



BEFORE YOU USE AI: L-O-C-A-D CHECKLIST



Five practical checks for responsible AI in research and scholarly publishing

As AI becomes increasingly embedded in research and scholarly publishing, this checklist brings consensus best practice together in a practical format to support its responsible use. Designed for authors, reviewers and editors, it provides questions to help them assess their use of AI tools, including large language models (LLMs), before and during the publication process.

Not all questions will apply in every case, and the checklist should be used proportionately to the task and context. It focuses on the ethical and safe use of these tools, based on guidance from the European Data Protection Board, COPE, EASE and STM, as well as expert input from staff at EDP Sciences. It was inspired by the framework proposed by Dr. Hong Zhou¹⁻⁶, and originally presented as a poster at the OASPA Annual Conference in Zagreb 21-23 September 2026⁷.

We welcome feedback on how you are using the checklist and how it could be strengthened in future versions. Please contact selina.labarbera@edpsciences.org.

Use LOCAD proportionately: the level of scrutiny should reflect the task, the data sensitivity, the scientific impact and the role of the author, reviewer or editor.

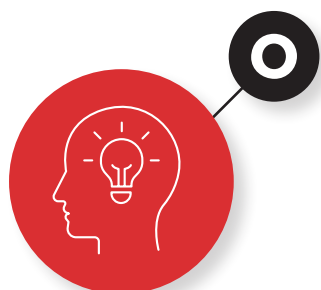


LIMITATIONS



- ☐ **Understand the limits:** Is the tool appropriate for this specific task, data and disciplinary context? What is known about its training data, domain coverage and documented limitations?
- ☐ **Assess Data Quality and Relevance:** Could gaps, outdated data, bias or limited domain coverage affect the relevance or reliability of the output?
- ☐ **Maintain Human Critical Thinking:** Have you critically examined the output, its assumptions and limitations rather than treating it as authoritative or expert knowledge?
- ☐ **Model updates and reproducibility:** Could model updates or configuration changes affect the result? Have you documented the model/version, date of use, and any relevant conditions of use?

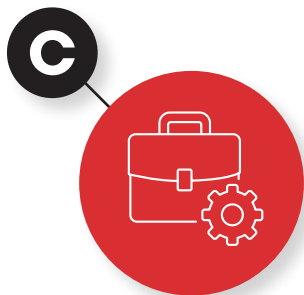
OWNERSHIP



- ☐ **Retain responsibility:** Have you accepted that legal and ethical responsibility for every word in your manuscript resides solely with you?
- ☐ **Human accountability:** Is a named person responsible for the AI-delegated task, checking its verification and approving the outcome?
- ☐ **Model openness and control:** Do you know whether the model is open, open-weight or closed, what that means in practice, and what you can inspect, modify or control?
- ☐ **Copyright, originality and attribution:** Have you checked whether the AI-assisted material is sufficiently original and complies with copyright, licensing and attribution requirements?

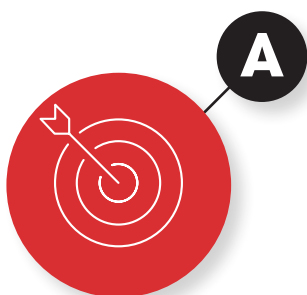


CONFIDENTIALITY



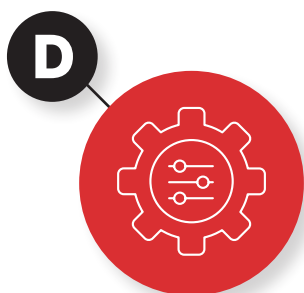
- ☐ **Data Minimisation:** Are you sharing only the minimum information necessary for the task?
- ☐ **Protect sensitive and confidential material:** Have you removed or appropriately protected personal, sensitive, confidential, proprietary or unpublished information before using the tool?
- ☐ **No Upload Check:** Have you avoided uploading any unpublished manuscript sections, proprietary data or confidential information into AI platforms?
- ☐ **Provider terms and data use:** Have you checked the provider's terms and conditions, including how your inputs may be stored, retained, reused for training or shared with third parties?

ACCURACY



- ☐ **Verify facts, hallucinations & outputs:** Have factual claims, references, code, calculations and other material outputs been checked against reliable sources or independent methods?
- ☐ **Account for data quality, bias and uncertainty:** Could bias, poor or limited data, uncertainty or out-of-domain use affect the reliability of the output?
- ☐ **Data and image integrity check:** Have any AI-assisted changes to data or images been checked to ensure that relevant features or evidence were not added, removed, obscured or misrepresented?
- ☐ **Human-in-the-loop:** Has a qualified human critically reviewed the output and retained responsibility for the final interpretation or decision?

DISCLOSURE



- ☐ **Document transparently:** Describe the task delegated to AI, the tool used and the human oversight applied. It helps to use the GAIDeT taxonomy as a guide.
- ☐ **Identify AI-generated content:** Where required, has AI-generated or materially AI-modified content been clearly labelled to ensure transparency and avoid misleading the reader?
- ☐ **Task-based disclosure:** Have you clearly stated which research or publication tasks were delegated to AI and under whose human oversight?
- ☐ **Tool and model information:** Have you documented the tool, provider, model/version and date of use?



TAKE-HOME MESSAGE

Responsible AI use requires understanding limitations, retaining human accountability, protecting confidential information, verifying outputs, and transparently documenting and disclosing AI use.

SOURCES

- [1] Zhou, H. "Peer Review in the Era of AI: Risks, Rewards, and Responsibilities." The Scholarly Kitchen, 17 Sep. 2025.
- [2] Barbera, I. "AI Privacy Risks & Mitigations – Large Language Models (LLMs)." EDPB Support Pool of Experts, Mar. 2025.
- [3] COPE Council. "Authorship and AI tools." Committee on Publication Ethics, 13 Feb. 2023.
- [4] STM Integrity Hub Team. "The STM Integrity Hub: Current Status and Recent Developments." Science Editor, vol. 48, 8 Dec. 2025.
- [5] EASE Digest Team. "Recommendations on the Use of AI in Scholarly Communication." EASE Digest, 25 Sep. 2024.
- [6] Suchikova, Y. et al. "GAIDeT: Generative AI Delegation Taxonomy." Accountability in Research, vol. 33, no. 3, 8 Aug. 2025.
- [7] Wojtczak, K., C. Van Rooyen, A. Henri, and S. La Barbera. "Before You Use AI: L-O-C-A-D Checklist." Poster presented at the OASPA Conference 2026, Zagreb, Croatia, 21–23 Sep. 2026. Zenodo, DOI: 10.5281/zenodo.23060715.