

主 题:	Invitation to review a manuscript for Scientific Data from Dr He
发件人:	"Scientific Data" <do-not-reply@springernature.com>
收件人:	duansh@ustb.edu.cn

Invitation to review "Characterization of high-resolution AI data center training workloads on single and multiple GPU nodes"

Should you accept to review this manuscript, your report would be due within 21 days.

Dear Dr Duan,

We have received a manuscript for Scientific Data that we think falls within your area of expertise. Our reviewers are integral to ensuring we have the highest-quality publication.

We would greatly appreciate it if you could let us know if you are available to review by accepting or declining the invitation link below.

Title: Characterization of high-resolution AI data center training workloads on single and multiple GPU nodes

Abstract: The rapid advancement of Artificial Intelligence (AI) is driving unprecedented computational demands, posing significant challenges to datacenter infrastructure and threatening the stability and resilience of modern power grids. This study presents an open-access dataset featuring a diverse set of AI training sessions recorded at sub-second resolution, designed to advance research on the energy consumption profiles of AI workloads and their interactions with power grid dynamics in datacenter environments. The dataset contains 32 training sessions on high-performance H100 and B200 8-GPU nodes and 40 sessions on consumer-grade NVIDIA GeForce RTX 3060 GPUs, encompassing over 1.8 million samples. Each session records power demand, CPU and GPU utilization, per-GPU power, memory usage, and temperature across diverse AI tasks, including forecasting, classification, reinforcement learning, and text and image generation. Data quality was verified through detailed technical validation, including timing accuracy, hardware limit conformance, and cross-metric correlation analysis. Measurements remained within manufacturer-specified thermal and power envelopes, and observed correlations among power, utilization, temperature, and current were consistent with established processor and GPU behavior. The dataset provides a robust foundation for modeling AI datacenter energy behavior, system-level performance analysis, and power grid connection impact assessment studies.

Authors: Ahmed Abd Elaziz Elsayed, Abdullah Azhar Al-Obaidi, Hany E.Z. Farag

We hope to hear from you soon.

Kind regards,

Jie He
Editor
Scientific Data

Accept or decline this invitation and view due date: <https://reviewer-feedback.springernature.com/review-invitation/26ad9aa7-5791-48d0-bef2-0a15376610dc>

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Reviewing for Scientific Data

Scientific Data is committed to providing a rapid and fair review process. So, if you decide to accept this invitation, we would hope to receive your report at your earliest convenience.

The editorial board and publishing team of Scientific Data are not able to anticipate all potential competing interests, so we ask you to draw our attention to anything that might affect your review, and to decline submissions where it may be hard to remain objective.

Contact scientificdata@nature.com if you need any assistance with this request using this

submission ID: 74df4fee-b18b-4906-8b83-13391a5838bc

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