Artificial Intelligence and Research Integrity

OWID
Ombudsgremium für die wissenschaftliche Integrität in Deutschland

Editorial Policies on AI (November 2025)

	Elsevier	ICMJE	Nature Springer	Science	Taylor and Francis	Wiley	WAME
AI and Authorship	AI ≠ author	AI ≠ author	AI ≠ author	AI ≠ author	AI ≠ author	AI ≠ author	AI ≠ author
Declaring the use of AI	Use of AI needs to be specifically declared in manuscript	Use of AI needs to be specifically declared in manuscript	Use of AI needs to be specifically declared in manuscript	Use of AI needs to be specifically declared in manuscript	Use of AI needs to be specifically declared in manuscript	Use of AI needs to be specifically declared in manuscript	Use of AI needs to be specifically declared in manuscript
AI generated images	not allowed	not specified	highly restricted	highly restricted	not allowed	allowed with some restrictions	not specified
AI and Peer Review	not allowed	restricted	restricted	not allowed	restricted	restricted	restricted

Disclosing AI when used for coding

- Few AI policies specifically mention using AI for code
- Exceptions: “[w]hen an AI tool such as a chatbot is used to […] write computer codes, this should be stated in the body of the paper, in both the Abstract and the Methods section’” (WAME); Sage, Wiley
- Some journals differentiate between substantial/generative use and assistance, only the former requiring disclosure
  - Which aspects are considered substantial may differ from policy to policy (example debugging)
- If code is not specifically mentioned in a policy, err on the side of transparency

Use of AI in compliance with RI

AI use category	Requires disclosure	Does not require disclosure
Code development	• **Programming:** AI writes analysis scripts or algorithms • **Software generation:** AI develops custom research software or applications • **Data pipeline design:** AI builds automated workflows to clean, process, and integrate datasets • **Modeling:** AI develops or adapts computational or statistical models for research analysis	• **Debugging:** AI checks syntax errors or suggests fixes • **Code style:** AI formats code structure/style • **Documentation:** AI generates comments or documentation • **Suggestions:** AI recommends standard library functions or common approaches

Example: AI Policy Wiley

When disclosing AI use in your methods, we require that you share:

- AI Technology name and version
- Date/year of use
- The AI Technology's role in your work (image processing, code development, statistical analysis, etc.)
- The author's role in directing or reviewing the work of the AI Technology
- For sensitive, proprietary, or human subject data describe how privacy and compliance requirements were maintained

Example disclosure statements

"Analysis scripts for regression models were generated using Claude 3.5 Sonnet (accessed June 2025). All AI-generated code was reviewed, tested, and revised by the authors, who confirmed accuracy and reproducibility of results."

Example: AI Policy Wiley

If AI contributed substantially to your analysis or methodology, you may be asked to provide supplemental documentation to support reproducibility and transparency, such as:

- Prompts or parameters used
- AI settings or configurations
- Code repository
- Data protection approach
- Compliance with institutional requirements

Example: AI Policy Wiley

4.1 Risk: Privacy violation and unintentional disclosure of information

(Generative) AI systems often store and/or use the information entered by users, for example to further train the AI. In this way, the information entered by users can reach both the service provider and other future users. Users of certain AI systems thus run the risk of passing on sensitive, confidential or personal data to others.

This can have various consequences:

- Potential violation of the General Data Protection Regulation[2] (GDPR), which protects personal data.
- Violation of the Trade Secrets Act[3] through the disclosure of confidential business information/secrets.
- Unpublished research results/data/projects and manuscripts are made accessible to third parties, so that they can be used and possibly published by competitors.

Data protection // Helmholtz AI Policy

Recommended action for risk mitigation

- When using (external) AI systems, care should be taken to ensure that no sensitive data is passed on to the service providers. This includes
  - Personal data (see GDPR for details)
  - Trade secrets, confidential/strategic business information
  - Unpublished research results/data, scientific manuscripts, research and project proposals
- If AI systems are used nonetheless, care must be taken to ensure that the sensitive data is obfuscated so that it cannot be reconstructed or used by either the external service provider or other users.
- When sensitive data cannot be obfuscated because all information in the document is necessary for a meaningful evaluation, e.g., of scientific manuscripts or research and project

Data protection // Helmholtz AI Policy

Other risks

Hallucinations

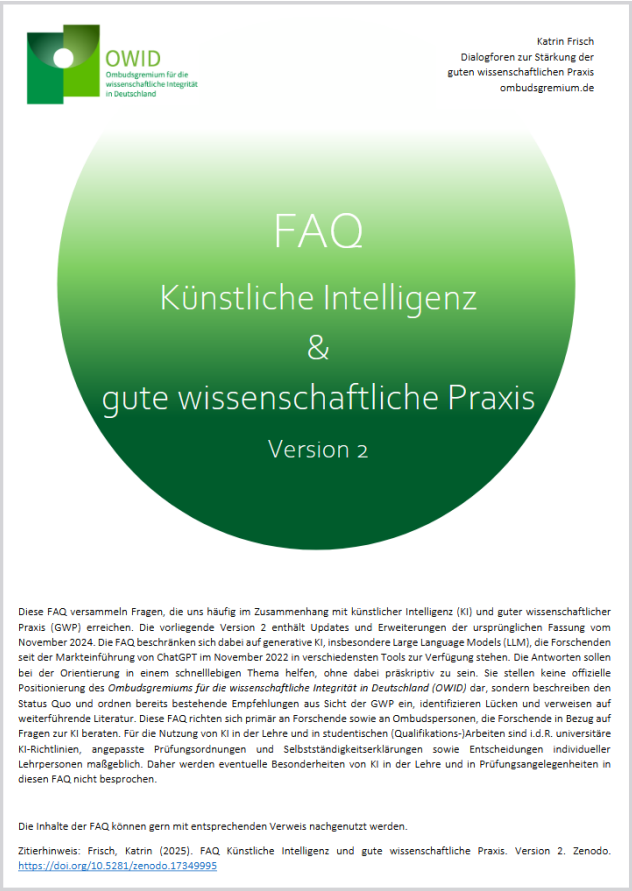
- AI tools are prone to „hallucinate“
- Check every AI output for hallucinations and other errors → you as authors are responsible for AI output
- Hallucinations can be grounds for a paper being retracted

AI generated images/visuals

- Most publishing houses do not allow AI generated images (in case it is allowed, use must be declared)
- Little to no rules when it comes to conference posters → check with the conference organisers

- Use of AI ≠ RI breach in research publications, but…
- Use of AI needs to be disclosed
  - » Check funders‘ and/or editorial policies, university and discipline specific guidelines (if they exist)
  - » Use a referencing system that offers transparency to readers but also fits your work flow with AI
  - » Be consistent
  - » Err on the side of transparency
- Be aware of common weaknesses and errors of AI → know your AI!
- Exercise due diligence and observe the rules of use in academic/scientific contexts
- Be aware that you are responsible for all AI outputs in your paper
- Create an internal documentation of your work-in-progress
- If you work in a team, make sure all prospective authors agree on the use of AI

Summary



OWID
Ombudsgremium für die wissenschaftliche Integrität in Deutschland

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FAQ

Künstliche Intelligenz
&
gute wissenschaftliche Praxis

Version 2

Diese FAQ versammeln Fragen, die uns häufig im Zusammenhang mit künstlicher Intelligenz (KI) und guter wissenschaftlicher Praxis (GWP) erreichen. Die vorliegende Version 2 enthält Updates und Erweiterungen der ursprünglichen Fassung vom November 2024. Die FAQ beschränken sich dabei auf generative KI, insbesondere Large Language Models (LLM), die Forschenden seit der Markteinführung von ChatGPT im November 2022 in verschiedensten Tools zur Verfügung stehen. Die Antworten sollen bei der Orientierung in einem schnelllebigen Thema helfen, ohne dabei präskriptiv zu sein. Sie stellen keine offizielle Positionierung des *Ombudsgremiums für die wissenschaftliche Integrität in Deutschland (OWID)* dar, sondern beschreiben den Status Quo und ordnen bereits bestehende Empfehlungen aus Sicht der GWP ein, identifizieren Lücken und verweisen auf weiterführende Literatur. Diese FAQ richten sich primär an Forschende sowie an Ombudspersonen, die Forschende in Bezug auf Fragen zur KI beraten. Für die Nutzung von KI in der Lehre und in studentischen (Qualifikations-)Arbeiten sind i.d.R. universitäre KI-Richtlinien, angepasste Prüfungsordnungen und Selbstständigkeitserklärungen sowie Entscheidungen individueller Lehrpersonen maßgeblich. Daher werden eventuelle Besonderheiten von KI in der Lehre und in Prüfungsangelegenheiten in diesen FAQ nicht besprochen.

Die Inhalte der FAQ können gern mit entsprechenden Verweis nachgenutzt werden.

Zitierhinweis: Frisch, Katrin (2025). FAQ. Künstliche Intelligenz und gute wissenschaftliche Praxis. Version 2. Zenodo. https://doi.org/10.5281/zenodo.17349995

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BEITRÄGE › RESEARCH INTEGRITY AND ARTIFICIAL INTELLIGENCE

This page offers a selection of literature on the topic of good research practice (GRP) and artificial intelligence (AI). This bibliography focusses on topics relating to research practice and science as a whole, rather than teaching and exams. Many statements from universities that mainly deal with the latter are therefore not listed. As developments in the field of AI are very fluid, there currently exists a certain consensus on the use of AI I science and scholarship, but there are still some heterogeneous recommendations with regard to details.

The German research Ombudsman has created a FAQ on the topic of AI and RI. You can find an interactive version on out website as well as a downloadable PDF-version in German and English.

Inhaltsverzeichnis

Where can I find my local

https://ombudsgremium.de/12379/good-research-practice-and-artificial-intelligence/?lang=en

Further Reading


Time for questions

Practical Task

Overarching Task: With the help of an LLM, (1) acquire the 2025 German parliamentary election data and (2) create an interactive interface for it. It should be possible to query the data for…

- all of Germany,
- individual regions, and
- individual parties.

Finally, (3) write an AI declaration statement

The world is your oyster and the task is deliberately fuzzy; feel free try and make a TUI, a GUI, a website, …

Be aware that it's likely that you won't finish the exercise due to our limited time, so don't be frustrated and move on when things just don't work/work out how you'd like them to. :)

Note that discussing political views is *not* part of this exercise! ;)

Practical Task 60-75 Minutes

(1) Data acquisition: Acquire the official 2025 German parliamentary election data with the help of an LLM.

(2) Parsing and Interface Building: Use the data from Part 1 to create an interactive interface around the data. Feel free to try and make the interface however you like! As a minimal specification, we want to be able to query data for all of Germany, individual regions, and individual parties.

(3) Documentation: Imagine that you want to publish a paper based on the work you did here in class (either a paper describing the method or showcasing the results). Choose one of the publishers – PLOS One, Science or Wiley – and draft a statement that discloses your AI use in line with the publisher's AI policy.

If you are stuck during the practical task, you can take a look into the cheat sheet we prepared https://go.fzj.de/hida-llms-for-rse