

Reproducibility Checklist

Instructions for Authors:

This document outlines key aspects for assessing reproducibility. Please provide your input by editing this .tex file directly.

For each question (that applies), replace the “Type your response here” text with your answer.

Example: If a question appears as

```
\question{Proofs of all novel claims  
are included} {(yes/partial/no)}  
Type your response here
```

you would change it to:

```
\question{Proofs of all novel claims  
are included} {(yes/partial/no)}  
yes
```

Please make sure to:

- Replace **ONLY** the “Type your response here” text and nothing else.
- Use one of the options listed for that question (e.g., **yes**, **no**, **partial**, or **NA**).
- **Not** modify any other part of the `\question` command or any other lines in this document.

You can `\input` this .tex file right before `\end{document}` of your main file or compile it as a stand-alone document. Check the instructions on your conference’s website to see if you will be asked to provide this checklist with your paper or separately.

1. General Paper Structure

- 1.1. Includes a conceptual outline and/or pseudocode description of AI methods introduced (yes/partial/no/NA) **yes**
- 1.2. Clearly delineates statements that are opinions, hypothesis, and speculation from objective facts and results (yes/no) **yes**
- 1.3. Provides well-marked pedagogical references for less-familiar readers to gain background necessary to replicate the paper (yes/no) **yes**

2. Theoretical Contributions

- 2.1. Does this paper make theoretical contributions? (yes/no) **yes**

If yes, please address the following points:

- 2.2. All assumptions and restrictions are stated clearly and formally (yes/partial/no) **no**
- 2.3. All novel claims are stated formally (e.g., in theorem statements) (yes/partial/no) **partial**

- 2.4. Proofs of all novel claims are included (yes/partial/no) **yes**
- 2.5. Proof sketches or intuitions are given for complex and/or novel results (yes/partial/no) **yes**
- 2.6. Appropriate citations to theoretical tools used are given (yes/partial/no) **yes**
- 2.7. All theoretical claims are demonstrated empirically to hold (yes/partial/no/NA) **yes**
- 2.8. All experimental code used to eliminate or disprove claims is included (yes/no/NA) **yes**

3. Dataset Usage

- 3.1. Does this paper rely on one or more datasets? (yes/no) **yes**

If yes, please address the following points:

- 3.2. A motivation is given for why the experiments are conducted on the selected datasets (yes/partial/no/NA) **yes**
- 3.3. All novel datasets introduced in this paper are included in a data appendix (yes/partial/no/NA) **NA**
- 3.4. All novel datasets introduced in this paper will be made publicly available upon publication of the paper with a license that allows free usage for research purposes (yes/partial/no/NA) **NA**
- 3.5. All datasets drawn from the existing literature (potentially including authors’ own previously published work) are accompanied by appropriate citations (yes/no/NA) **yes**
- 3.6. All datasets drawn from the existing literature (potentially including authors’ own previously published work) are publicly available (yes/partial/no/NA) **yes**
- 3.7. All datasets that are not publicly available are described in detail, with explanation why publicly available alternatives are not scientifically satisfying (yes/partial/no/NA) **NA**

4. Computational Experiments

- 4.1. Does this paper include computational experiments? (yes/no) **yes**

If yes, please address the following points:

- 4.2. This paper states the number and range of values tried per (hyper-) parameter during development of the paper, along with the criterion used for selecting the final parameter setting (yes/partial/no/NA) **yes**
- 4.3. Any code required for pre-processing data is included in the appendix (yes/partial/no) **no**

- 4.4. All source code required for conducting and analyzing the experiments is included in a code appendix (yes/partial/no) [no](#)
- 4.5. All source code required for conducting and analyzing the experiments will be made publicly available upon publication of the paper with a license that allows free usage for research purposes (yes/partial/no) [yes](#)
- 4.6. All source code implementing new methods have comments detailing the implementation, with references to the paper where each step comes from (yes/partial/no) [yes](#)
- 4.7. If an algorithm depends on randomness, then the method used for setting seeds is described in a way sufficient to allow replication of results (yes/partial/no/NA) [no](#)
- 4.8. This paper specifies the computing infrastructure used for running experiments (hardware and software), including GPU/CPU models; amount of memory; operating system; names and versions of relevant software libraries and frameworks (yes/partial/no) [yes](#)
- 4.9. This paper formally describes evaluation metrics used and explains the motivation for choosing these metrics (yes/partial/no) [yes](#)
- 4.10. This paper states the number of algorithm runs used to compute each reported result (yes/no) [yes](#)
- 4.11. Analysis of experiments goes beyond single-dimensional summaries of performance (e.g., average; median) to include measures of variation, confidence, or other distributional information (yes/no) [yes](#)
- 4.12. The significance of any improvement or decrease in performance is judged using appropriate statistical tests (e.g., Wilcoxon signed-rank) (yes/partial/no) [no](#)
- 4.13. This paper lists all final (hyper-)parameters used for each model/algorithm in the paper's experiments (yes/partial/no/NA) [yes](#)