IJCAI 2021 Reproducibility Guidelines

Unless specified otherwise, please answer "yes" to each question if the relevant information is described either in the paper itself or in a technical appendix with an explicit reference from the main paper. If you wish to explain an answer further, please do so in a section titled "Reproducibility Checklist" at the end of the technical appendix. <mark>If you have further questions related to the reproducibility checklist, please contact the Reproducibility Co-chairs (Zhiyuan Liu <liuzy@tsinghua.edu.cn> and Jian Tang <jian.tang@hec.ca>).</mark>

This paper:
- clearly states what claims are being investigated.
- explains how the results substantiate the claims.
- explicitly identifies limitations or technical assumptions.
- includes a conceptual outline and/or pseudocode description of AI methods introduced.

Does this paper make **theoretical claims**?
If yes, please complete the list below.
- All assumptions and restrictions are stated clearly and formally.
- All novel claims are stated formally (e.g., in theorem statements).
- Proofs of all novel claims are included and complete.
- Proof sketches or intuitions are given for complex and/or novel results.
- Appropriate citations to theoretical tools used are given.

Does this paper rely on one or more **data sets**?
If yes, please complete the list below.
- All novel datasets introduced in this paper are described in detail in a data appendix, including the collecting procedure and data statistics.
- 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.
- All datasets drawn from the existing literature (potentially including authors' previously published work) are accompanied with appropriate citations.
- All datasets that are not publicly available are described in details.
- The preprocessing details of datasets are included.
- Details of Train/Valid/Test splits are included.

Does this paper include **novel models and algorithms**?
If yes, please complete the list below.
- The input and output, mathematical setting, and algorithms are clearly introduced.
- The complexity analysis including time, space, and sample size is presented.

Does this paper include **computational experiments**?
If yes, please complete the list of **experiment results** below.
- The evaluation metrics are formally described and the reasons for choosing these metrics are explained.
- Detailed hyperparameter settings of algorithms are described, including the ranges and how to select the best ones.
- The computing infrastructure for running experiments is described in detail, including GPU/CPU models, amount of memory, operating system.
- Analysis of experiments goes beyond single-dimensional summaries of performance (e.g., average; median) to include measures of variation, confidence, or other distributional information.
- The number of training and inference runs are stated explicitly. [only applied for papers related to machine learning]
- Average training and inference time. [only applied for papers related to machine learning]

Please also complete the list of **source code** below.
- All source code required for conducting experiments are uploaded as attachments
- All source code required for conducting experiments will be made publicly available upon publication of the paper with a license that allows free usage for research purposes
- If an algorithm depends on randomness, then the method used for setting seeds is described in a clear way to allow replication of results.
- The specification of dependencies is described, including the names and versions of relevant software libraries and frameworks.
- A README is provided to explain the structure of the source code, and how to obtain different results in the submission with corresponding scripts.
- The scripts or commands that are used to obtain results in different tables/figures are provided.

Note: These guidelines are based on the following resources: (1) reproducibility checklists or guidelines in AAAI 2021, NeuIPS 2020; (2) Pineau et al. Improving Reproducibility in Machine Learning Research. arXiv:2003.12206.