



# What is Artificial Intelligence (AI)?

## How can I use AI ethically at university?

This guideline of the German Network "Ethische Nutzung von KI" (Ethical Use of AI) is intended as initial information for university teachers who have not yet worked with AI: It consists of basic statements on the use of AI and the FAQ list with recommendations for practice (pages 2-3).

### 10 Statements on Artificial Intelligence (AI)

1. There is not *just one* AI, but many types of AI systems with different functions (for text and image generation, translation, search, correction, conversion, etc.).
2. AI is currently not "intelligent", but rather a form of automation known as so-called "weak AI". It involves the probability-based analysis of large amounts of data by algorithms, combining models (designed and trained by humans) and (human) assessments.
3. According to the current state of knowledge, AI will not be able to take over the world as a so-called "strong (i.e., autonomously learning) AI" in the future, nor will it be able to achieve autonomous consciousness.
4. AI is not objective, but is based on data that is generated, selected and/or classified by humans, which is why AI can also have a discriminatory effect.
5. AI offers many opportunities and many risks: blanket bans are not a solution, smart concepts for sensible use are necessary, but sometimes bans are also necessary.
6. AI has no competence to act because this, like the responsibility for the use of AI, always lies with humans. The university has to ensure this human responsibility through appropriate measures.
7. AI must always be seen in relation to the purpose for which it is used (as a tool), because AI is a tool with major ethical, legal and social implications.
8. AI permeates all areas of life and is already being used in education. Therefore, AI cannot be ignored and should also be accessible to everyone.
9. Education as a whole is a particular sector that requires special AI regulations and care due to the general human rights to education, child protection, privacy, etc.
10. The use of AI systems in universities must not be completely automated. Decisions and evaluations have always to be the responsibility of humans.

More information, examples and literature recommendations: <https://ethischeki.ecompetence.eu>

About our Network "Ethische Nutzung von KI" (Ethical Use of AI), the authors, the open and free licence and the recommended citation:

The German Network "Ethische Nutzung von KI" met for the first time on 11th of May 2023. Since then, we have been meeting once a month and all interested parties are welcome! <https://ethischeki.ecompetence.eu> - Contact: Christian M. Stracke: [stracke@uni-bonn.de](mailto:stracke@uni-bonn.de)

By: Christian M. Stracke (Universität Bonn), Bärbel Bohr (Ostschweizer Fachhochschule), Sonja Gabriel (KPH Wien/Krems), Nina Galla, Martin Hofmann (Pädagogische Hochschule St.Gallen), Heike Karolyi (FernUniversität in Hagen), Heike Mersmann-Hoffmann (Universität Münster), Julia Maria Mönig (Universität Bonn), Margret Mundorf (Hochschule Kaiserslautern), Simone Opel (FernUniversität in Hagen), Janine Rischke-Neß (HWR Berlin), Markus Schröppel (HMKW Hochschule für Medien), Alexis Silvestri (Universität für Weiterbildung Krems), Gudrun Anne Stroot (Jade Hochschule) – edited by the Network "Ethische Nutzung von KI" with open & free licence: <https://creativecommons.org/licenses/by/4.0>



Recommended citation: Stracke, C. M., Bohr, B., Gabriel, S., Galla, N., Hofmann, M., Karolyi, H., Mersmann-Hoffmann, H., Mönig, J. M., Mundorf, M., Opel, S., Rischke-Neß, J., Schröppel, M., Silvestri, A., & Stroot, G. (2024): *What is Artificial Intelligence (AI)? How can I use AI ethically at university?* Edited by the German Network "Ethische Nutzung von KI". <https://doi.org/10.5281/zenodo.10995669>

## Question-and-answer list (FAQ) with recommendations for practice on key aspects of the ethical use of AI in education:

- **How do AI systems work in general?**

Answer: Large amounts of data are analysed and evaluated with the help of algorithms. Some of it is selected and evaluated by humans at the beginning or in-between as training data for the AI system.

Recommendation: Clarify what type of AI you can and want to use for your purpose and what data the AI system has been trained with.

- **What types of AI systems are there?**

Answer: Among the many types of AI, a general distinction can be made between two types of AI systems: analysing (and possibly deciding) AI systems and producing (so-called generative) AI systems such as *ChatGPT* and *DALL-E*.

Recommendation: Think about which results you want to achieve with which data and inputs.

- **What competences do teachers and students need for the ethical use of AI systems?**

Answer: A wide range of digital, but also pedagogical and legal competences.

Recommendation: Seek exchange with colleagues, students and networks.

- **What specific responsibilities do teachers and university management have?**

Answer: Teachers and management are responsible for their own actions. This also applies to the protection of students' rights.

Recommendation: Seek advice, read internal AI guidelines or initiate them if necessary.

- **What legal aspects do teachers need to consider?**

Answer: Laws must also be observed when using AI systems (copyrights, data protection, European AI Act, personal rights, accessibility).

Recommendation: Obtain consent (from the institution and students) for the use of AI systems in advance and allow students to freely decide on the AI use.

- **What formal aspects do teachers need to consider?**

Answer: Teachers are themselves responsible for both, the use of AI systems (input) as well as the use of their results (output).

Recommendation: Only enter your own (or public domain) texts or images for correction, translation, analysis, summary, evaluation, etc., but not those of third parties (e.g., learners); third parties should then make this entry themselves.

- **What opportunities do AI systems offer in teaching?**

Answer: Many, e.g., teachers can adapt materials more easily and let students working on them, so that dynamization, personalization, differentiation and individualization are possible.

Recommendation: Familiarize yourself with the potential and limitations of AI systems and gradually integrate them step by step into your teaching methods.

- **What risks do AI systems pose in teaching?**

Answer: Many, e.g., results from generative AI systems (such as *ChatGPT* or *DALL-E*) are often not "objective" due to the data used and reproduce stereotypes or bias. These AI results may be re-used without any reflection.

Recommendation: Make yourself and the students aware of (sometimes discriminatory) stereotypes and bias. Take a critical look at generated material and revise the AI result if necessary.

- **How can AI systems be misused for fake news and disinformation?**

Answer: Generative AI systems in particular can produce deceptively "real" texts, images, voices and even videos.

Recommendation: Discuss with students that the results of generative AI systems are difficult or impossible to recognize and establish clear rules for the use and labelling of results (output) of AI systems.

- **How can AI systems be strategically introduced at the university?**

Answer: The development of university-wide ethical AI framework guidelines is essential for the introduction.

Recommendation: Ask your department, institute and university management for guidelines on the use of AI and cooperate across disciplines and with other universities in order to learn from each other. Demand autonomy and provider diversity from your university in order to avoid dependence on a few commercial AI companies.

- **How can AI systems be used responsibly at universities in general?**

Answer: Responsible use of AI requires raising awareness among all university staff, including offers for internal exchange and further training, so that the organizational goals are supported.

Recommendation: Ask for offers for internal exchange and further training and regularly discuss and evaluate (and if necessary, optimize) the guidelines and areas of application of AI systems.

- **How can teachers responsibly integrate AI systems into their teaching concept?**

Answer: The use of AI systems, like all other teaching materials, requires suitable learning scenarios with clearly formulated learning objectives, so that the learning process is effectively supported.

Recommendation: Continuously revise the teaching concept, learning objectives and application scenarios of AI systems yourself (if necessary, also with the students).

- **How can teachers use AI systems responsibly in their teaching?**

Answer: The rules for the use of AI systems and labelling should be known to everyone from the beginning (in accordance with the recommendations in this guide).

Recommendation: Support the responsible use of AI systems. Reflect on and evaluate the use of AI systems in teaching with the students. Ensure that AI systems are not seen as a substitute for a well-founded discussion with a teacher.

- **How can AI systems be used by teachers for performance assessment?**

Answer: If AI systems may be used for assessment, they require precise and previously known assessment criteria so that students can understand the assessment of their performance.

Recommendation: Discuss with the students both, your assessment criteria as well as their "translation" for the AI system you favour. You must not leave the responsibility for your final assessment to the AI system.

- **What first steps can I take when using AI systems in teaching?**

Answer: This depends very much on your own goals, knowledge and teaching conditions.

Recommendation: Reflect on and compare examples and use cases with colleagues.

- **What consequences will the use of AI systems have in teaching?**

Answer: AI systems can decisively change teaching and you can and should help shaping this process.

Recommendation: Consider whether you want to use AI systems and, if so, how you can use AI systems sensibly for your teaching and learning objectives.

More information, examples and literature recommendations by the German Network:

<https://ethischeki.ecompetence.eu>

More English information, examples and literature recommendations by the European Network:

<https://ethicalai.ecompetence.eu>