# Handout for STUDENTS

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## On academic work with AI at Rosenheim Technical University



**AI-generated with the help of chat.openai.com**

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# Contents

# Introduction

(Generative) AI offers many opportunities to make the scientific work process more efficient. Used correctly, AI can help with literature research, text structuring and linguistic optimisation. Nevertheless, scientific work remains a process that requires your own contribution and critical thinking. This guide is intended to help you use AI in a meaningful and transparent way.

## 1. Scientific work in the age of AI

### 1.1 Skills for successful work with AI

The use of AI tools can increase efficiency, but it does not replace the development of important scientific skills. Students must continue to be able to work independently and soundly. When working with AI, you should therefore consolidate and develop the following skills:

- **Deepening specialist knowledge**: Independent work remains at the heart of the scientific learning process. Use AI for support, but always retain control over your content.
- **Structure complex problems**: Scientific work requires the analysis and structuring of challenging questions. AI can provide suggestions here, which you should further develop and question.
- **Information literacy**: Evaluating sources remains a central task. AI-generated results must be carefully checked, as AI does not always provide verified or correct information.
- **Critical thinking**: Learn to critically question and reflect on AI-generated content. Do not blindly accept suggestions, but consider their significance and relevance.
- **Ethical conduct**: Scientific integrity is essential. Adhere to academic standards and handle AI-generated content responsibly.

By specifically training these skills, you can use AI as a helpful tool and ensure that your own performance remains visible.

### 1.2 Opportunities and limitations of AI tools

The correct use of AI can facilitate and enrich the work process. However, it is important to be aware of both the possibilities and the limitations.

**Opportunities:** AI offers many possibilities for support in scientific work:

- **Time savings**: AI can save time in literature research, data analysis and text editing.

- **Linguistic improvement**: Tools such as ChatGPT or DeepL Write help with the linguistic revision of texts.
- **Structuring and brainstorming**: AI provides suggestions for outlines or initial approaches to questions.
- **Visual support**: Visualisations and diagrams can be created quickly and efficiently.

**Limitations and dangers:** Despite the advantages, the use of AI also entails risks that you should be aware of:

- **Inaccuracy**: AI can generate incorrect or incomplete information. Critical review is essential.
- **Risk** of **plagiarism**: Content created with the help of AI must not be used without attribution. The use of AI must be disclosed, and the content must be developed independently and verified with appropriate primary sources.
- **Lack of original work**: Academic work requires you to develop your own ideas and analyses. AI must not be used as a substitute for your own work.
- **Data protection issues**: Do not enter sensitive or personal data into AI tools. Use alternatives that comply with data protection regulations.

**Practical example**: You can use AI tools to develop ideas for the structure of your work or to obtain literature suggestions. An AI-generated outline suggestion can be a valuable source of inspiration. However, remember to critically review this suggestion and revise it according to your own requirements.[1]

## 2. Legal basis

### 2.1 Plagiarism and copyright

The use of AI-supported tools is changing the way academic work is produced. The basic principle is that responsibility for content, accuracy and source verification remains entirely with the students[2] . To ensure academic integrity, the following principles apply:

- **Transparent disclosure:** AI tools can generate, rephrase or analyse content. Their use must be disclosed in terms of type and scope; undisclosed use may be considered deception.

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[1] Recommended reading: Bucher, U., Holzweißig, K., Schwarzer, M. (2024). Artificial intelligence and academic work. ChatGPT & Co.: The turbo boost for successful studies. Munich: Franz Vahlen1

[2] German Research Foundation (2025). Guidelines for Ensuring Good Scientific Practice. Code (Version v3). https://doi.org/10.5281/zenodo.14281892 (as of 10 December 2025).

- **Independent source verification:** AI tools can generate false or fabricated sources. Students must verify all sources independently and only use primary sources that actually exist and are citable. Responsibility for accuracy lies with humans.

- **Observe copyright and data protection:** AI-generated content is usually copyright-free, but may be based on protected material or involve sensitive data. Accordingly, copyright and data protection regulations must be observed.

- **AI does not replace independent work:** Students must clearly demonstrate which steps they have taken independently and be able to defend this (e.g. in the final presentation). This includes reflecting on the use of AI, justifying their own decisions and transferring this to independent analysis or problem-solving processes.

- **AI is not a citable source:** AI systems do not have authorship. AI outputs may not be cited as a source of literature and must always be backed up by appropriate primary sources. The use of AI must be documented in a separate appendix, not in the bibliography. [3]

## 2.2 Data protection and safe use of AI

The use of AI-supported tools can pose risks to data protection and security. Many AI systems store, analyse or further use the data entered. The following principles therefore apply to responsible use:

- **Do not enter any personal or sensitive data into external AI systems:** This includes: name, student ID number, health data, addresses, company content, internship data, internal documents or exam results. These may only be processed in systems provided or checked by the university.

- **Protect company data:** Data from companies, internships or theses must not be uploaded to public AI systems. This may violate confidentiality and data protection agreements.

- **Use data protection-compliant tools:** Preferably use AI applications that comply with EU data protection standards.

- **Use AI for support, not for data transfer:**
  - *Permitted uses include* structuring ideas, linguistic smoothing and inspiration for formulations.

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[3] Hochschule Bayern e.V. (2025). AI guidelines for university teaching. Recommendations for the use of AI in teaching at Bavarian universities of applied sciences and technical universities. Hochschule Bayern e.V. https://www.hochschule-bayern.de/fileadmin/daten/Positionspapiere/KI-Leitlinie_Hochschule-Bayern-19052025.pdf (as of 26 November 2025).

o *Not permitted: e.g.* uploading complete texts containing personal data, transmitting confidential content, using AI to evaluate or analyse other people.

By observing these principles, you ensure that your use of AI is responsible, compliant with data protection regulations and consistent with the university's rules.

# 3. Documenting AI as a tool

## 3.1 Why documentation is important

Transparency is a central component of scientific work. When AI-supported tools are used, the nature and extent of their use must be disclosed so that the individual's own contribution remains traceable. Therefore, documentation of the AI tools used must be included as an appendix to the work, which can also be discussed in the final presentation.

## 3.2 Step-by-step instructions

1. Name the AI tools used (e.g. ChatGPT, DeepL Write).
2. Describe the type of use (e.g. brainstorming, linguistic improvement).
3. Verify instead of citing: AI results may not be cited as sources.
4. Content taken from AI must always be substantiated by genuine primary sources. Use a declaration on the use of AI, such as the following template:

Sample template for documenting AI use:

| Work step | AI tools AI tools | Description of use |
|---|---|---|
| Brainstorming and structuring | ChatGPT | Suggestions for outline created |
| Literature research | Perplexity | Relevant studies identified |
| Visualisations | Mindverse | Diagrams created for data analysis |

A detailed description can be found in the appendix (Appendix 2: Template; Appendix 3: Help with filling in the form).

## Tips for your own work

AI can assist with many work steps, but it does not replace your own scientific work. It is crucial that you clearly show which decisions, interpretations and analyses originate from you. Use AI as a tool – not as a substitute for thinking or finding solutions.

Critically review and revise AI outputs; do not accept anything without checking it first. Use AI for supporting steps (e.g. structuring, alternative formulations), not for complete problem solving. Clearly highlight your own arguments, analyses and reasoning. Take advantage of the possibilities offered by AI while demonstrating your own skills and scientific understanding.

*Example: Allow AI to suggest possible hypotheses, but review and develop them independently.*

# Appendix

## Appendix 1: Template for declaration on the use of generative AI systems

### Appendix "Declaration on the use of generative AI systems"

In writing this paper, I used the following artificial intelligence (AI)-based systems[4] :

|  | AI system | Homepage/link to the tool |
|---|---|---|
| 1. |  |  |
| 2. |  |  |
| 3. |  |  |
| 4. |  |  |
| ... |  |  |

I further declare that I
- ☐ have actively informed myself about the capabilities and limitations of the above-mentioned AI systems,
- ☐ do not provide personal or sensitive information to any external AI system,
- ☐ have verified that the content generated using the above-mentioned AI systems and adopted by me is factually correct,
- ☐ I am aware that, as the author of this work, I am responsible for the information and statements made therein.

I used the above AI systems as described below.

*(Continued on next page)*

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[4] If you are unsure whether you need to disclose an AI system you have used, please contact your supervisor.

| Work step | AI system(s) used | Description of how it was used |
|---|---|---|
| Generation of ideas and conception of the work | | |
| Literature search | | |
| Literature analysis | | |
| Literature management and citation management | | |
| Selection of methods and models | | |
| Data collection and analysis | | |
| Generation of programme codes | | |
| Creation of visualisations | | |
| Interpretation and validation | | |
| Structuring the text of the thesis | | |
| Translation of the text of the thesis | | |
| Preparation of the presentation of the text | | |
| Other | | |

Place, date                                                                 Signature


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Appendix 2: Help with filling out the form Declaration on the use of generative AI systems

**Appendix "Declaration on the use of generative AI systems"**

In preparing this work, I used the following artificial intelligence (AI)-based systems[5] :

|  | AI system | Homepage/link to the tool |
|---|---|---|
| 1. | ChatGPT (corresponding version XY) | https://www.chatgpt.com/ |
| 2. | Perplexity | https://www.perplexity.ai |
| 3. | Mindverse | https://www.mind-verse.de/ |
| 4. | ResearchRabbit | https://www.researchrabbit.ai/ |
| 5. | Deepl Write | https://www.deepl.com/de/write |
| 6. | Transkriptor | https://transkriptor.com/de/ |
| 7. | MAXQDA AI Assist | https://www.maxqda.com/de/produkte/ai-assist |
| 8. | Scispace | https://typeset.io/ |
| 9. | KREA | https://www.krea.ai/home |
| 10. | LookX AI | https://www.lookx.ai/ |
| … |  |  |

I further declare that I
☒ have actively informed myself about the capabilities and limitations of the above-mentioned AI systems,
☒ did not provide personal or sensitive information to any external AI system,
☒ have verified that the content generated using the above-mentioned AI systems and adopted by me is factually correct,
☒ I am aware that, as the author of this work, I am responsible for the information and statements made therein.

I have used the above-mentioned AI systems as described below.

| Work step | AI system(s) used | Description of how it was used |
|---|---|---|
| Generation of ideas and conception of the work | 1. Perplexity<br>2. ChatGPT<br>3. LookX AI<br>4. KREA | 1. as a search engine<br>2. for generating and testing initial questions, approaches and ideas; lists created by ChatGPT served as inspiration; none of ChatGPT's suggestions were adopted directly, with the exception of [XY]<br>3. & 4. Creating AI-based renderings to generate ideas for my project in the field of furniture design/overall architectural concept; comparison with real projects that have already been implemented ; critical reflection on feasibility/practicability |

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[5] If you are unsure whether you need to specify an AI system you have used, please contact your supervisor.

| Literature search | Perplexity | as a search engine |
|---|---|---|
| Literature analysis | Scispace | Analyse overview of abstracts and relevant results and data collection tools used in relation to my research question; questions about the suggested texts and those I have uploaded; comparison of content |
| Literature management and citation management | ChatGPT | Transform bibliographic references in different formats into IEEE format/APA format |
| Selection of methods and models | 1. ChatGPT<br>2. Perplexity | 1. ChatGPT was asked about suitable analysis methods for a specific type of data<br>2. Based on ChatGPT's answers, I searched for real-world examples of application and then selected the method that seemed best to me |
| Data collection and analysis | 1. Transkriptor<br>2. MAXQDA AI Assist | 1. Automatic audio transcription of the interviews conducted; I then checked the automatically generated texts for accuracy and corrected them in places<br>2. Chatting with the data→ Automated analysis of PDF and text documents, as well as coded segments; explanation of marked words and text passages and saving them as memos; automated creation of summaries; automatic suggestion of main and subcodes; the suggestions output were critically reflected upon and revised by me. |
| Generation of programme codes | --- | --- |
| Creation of visualisations | 1. Mindverse<br>2. LookX AI<br>3. KREA | 1. Generation of alternative data visualisations and diagram variants; I then created the best variant myself in Excel<br>2. & 3. Creation of AI-based renderings for my proposed model |
| Interpretation and validation | ChatGPT | Ideas and suggestions for interpreting the data and content of the work; alternative suggestions that differ from my interpretation |
| Structuring the text of the work | ChatGPT | Generation of possible outlines for the work; generation of suggestions for the structure of chapters |
| Translation of the text of the paper | ChatGPT<br>Deepl Write | Translation assistance for English-language specialist articles |
| Preparation of the presentation of the text | ChatGPT | Suggestions for summarising the relevant key points of each chapter |
| Other | --- | --- |

Place, date                                          Signature

17 June 2024                                          *Marianne Muster*

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**For Rosenheim Technical University,**
**with reference to Faculty of Wood Technology and Construction**