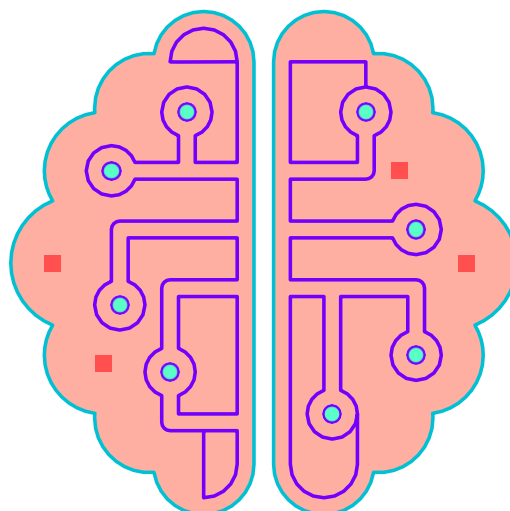# TUHH
Technische
Universität
Hamburg

AI-TOOLS
FOR TEACHING AND LEARNING

Guidance from TU Hamburg

Preface

Artificial intelligence (AI) is indisputably one of the key technologies of the future. Rapid developments in this field are already leading to far-reaching changes in our society. AI systems are rapidly permeating work processes, not only in companies but also in universities, and are changing the way we teach and learn. While this brings great opportunities, it also poses challenges.

It is therefore particularly important to prepare our students to use AI responsibly.

Publishing this guidance on AI tools for teaching and learning is an important step in this direction. It offers suggestions on how AI applications can be integrated into teaching and presents application scenarios and potential developments. In addition, fundamental aspects and legal information are covered.

I would like to express my sincere thanks to all those who contributed to creating this guidance. It was only possible to have this guidance ready for the 2023/24 winter semester thanks to the outstanding commitment shown by all those involved.

In order to write this guidance, the Committee for Strategy Development in Teaching and Learning set up a working group incorporating all status groups (professors, academic staff, technical and administrative staff, and the student body), led by Prof. Maren Baumhauer. This guidance was reviewed from a legal perspective and discussed by the Executive Board.

Nevertheless, given the rapid development of artificial intelligence and the still limited experience in teaching and learning, such guidance can only represent a snapshot. We therefore plan to treat the guidance as a "living document" and regularly adapt it to reflect our current level of understanding and any new developments.

In this respect, I look forward to AI being rigorously applied in teaching and learning, as well as subsequent discussions and further iterations of this guidance.

Prof. Dr. Dr. h. c. Wolfgang Kersten
Vice President for Education
Hamburg University of Technology

Contents

Part 1: General frame of reference

POSITION STATEMENT FROM TU HAMBURG

All research, teaching and technology transfer undertaken at Hamburg University of Technology (TU Hamburg) is guided by the principle of developing Technology for Humanity. This also includes the rapid developments that have emerged in recent years in the field of artificial intelligence (AI), which refers to technical systems that reproduce human abilities such as thinking and learning. These "intelligent" systems can find answers and solve problems using a large database. It should be noted that these systems are not capable of independent thought processes, but rather analyse the underlying data and make calculations based on predefined variables (cf. Heilmann, 2019). AI tools are able to respond to questions and, in the case of generative AI such as ChatGPT, communicate in a human-like manner.[1]

However, they cannot evaluate information and therefore cannot distinguish reliably between true and false statements (yet). Instead, this must still be undertaken by users of AI tools – i.e. lecturers and students in particular – and therefore requires a responsible approach.

Bearing this in mind, AI tools can supplement or support university teaching, but they do not (!) replace lecturers' subject-specific and interdisciplinary expertise. Rather, AI tools require specific, sometimes new skills in order to be able to use them effectively. In line with our guiding principle, we want to promote the development and testing of AI tools in teaching at TU Hamburg in a critical, constructive and technologically reflective manner, thus pro-actively tackling associated teaching tasks. After all, we can only uphold our guiding principle in the current times by using these new AI tools. We want to prepare our students in the best possible way for the opportunities and challenges associated with using AI tools, and support them in this process. It is therefore necessary to jointly design this new scope of opportunities to enable both the meaningful and responsible use and evaluation of AI tools in university teaching, with the purpose of enabling lecturers and students to develop comprehensive skills at the same time. At TU Hamburg, we are committed to ensure that our students not only use AI tools confidently and independently in a university context, but also develop professional skills that can be transferred into practice (see Teaching Mission Statement, 2021).

PURPOSE OF THIS GUIDANCE

This guidance is primarily aimed at lecturers – but also serves as a guide for students at TU Hamburg – to integrate new AI developments into teaching and learning processes. A fundamentally open and responsible approach to AI is therefore considered constructive. Based on selected class types at TU Hamburg, the following information sets out application scenarios that are intended to serve as suggestions and inspiration for integrating AI tools into your own teaching and learning processes, and thus utilising their potential in a meaningful way.

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1 A definition of the term AI and a clear explanation of ChatGPT published by UNESCO can be found here: https://unesdoc.unesco.org/ark:/48223/pf0000385146

Furthermore, this guidance contains general legal information intended to support the safe use of AI tools and to enable a critical yet constructive discussion of their opportunities and limitations. Due to uncertainties and open developments in the field – in relation to technological progress, economic, ecological and social processes, the current legal framework and the scientific-ethical discourse on AI – this guidance will be continuously updated and adapted in line with new developments. Anyone who would like to contribute their experience with AI tools in teaching at TU Hamburg to this process is invited to help shape the joint reflection and discussion on the role and significance of AI tools in our teaching.

Part 2: Application scenarios and potential developments for teaching

The role and creative scope of lecturers change continually. As such, lecturers take on a broad range of roles: they inspire as part of the learning process, they are facilitators, creators, listeners – and of course they share knowledge, give feedback and act as examiners. Newly emerging AI tools can support these diverse activities and associated requirements. The aim is not to replace lecturers with AI tools, but rather to support them in their various roles by using AI tools.

In this respect, we consider the integration of AI tools into teaching at TU Hamburg as a step-by-step process that requires careful planning, design, implementation, reflection and evaluation, taking into account pedagogical principles, university-specific framework conditions and the expertise and responsibility of teaching staff. Decisions on the use of AI tools are based on the subject area, the desired teaching and learning objectives, the teaching and learning formats to be used, as well as the intended feedback and examination type. In addition to determining how an AI tool is intended to be used, the ability to carefully weigh up the pros and cons of an AI tool against previously proven pedagogical concepts and methods in teaching is also important. The key factor here is that using an AI tool supports students to acquire comprehensive competences:

- *Professional competence* is needed to define clear teaching/learning objectives and select suitable content, but also to critically appraise the quality of AI-generated content.
- *Pedagogical competence* is necessary to ensure that the methods used with AI tools enable students to acquire competences independently, instead of simply delegating tasks to AI tools.
- *Ethical competence* is essential in order to be able to adequately reflect on the implications with regard to the justifiability of use, data protection, diversity and authorship.
- A basic understanding of the (technical) functioning of AI and *contextual knowledge* of the framework conditions at TU Hamburg are required to develop feasible teaching and learning concepts.

Finally, it is also important to gradually develop lecturers' AI skills, not only to reflect the tools used in terms of their functionality, but also to be able to assess and evaluate them in a multidimensional way (e.g. ethically, legally) (cf. Wienrich et al., 2023, p. 7).

„SAFE" USE

AI tools can only be used "safely" if the legal aspects (see Part 3) are also taken into account.

AI tools can also be used "safely" in teaching if the result could be interesting but does not have to be correct (cf. UNESCO, 2023, p. 6, Fig. 1).

Insofar as it is important that the result is correct, users must have expertise (e.g. evaluate results and take full responsibility) to be able to use AI tools "safely" (ibid.).

If the result must be correct, but users have neither the expertise nor the willingness to take responsibility or identify any inaccuracy in the result, using AI tools is not "safe" and therefore not recommended (ibid.).

Are you also wondering where you can find good practices?

GOOD PRACTICES

For examples of teaching practice with AI at the TU Hamburg, take a look here.

You can also find inspiring AI teaching projects on the KI-Campus or on the portal of the "Stiftung für Innovation in der Hochschullehre".

Are you also wondering where you can find suitable AI tools?

AI TOOL FINDER

When searching for AI tools for teaching, first try out numerous AI databases such as Advanced Innovation or Futurepedia.

Are you also wondering how you can share ideas and gain further training?

EXCHANGE AND FURTHER QUALIFICATION OPPORTUNITIES

TU members can share information via TU Hamburg's internal Mattermost channel: https://communicating.tuhh.de/onlineedutuhh/channels/generative-ki-und-chatgpt

The Center for Teaching and Learning also provides all lecturers with an opportunity to further educate themselves, share ideas and network.

In addition, the MMKH AI series and ToolTipTuesday offer introductions to AI tools, while the KI-Campus offers learning opportunities on various AI topics and in different formats. Various podcasts and the Uni-DigitalNewsletter also provide up-to-date information.

In line with established teaching formats at TU Hamburg, specific application scenarios and potential developments for AI tools in teaching are presented below, and examinations are discussed.

For each teaching format, we will address the learning objectives, knowledge transfer and student engagement in the teaching/learning process, as well as examination and course achievements. In line with a modular approach, teaching methods and media, as well as possible applications, can also be adopted in other class types.

LECTURES

A lecture series consists of talks that are held regularly and are partly interactive, during which specific topics are presented in context. The use of AI tools opens up new possibilities for lecturers to select, structure and prepare content in multimedia form and in different languages, thus breaking down language barriers. Students can use any AI tools that are recommended or provided, especially when preparing and following up lecture topics.

	LEARNING OBJECTIVES	KNOWLEDGE TRANSFER	STUDENT ENGAGEMENT	EXAMINATION AND COURSE ACHIEVEMENTS
POSSIBLE APPLICATION	Students … reflect on the possibilities and limitations of the support provided by AI tools in lectures. … develop skills to edit and critically evaluate text output by AI tools.	AI tools support the provision, preparation and communication of lecture content.	Students undertake research assignments using selected AI tools and create summaries of the lecture content; integration of live surveys; integration of AI-generated questions in audience response systems (clickers).	Inspiration gathering for sample examination questions and exercises, integration of AI-supported keynote speeches and digressions as an extension of the lecture content.
APPLICATION EXAMPLE	Students are given one or more answers from a selected AI tool to a question posed by the lecturer. The students are tasked with: a. Evaluating the AI response and identifying subject-related misconceptions; b. Disclosing criteria for their own assessment; c. Comparing the first and second answers; d. Determining the more appropriate answer and justifying it, or e. Setting out the inadequacies of the answer(s).			

GROUP EXERCISES / TUTORIALS

During a group exercise or tutorial, students work on tasks related to the lecture content individually or as part of a group. Group exercises or tutorials can, for example, be designed around the flipped classroom concept– also combined with just-in-time teaching – and mapped in Stud.IP/ILIAS: ahead of an exercise, material on the learning content and subtasks are made available for students to work on independently in advance. Students are encouraged to share questions about the materials and tasks with other students and the lecturer via an online tool. Building on this, the students then meet as part of the group exercise/tutorial and actively engage with the content together with the lecturer at a higher learning level. Selected submitted task solutions and the voluntary use of AI tools can also be discussed in an oral module examination.

	LEARNING OBJECTIVES	KNOWLEDGE TRANSFER DURING SELF-STUDY	STUDENT ENGAGEMENT TOGETHER WITH LECTURERS	EXAMINATION AND COURSE ACHIEVEMENTS
POSSIBLE APPLICATION	Students … read code and determine the output. … develop a code and discuss the result. … discuss the voluntary use of AI tools.	AI tools support the provision and preparation of materials (scripts, articles, textbooks, explanatory videos) + task creation (sample code). Students ask subject-related, methodological and AI-tool-related questions in advance.	Students grapple in teamwork with tutorial content. Here, AI can generate suggestions for tutorial questions to support the lecturer. Students present their task solutions in groups. Here, AI can suggest how to methodically organise group work. Students reflect on the voluntary use of AI. Here, AI can create suggestions for reflective questions.	AI tools can suggest exam questions, rubrics and reflective questions on AI usage or NON-usage.
APPLICATION EXAMPLE	The lecturer provides students with the material and an assignment. The students are tasked with: a. Reading a code and determining the output; b. Developing the code for a given problem and discussing the solution; c. Describing and reflecting on their approach – with or without an AI tool; d. Sharing content-related, process-related and AI-related questions; e. Identifying their various approaches, specifying results as self-written, copied from specialist forums, etc., or AI-generated "code parts", and preparing reflections on their own skills development, on the support afforded by AI tools and their limitations for presentation to others.			

LABORATORY PRACTICALS

During laboratory practicals, students use equipment, apparatuses and/or software systems appropriate for the subject or research matter, and analyse the results of their work. Firstly, subject content and methods as well as the necessary reflective, writing and presentation skills can be taught interactively, material can be provided and groups formed. In parallel groups, students can work on selected laboratory experiments from a test series. They present their preliminary considerations to the other groups during a colloquium ahead of the laboratory experiment, give each other feedback and discuss key aspects of the experiments with the lecturer. Students conclude their laboratory practicals with an individualised log, which, in addition to an oral group presentation, is part of the theoretical/practical module examination.

	LEARNING OBJECTIVES	KNOWLEDGE TRANSFER	STUDENT ENGAGEMENT	EXAMINATION AND COURSE ACHIEVEMENTS
POSSIBLE APPLICATION	Students … reflect on their results and strategies (incl. voluntary use of AI tools) when developing questions, hypotheses and the experimental design. … evaluate work results. … interpret, document and present them.	AI tools can make suggestions for preparing the script, a template or guidelines for the log.	Students present their experiments during the colloquium and give feedback. Here, AI tools can generate suggestions for the colloquium process, raise questions, and create presentations and instructions for conducting peer feedback.	AI tools can make suggestions for assignments, rubrics for peer feedback, logs and oral examinations, as well as reflective questions on the voluntary use of AI tools.

APPLICATION EXAMPLE	The lecturer provides students with the material and an assignment. The students are tasked with: a. Considering whether, why and for what purpose they want to use an AI tool when logging the experiment; b. Presenting their experimental design during the colloquium, raising questions about the other experiments and describing their methodological approach (with or without using AI); c. Preparing their log, identifying AI-generated text passages, describing their methodological approach (with or without using AI), and scrutinising their own learning.

SEMINAR

In seminars, students acquire knowledge and skills independently – both individually and in groups – under (inter)disciplinary supervision, so that they are able to present and defend the content presented as part of a discussion. As such, using AI tools in a seminar context can help students to learn how to use these tools through the targeted use of AI, also with a regard to their later professional relevance.

	LEARNING OBJECTIVES	KNOWLEDGE TRANSFER	STUDENT ENGAGEMENT	EXAMINATION AND COURSE ACHIEVEMENTS
POSSIBLE APPLICATION	Students … use various AI tools to manage tasks. … categorise AI-generated outputs based on defined criteria. … evaluate AI-generated outputs based on their professional knowledge.	AI tools support students to handle tasks. Lecturers share knowledge about the potentials and dangers of using AI tools.	Students use AI tools critically and constructively to handle tasks – both individually and in groups – and reflect on the results generated.	Use of AI as inspiration for structuring written essays. Critical reflection on an AI-generated text based on one's own professional expertise.

APPLICATION EXAMPLE

Students work on a topic as part of a group and present it during the seminar. The students are tasked with:

a. Gaining an overview of the topic with support from AI tools;

b. Critically reflecting on the AI-generated overview, consulting other scientific sources and identifying incorrect information;

c. Preparing a presentation on the topic being worked on, in which incorrect information is also discussed;

d. Giving the presentation as a group during the seminar;

e. Setting out how they personally use AI tools when working on topics.

EXAMINATIONS

In terms of examination procedures, AI tools do not directly trigger the need for changes to examination regulations. Rather, it is a pedagogic decision or rather a decision to be made by lecturers and examiners as to whether AI tools may be used when completing examination achievements, and in what way, or whether their use is excluded. It is important that the respective examination scenario is designed in such a way that examiners are able to define how an individual candidate's achievement will be assessed. An achievement shall be deemed to be that of an individual if it has been rendered without the use of unauthorised aids and without unauthorized assistance from third parties. This means that the candidate is obliged both to ensure that the achievement in question is their own work and not to be misleading about this.

The methods examiners use to scrutinise students' work are of crucial relevance. With regard to assessing examination achievements, it is also important to treat all candidates equally and to apply a standardised examination and assessment standard. It is therefore essential that candidates have equal opportunities during the examination process. The principle of equal opportunities requires, amongst other things, that candidates are preferably able to sit their examinations under the same (external) examination conditions. This is possible by defining permissible aids. The permissible aids should be available or made available to each candidate to the same extent.

It remains to be seen whether – in the case of voluntarily using AI tools when taking an examination – examination achievements without AI are comparable with examination achievements with AI, and whether a uniform assessment standard can therefore be guaranteed.

With regard to examinations, it turns out that some types of examination are less affected by the use of AI tools in examination scenarios, and others more. Supervised examinations or those which require direct interaction with examiners – such as in-person written examinations, oral or practical examinations – are initially relatively unaffected by the new possibilities, providing AI tools are not explicitly designated as permissible aids for voluntary use. However, types of examinations that make supervision difficult or legally impossible – such as preparing written work that is not subject to on-going or full supervision (logs, project work, student research projects, dissertations) – are more likely to be affected. For all types of examination, however, it is important that lecturers ponder specific assignments if something changes in their teaching as a result of allowing the voluntary use of AI tools (see above in the class types). They can train students, for example, to practice assessing the plausibility of results obtained using AI tools. For the examination, however, a clear decision must be made and communicated as to whether it is a question of determining or assessing results. The use of AI tools can therefore lead to a shift in the subject matter of the examination and thus to changes in the level of difficulty and requirements. This should then be very consciously decided by the lecturer and made transparent.

In written papers, AI tools could be used in the writing process for the following steps: brainstorming and generating ideas, structuring and organising, helping with writer's block or fine-tuning language. In contrast, AI tools cannot be used to generate entire papers or whole sections of text without reflection, to import literature and content suggestions without checking them, or to deal with highly individualized questions.

Developing and using "good" prompts is essential (cf. Dang et al., 2022; Zamfirescu-Pereira et al., 2023, p. 10): After all, AI tools can only provide support in the relevant phases of the writing process if students and lecturers formulate concrete, targeted and clear prompts. When using AI tools in the writing process, it is therefore advisable to pro-actively discuss these possibilities for generating suggestions together from the outset and to highlight the opportunities and limitations of this approach, especially against the background of the intended acquisition of skills. For the assessment, more weight could be given to criteria that focus on the students' own achievement (such as subject-specific categorisation, critical evaluation of the results, or their own ability to express themselves). Considerable support for writing processes - including, as a rule, querying preliminary results - can help to focus students' independent and autonomous thinking. Critical reflection and meaningful assessment by the students themselves can be particularly successful if they have already developed a basic understanding of academic work and writing (cf. Salden & Leschke, 2023, p. 13). The rules of good scientific practice must always be observed and AI tools must be flagged like any other tool.

Part 3: Fundamental aspects and legal information

TU Hamburg is in favour of the equitable, moral and legitimate use of AI tools in teaching and learning. When selecting the data material (prompts and outputs), good scientific practice must be ensured. The same applies to avoiding improper and inappropriate use, as well as disclosing sensitive and personal data to third parties (developers and providers of AI tools). When using AI tools in teaching and learning, it should be noted that the information provided can be used for training purposes.

EQUAL OPPORTUNITIES

The adoption or use of AI tools must be in line with the principle of equal opportunities (see Part 2: Examinations). For lecturers, this means that integrating AI tools into their classes should always bring added value, but that using these tools is not a prerequisite for successfully participating in a class, i.e. to complete the learning activities or sit the examination.

ACADEMIC INTEGRITY

Academic integrity requires us all to act based on values of honesty, trust, fairness, respect and responsibility every day – including when using AI tools in teaching and learning. In this sense, for good academic practice and to avoid academic misconduct (cf. TU Hamburg, 2024), the informed, reflective and transparent use of AI tools is essential. Lecturers can proactively promote the development of academic integrity throughout the course. The connection between possible academic misconduct and the use of AI is under discussion at TU Hamburg.

COPYRIGHT / AUTHORSHIP

The current state of the legal debate shows that much of what may be relevant in terms of copyright law when using AI tools is still completely unclear. The use of AI tools is therefore not yet legally secure in this respect.[2]

For the purposes of the German Act on Copyright and Related Rights (Urheberrechtsgesetz – UrhG), AI-supported programmes cannot be considered authors or creators of the text they generate, cf. Sections 7, 2 (2) UrhG. Nevertheless, users of such programmes may be able to claim authorship of the generated texts if they have used AI tools as an aid for their own creative work. In this case, the decisive factor is a significant degree of own intellectual input (cf. Hoeren, 2023, p. 22 ff).
It should be noted that "the existence of copyright protection for AI-generated texts is therefore determined by the question of whether there is sufficient human influence to affirm the author's own intellectual creation within the meaning of Section 2 (2) UrhG" (ibid., p. 25).

The copyright relevance of AI language models, such as ChatGPT, does not just apply to the results. It can thus not be ruled out beyond doubt that the training data has not possibly been compiled by web scraping in violation of the rights of others, e.g. by reading databases (Section 87b UrhG) or by text/data mining (Section 44b UrhG).

Furthermore, the sources – and also the realisation of the results – are so confusing for users that it cannot be ruled out beyond doubt whether the results contain protected third-party passages that are integrated without permission or without stating the relevant copyright.

REGULATORY REQUIREMENTS AND OBLIGATION TO ACKNOWLEDGE USE OF AI

The general study and examination regulations for Bachelor's and Master's courses (ASPO), which can be found on TU Hamburg's website, contain provisions that are also applicable to the use of AI tools (Section 21, paragraph 6.2 ASPO). There is room for interpretation in each individual case: Are AI-supported tools part of everyday work (cf. Eaton, 2023) and therefore do not have to be specified, or do they go beyond this and concern more significantly the key scientific competence to be tested? Accordingly, "subject-specific examination regulations can define to what extent and under what conditions the use of AI-supported tools is permitted" (Hoeren, 2023, p. 23). The examiner ultimately determines the guidelines for the specific examination in accordance with the ASPO and FSPO (cf. Spannagel, 2023).

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[2] *In addition, reference should be made to the passing of the 'AI Act' on May 21, 2024 as the world's first law on the regulation of AI by the EU member states. The German government must now incorporate the AI Act into national law. You can find detailed information here: (in German only): https://www.bundesregierung.de/breg-de/themen/digitalisierung/kuenstliche-intelligenz/ai-act-2285944*

A requirement to identify any text output from an AI writing tool can also result from the terms of use of the respective software (cf. Hoeren, 2023, p. 23).

Below you will find guidance on the question of how such acknowledgement can be made in student assignments in the respective subject by the individual students being examined:

Are you also wondering how the use of AI tools can be specified in written papers (including the final thesis)?

ACKNOWLEDGING THE USE OF AI TOOLS

Once more upfront: AI tools can be used independently by students in written assignments (unless otherwise defined by examiners). Unless it is an AI-supported aid for everyday work, the use of an AI tool must always be acknowledged as an aid for written assignments in accordance with the ASPO, the FSPO, the terms of use of the AI tool and the lecturer's decision based on current practice in the subject. Acknowledgement of AI use can be undertaken as follows:

Documenting AI use:
Any communication with the AI tool that is relevant for the work (own questions/prompts, answers/outputs/AI texts) is documented electronically in a separate directory. The version used and the date of use are also specified for each communication (e.g.: ChatGPT May 24 version, 23/06/2023). This documentation is included as a primary source in the list of sources, e.g: ChatGPT documentation (year), and forms the basis for verbatim and analogous citations of AI-generated results.

AI as a source
Text elements generated using AI tools (verbatim quotations) are cited in the text, e.g. ChatGPT documentation (year), p. x, line y.
Own paraphrases of texts generated by AI tools (analogous quotations) are acknowledged appropriately, e.g. cf. ChatGPT documentation, p. x, line y.

Rephrasing and translating using AI tools

AI tools can be used as part of the writing process to support language, e.g. as a spelling and rephrasing aid, and do not then have to be identified (cf. Zurich University of Applied Sciences, 2023). The same applies to such linguistic support in a foreign language (e.g. word formulations, spelling and grammar checks, and translations) using AI tools. This use of AI tools is considered part of everyday work and is therefore not subject to acknowledgement requirements, unless examiners explicitly request acknowledgement in line with professional practice. It can then be noted in the Declaration of Originality (cf. Buck and Limburg, 2023) or in the list of tools used (cf. Spannagel, 2023) that AI tools were used or more specifically that the text in chapter XY or section XY or line XY was rephrased or translated using AI tool Z (e.g. Meier 2007, pp.208-209, translated by AI tool Z), for example.

DATA PROTECTION AND DATA SECURITY

As soon as personal data is processed using AI tools, the basic principles of data protection law from Art. 5 of the General Data Protection Regulation (GDPR) must be taken into account. Furthermore, there must be a legal basis for the processing, and the processing must be sufficiently transparent for the persons whose data is being processed. For example, disclosing personal data without obtaining data-protection-compliant consent from the data subject constitutes a breach of the GDPR. Consent must be given voluntarily, and other data protection requirements that necessitate consent under data protection law must be taken into account. If personal data is transferred to countries outside the EU or EEA in connection with the use of AI tools, it must be checked whether an appropriate level of data protection is guaranteed by taking suitable measures. The use of AI software from an American company routinely fails to comply with European data protection requirements.[3]

Using AI software without entering personal data is not automatically data-protection-compliant simply because there is no active input from or question about persons in the prompt.

Even the mere use of the tool can violate data protection laws, as the prompts and associated usage data (IP address, location, date, time, device-specific data) can generally provide a lot of information about users (preferences, political or ideological beliefs, medical conditions, etc.).

It should also be noted that when processing personal data in the context of using external AI tools, data protection agreements must be concluded on a regular basis and measures to ensure data security must also be implemented. For example, the provider OpenAl clarifies in its privacy policy how data is processed and protected, but cannot guarantee the security of the data. Ensuring confidentiality and integrity is therefore questionable when using such systems and it may be possible for third parties to gain access to the processed data. For this reason, too, it is essential to ensure that data security requirements are followed when using AI tools and that access by AI tools to sensitive, internal or confidential information provided specifically for this purpose is strictly avoided. It is important to bear in mind that AI tools can use any data (prompts, outputs and user behaviour) for training purposes. This function can be switched off on some tools. If the AI tool used features the relevant settings option and personal data is to be processed, deactivating the training mode is recommended (privacy by default).

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3 On 10 July 2023, the European Commission adopted its adequacy decision for the EU-US data protection framework. This stipulates that the United States will ensure an adequate level of protection (comparable to that of the European Union) for personal data transferred from the EU to US companies within the new framework. Detailed background information is available online: https://ec.europa.eu/commission/presscorner/detail/en/ip_23_3721 This provides initial legal certainty for data subjects and data exports, provided that the organisation in the USA is certified in accordance with thisframework. The list is available online: https://www.privacyshield.gov/list

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