Reproducibility Report for SC25 Paper XXX

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Abstract

This reproducibility report provides details about the artifact evaluation done with regards to the Artifact Description and Evaluation appendix of SC25 paper XXX by YYY. The work was done as part of the Reproducibility Initiative of SC25. The author is a member of the SC25 Reproducibilty Committee.

Keywords

Artifact Evaluation, Reproducibility

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1 Overview of Reproduction of Artifacts

The following table provides an overview of each computational artifact's reproducibility status. Artifact IDs correspond to those in the AD/AE Appendices.

Artifact ID	Available	Functional	Replicated
A_1	•	•	•
A_2	•	•	•
A_3	•	○	○
...			
Badge awarded	yes	no	no

2 Reproduction of Computational Artifacts

2.1 Timeline

- State when the experiments were done.
- e.g., "The artifact evaluation was conducted from July 24, 2025, to July 31, 2025."
- e.g., "Artifact evaluation was carried out on July 24, 2025."

2.2 Computational Environment and Resources

- Specify the computational resources utilized for experiments.
- e.g., "The experiments conducted for artifact evaluation were performed on Chameleon Cloud."
- Provide more details if different computational resources were used for analyzing different computational artifacts.

2.3 Details on Artifact Reproduction

- Describe the procedures undertaken to reproduce the computational artifacts detailed in the AD/AE Appendices.
- The detail level in this section can differ. If the procedures work as outlined in the AD/AE Appendices, a reference to these appendices suffices, confirming successful execution of the steps. In such instances, a brief statement for each computational artifact is sufficient.
- Generally, writing a brief paragraph about either the successful reproduction or the absence thereof of each computational artifact created by the authors is preferable.
- When facing issues in reproducing the computational artifacts, offer a high-level overview of the encountered problems. Omitting specific details is acceptable. For instance, it is sufficient to state that code compilation failed on machine X with compiler Y, without including the exact error messages.
- In the AE Report, potential shortcomings in the provided AD/AE Appendices that should be reported could include:
  - **Unanticipated environmental variables:** Differences in computational environments that were not accounted for in the AD/AE Appendices.
  - **Implicit assumptions:** Assumptions made by the original authors that are not explicitly documented.
  - **Versioning issues:** Discrepancies arising from different versions of software or dependencies that were not detailed in the appendices.
  - **Undocumented steps or procedures:** Any critical steps or procedures that the authors may have inadvertently left out of the appendix.
  - **Data accessibility:** Challenges in accessing or using the data required for reproduction, which might not be covered in the appendices.
  - **User-defined parameters:** Lack of clarity about user-defined parameters or settings required for running the experiments.
  - **Hardware-specific issues:** Certain computational artifacts may behave differently on varying hardware configurations, which might not be addressed in the appendices.
  - **Network dependencies:** Any network-related dependencies or configurations that were not explicitly mentioned.

Disclaimer: This Reproducibility Report was crafted by volunteers with the goal of enhancing reproducibility in our research domain. The time period allocated for the

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reproducibility analysis was constrained by paper notification deadlines and camera-ready submission dates. Furthermore, the compute hours in the shared infrastructure (e.g., Chameleon Cloud) available to the authors of this report were limited and restricted the scope and quantity of experiments in the review phase. Consequently, the inability to reproduce certain artifacts within this evaluation should not be interpreted as definitive evidence of their irreproducibility. Limitations in the time allocated to this review and the compute resources available to the reviewers may have prevented a positive outcome. Furthermore, reviewers assess the reproducibility of the artifacts provided by the authors; however, they are not accountable for verifying that the artifacts support the main claims of the paper.