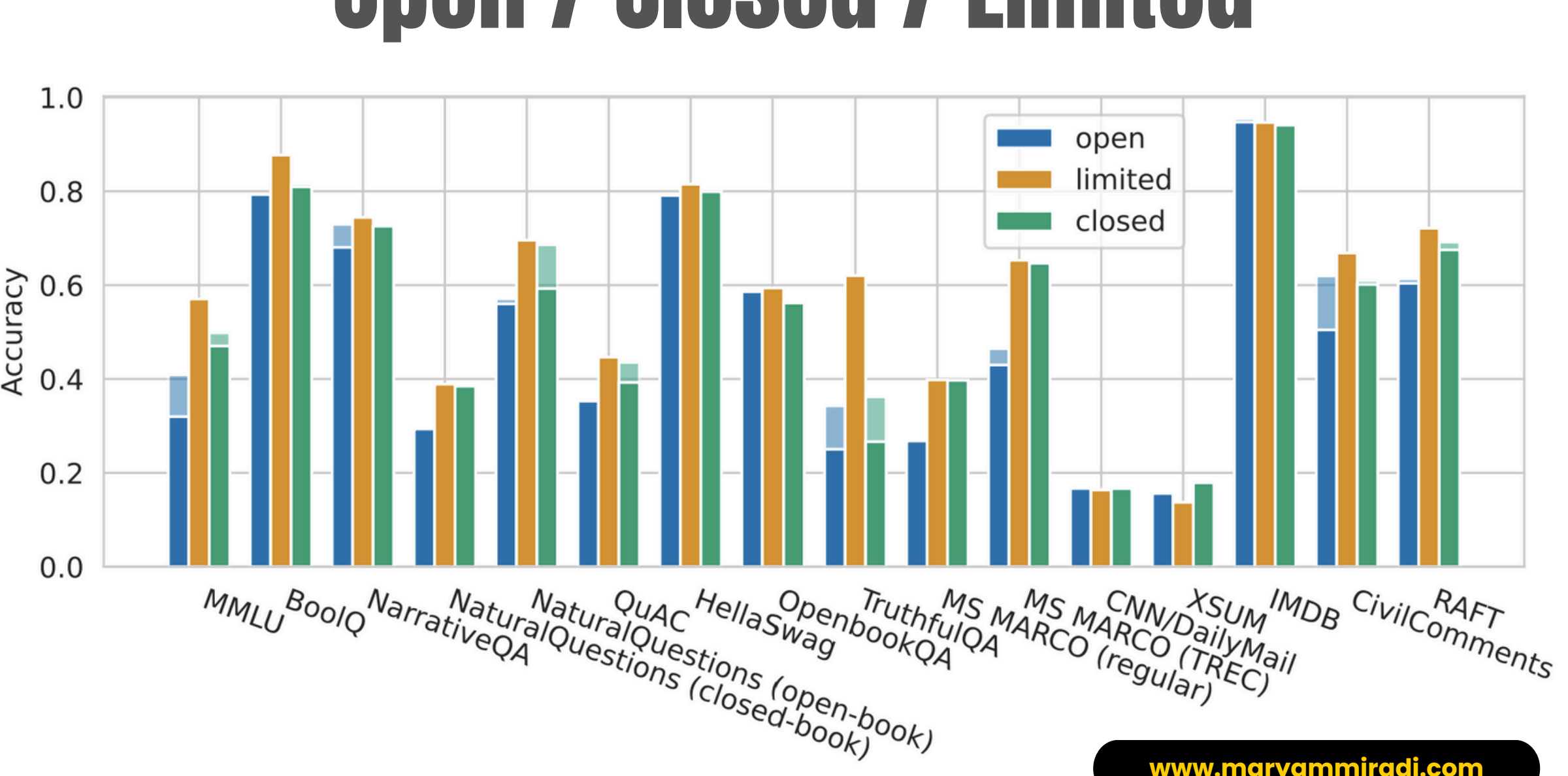
Open / Closed / Limited



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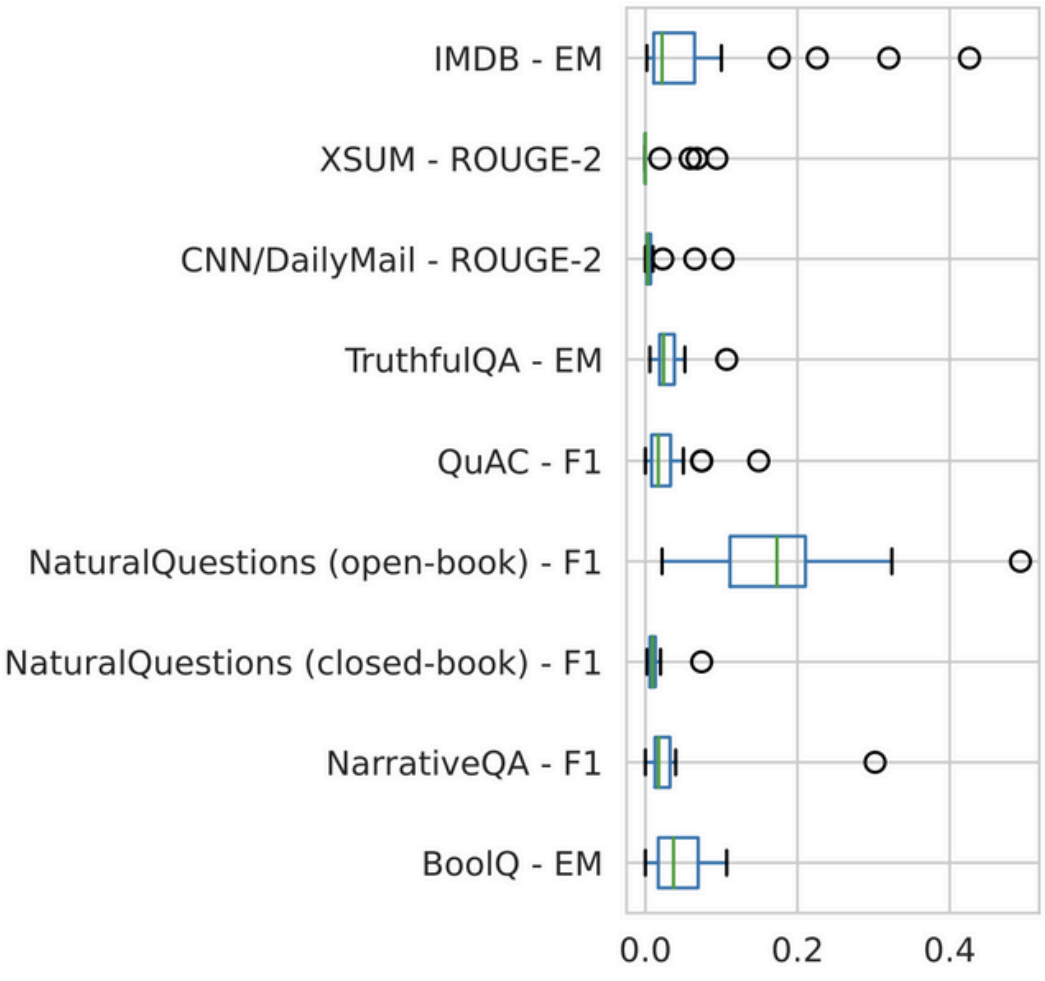
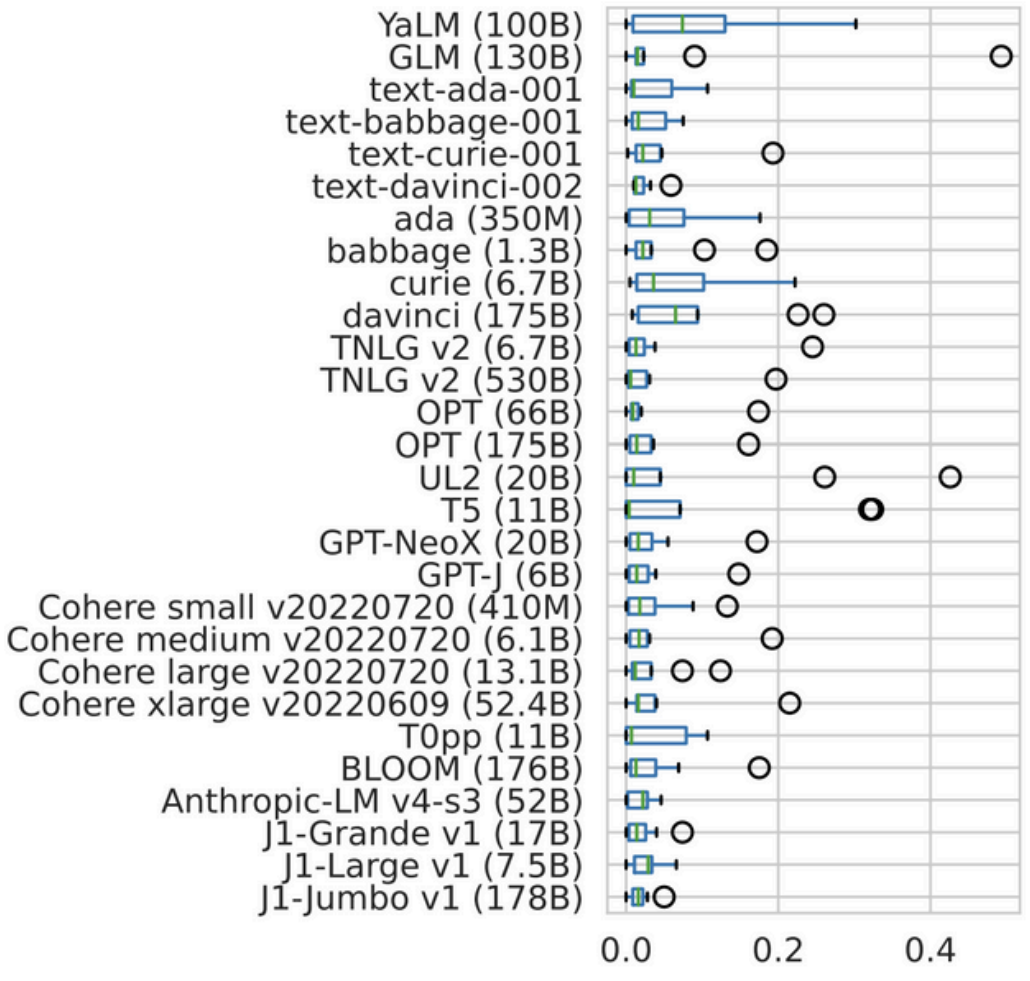
Variance of Accuracy





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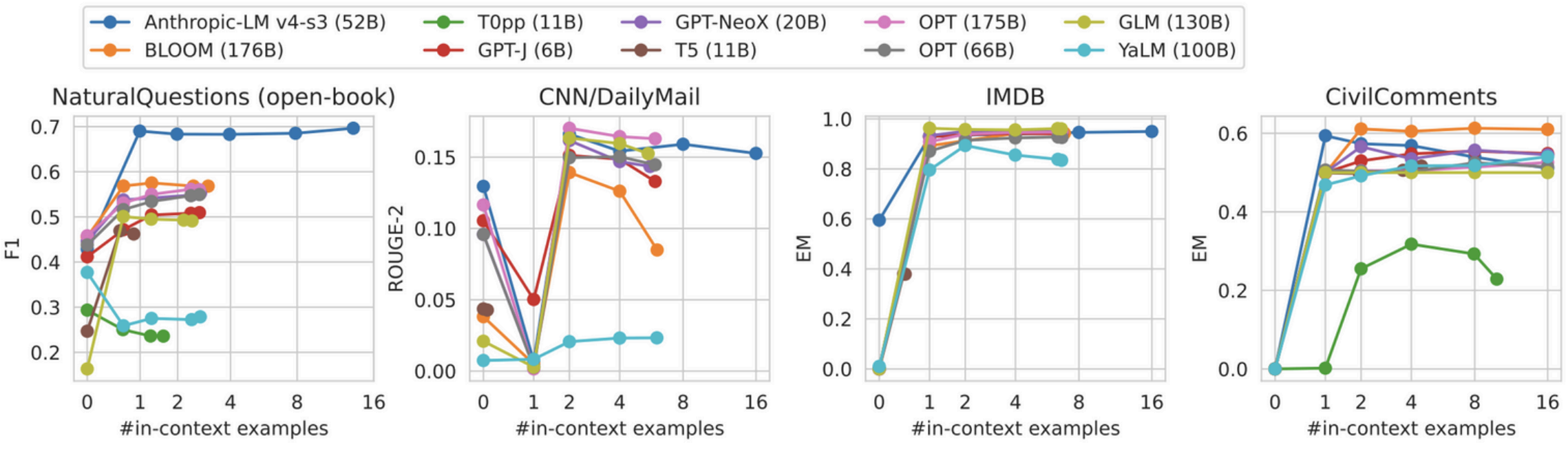
Number of in-Context Examples



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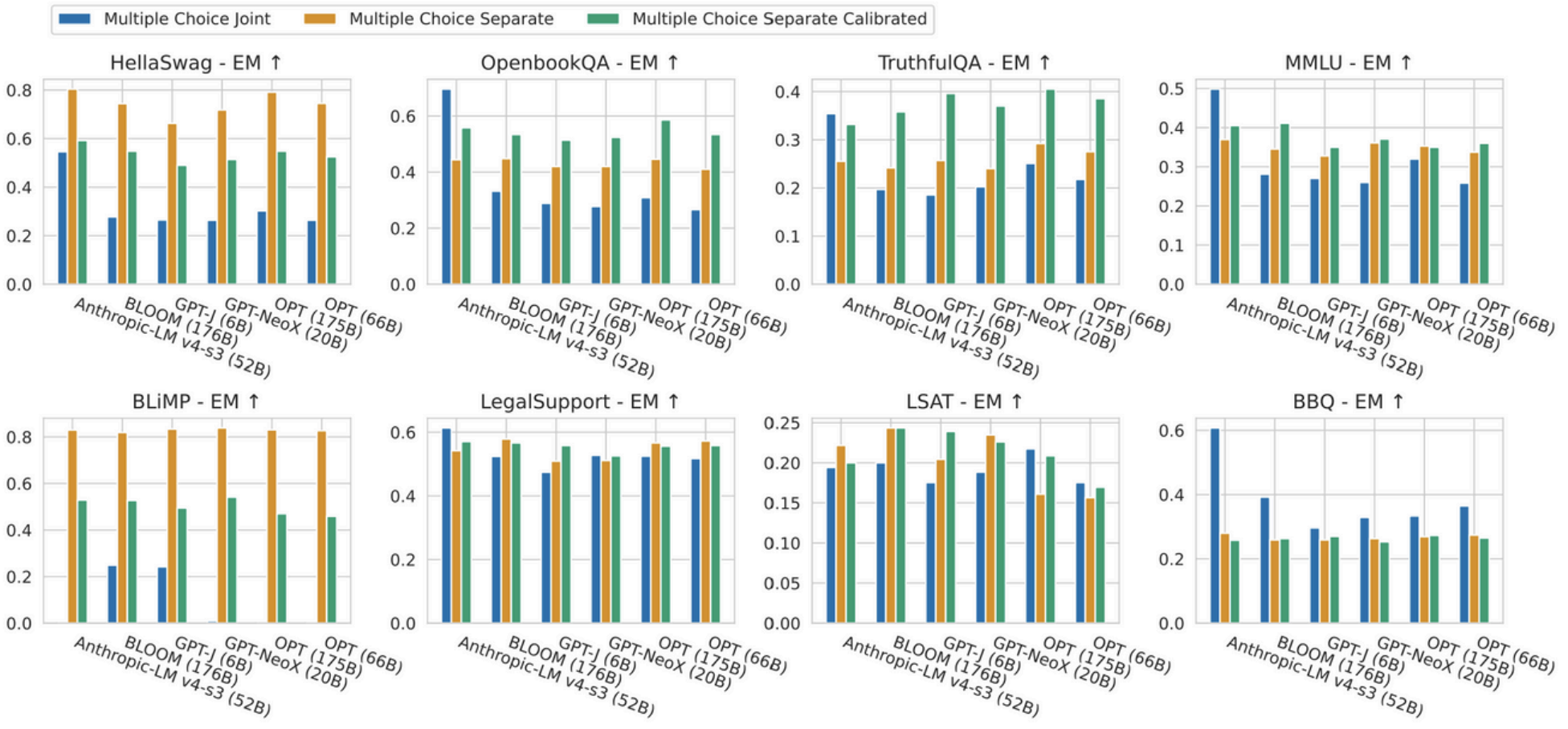
Multiple-choice adaptation



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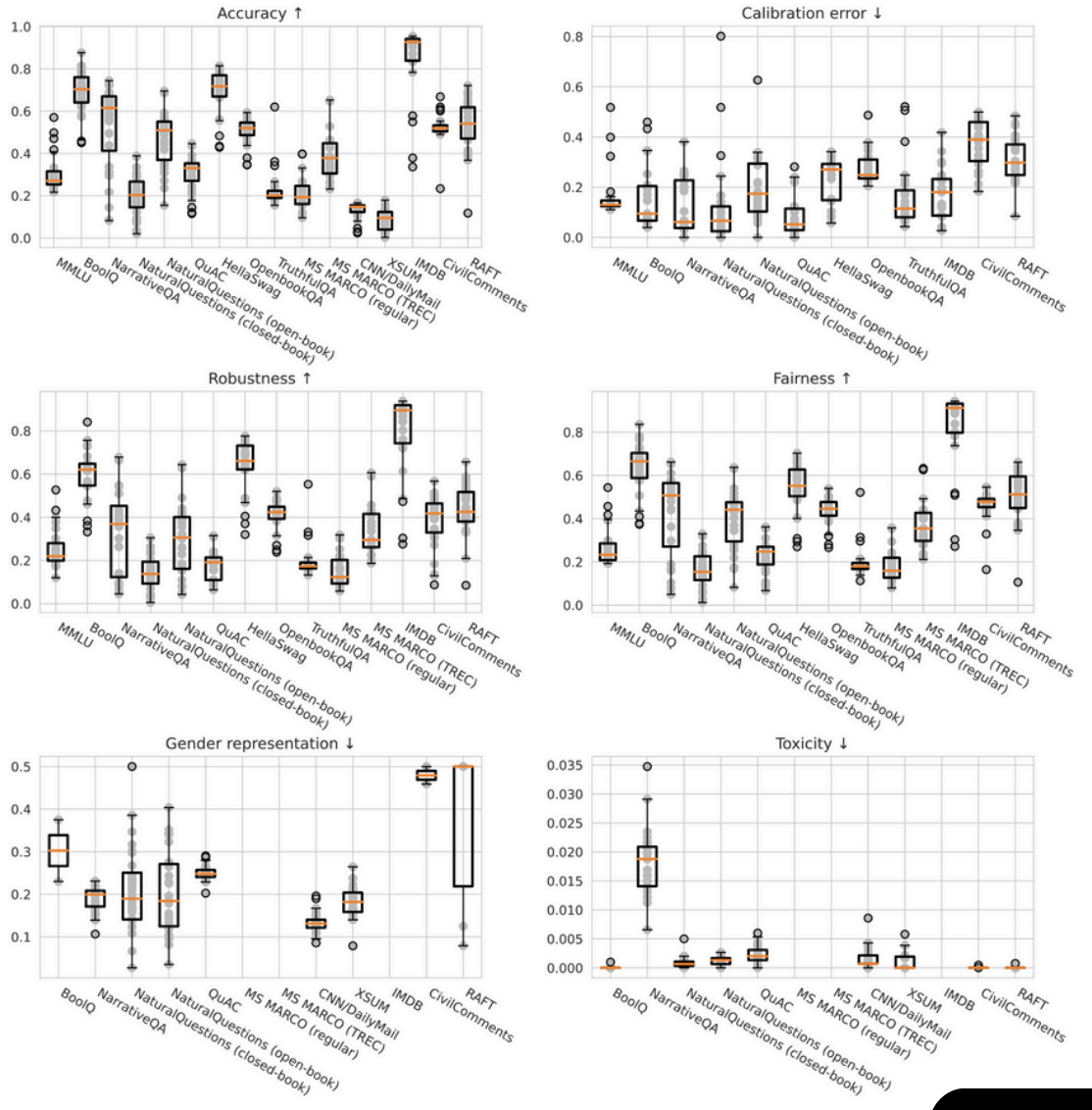
Metric spread



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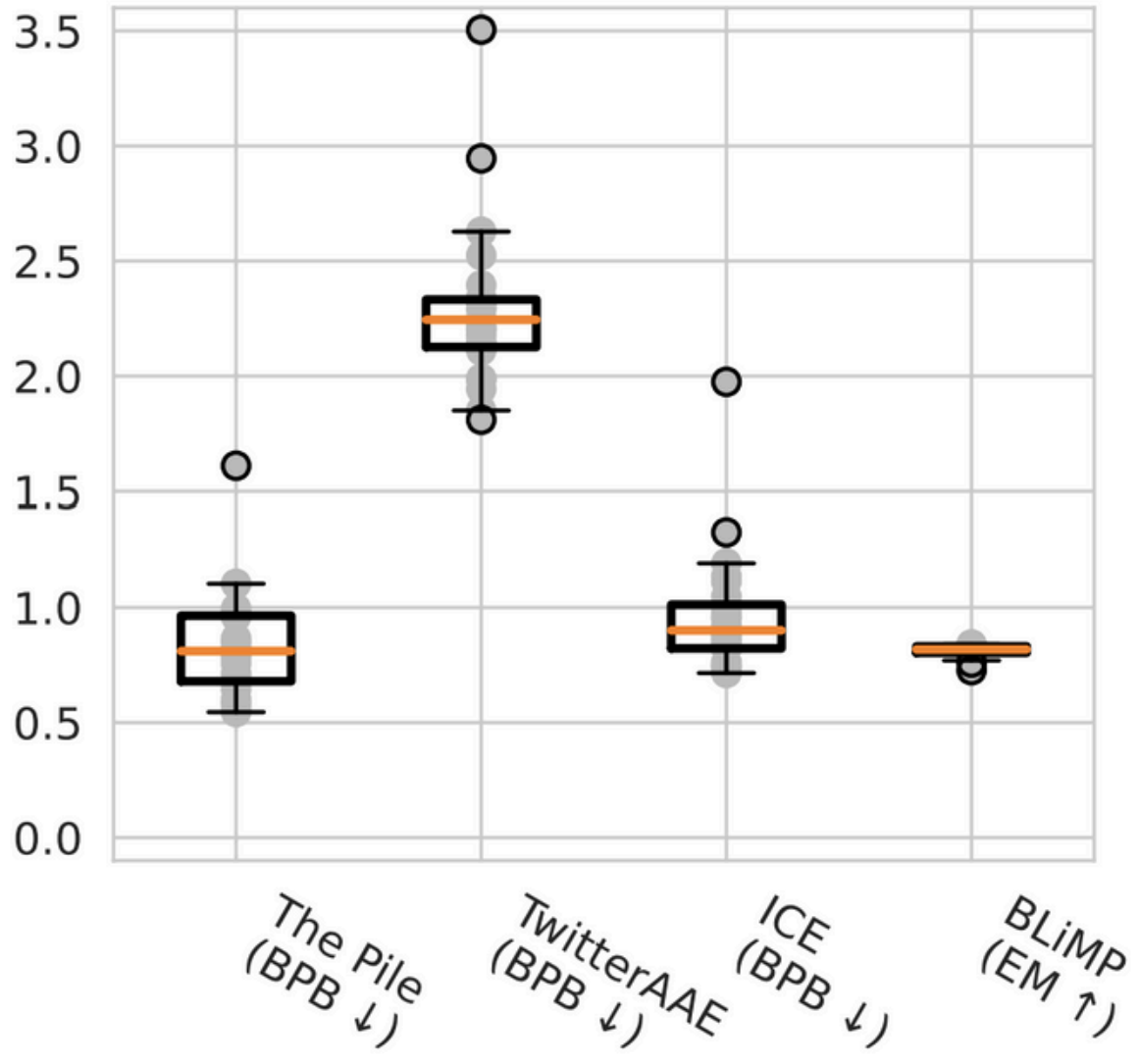
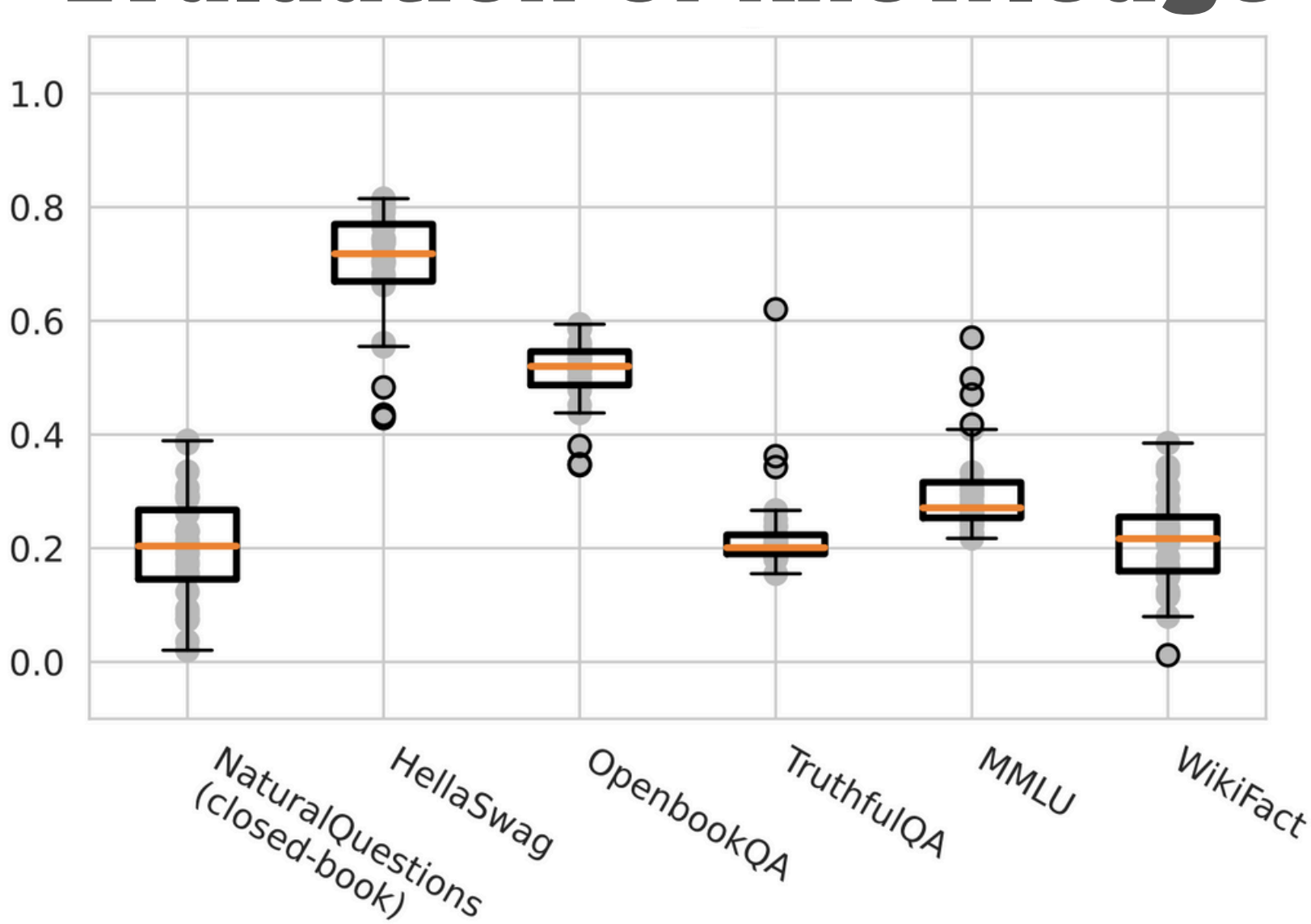
Evaluation of Language



LLM Evaluation

Evaluation of Knowledge



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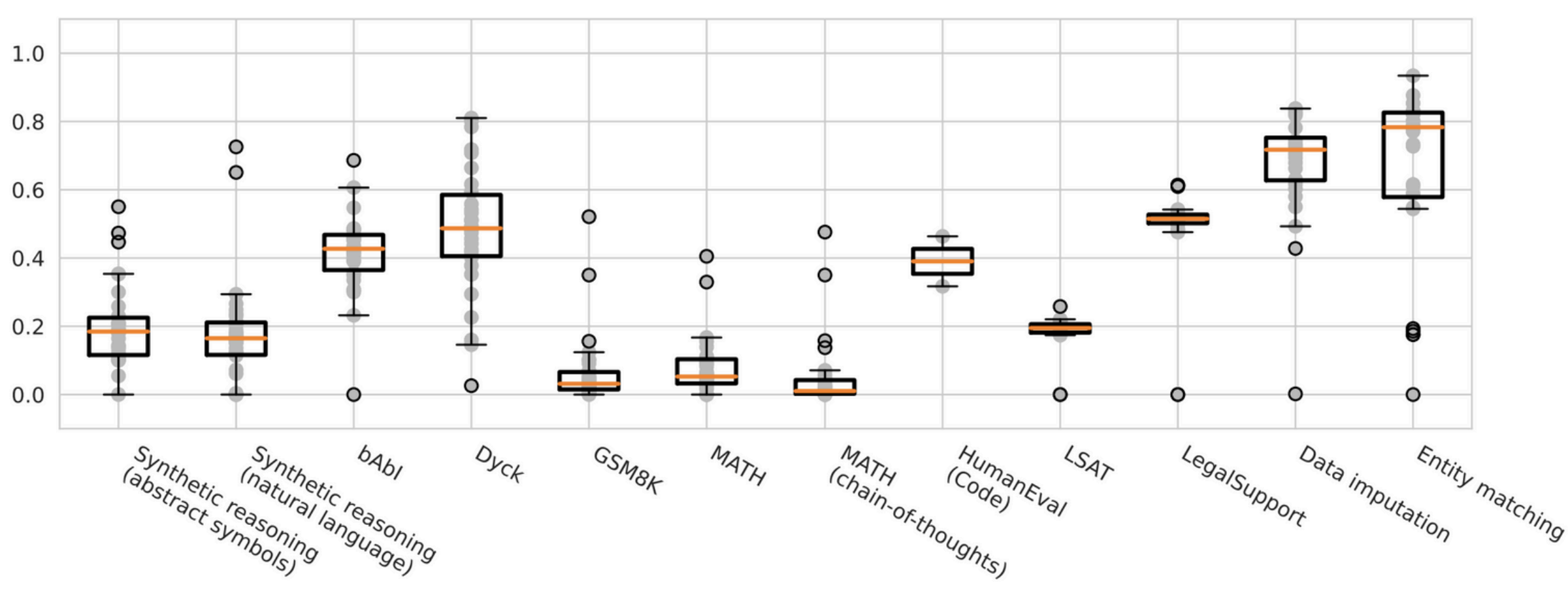
Evaluation of Reasoning



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Evaluation of Social Bias