

Responsible NLP Checklist

Paper title: *Execution as Verification: Fine-Grained Self-Correcting Reasoning for Complex KBQA*

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How to read the checklist symbols:

- the authors responded 'yes'
- the authors responded 'no'
- N/A the authors indicated that the question does not apply to their work
- the authors did not respond to the checkbox question

For background on the checklist and guidance provided to the authors, see the [Responsible NLP Checklist](#) page at ACL Rolling Review.

A. Questions mandatory for all submissions.

- A1. Did you describe the limitations of your work?

This paper has a Limitations section.

- A2. Did you discuss any potential risks of your work?

No, this work does not involve any significant ethical, safety, or societal risks. The research is theoretical/fundamental in nature and does not involve human subjects, hazardous materials, or sensitive data that could pose risks. Therefore, a discussion of potential risks was not applicable.

B. Did you use or create scientific artifacts? (e.g. code, datasets, models)

- B4. Did you discuss the steps taken to check whether the data that was collected/used contains any information that names or uniquely identifies individual people or offensive content, and the steps taken to protect/anonymize it?

No, this study did not involve any data containing personally identifiable information (PII) or offensive content.

- B6. Did you report relevant statistics like the number of examples, details of train/test/dev splits, etc. for the data that you used/created?

Appendix C and F

C. Did you run computational experiments?

- C2. Did you discuss the experimental setup, including hyperparameter search and best-found hyperparameter values?

Appendix E

- C3. Did you report descriptive statistics about your results (e.g., error bars around results, summary statistics from sets of experiments), and is it transparent whether you are reporting the max, mean, etc. or just a single run?

Section 5.2

D. Did you use human annotators (e.g., crowdworkers) or research with human subjects?

- D1. Did you report the full text of instructions given to participants, including e.g., screenshots, disclaimers of any risks to participants or annotators, etc.?

Not applicable. No participants were involved, and only publicly available datasets were used.

The Responsible NLP Checklist used at ACL Rolling Review is adopted from NAACL 2022, with the addition of ACL 2023 question on AI writing assistance and further refinements based on ARR practice. ACL 2026 used a subset of ARR checklist form.

- D2. Did you report information about how you recruited (e.g., crowdsourcing platform, students) and paid participants, and discuss if such payment is adequate given the participants' demographic (e.g., country of residence)?

No participants were recruited for this work. The project did not involve human subjects directly; it relied entirely on pre-existing datasets that do not involve compensation or active recruitment.

- D3. Did you discuss whether and how consent was obtained from people whose data you're using/curating (e.g., did your instructions explain how the data would be used)?

Consent was not obtained because the data used in this project is publicly available and anonymized, and it was originally released under terms that permit reuse for research purposes. Therefore, additional consent was not required.

- D4. Was the data collection protocol approved (or determined exempt) by an ethics review board?

No ethics review board approval was required because this study did not involve any direct interaction with human subjects.

- E. Did you use AI assistants (e.g., ChatGPT, Copilot) in your research, coding, or writing?**

- E1. If you used AI assistants, did you include information about their use?

Large language models were employed in conjunction with a knowledge graph for reasoning tasks, which is part of the core methodology of this paper. Additionally, an AI assistant was used to improve the grammar and clarity of the English writing during manuscript preparation.