

Responsible NLP Checklist

Paper title: *S2G-RAG: Structured Sufficiency and Gap Judging for Iterative Retrieval-Augmented QA*

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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. We did not include a dedicated risk discussion; the work is a methodological improvement to iterative RAG evaluated on public QA benchmarks and does not involve human subjects or private data. Potential misuse risks are comparable to standard RAG systems.

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. We use public benchmark datasets and their official Wikipedia dumps; we did not perform additional PII/offensive-content filtering beyond what the dataset creators provide.

- 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?

No. We follow established benchmark protocols and evaluate on the official development splits; dataset statistics are available in the original benchmark papers.

C. Did you run computational experiments?

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

Section 4.2 and Appendix B

- 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?

No. We report EM/F1 from a single run on the official dev splits and do not include error bars or multi-seed variance due to computational cost.

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.

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.?

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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)?

(left blank)

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)?

(left blank)

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

(left blank)

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?

(left blank)