BUDAPESTI CORVINUS EGYETEM

Recommendation for the Appropriate and Responsible Use of Artificial Intelligence in Education at Corvinus University of Budapest

A Guide for Students

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GUIDE FOR STUDENTS about the informed, effective and ethical use of Artificial Intelligence in learning

This Student's Guide summarises what to expect in learning, how to adapt to technological changes, what the minimum standard you need to know and perform- and what university regulations say. The Guide aims to ensure that each subsection is, as far as possible, independently meaningful and usable.

You may want to use the Guide in the following ways:

1. Chapter 1 helps students understand their challenges when using generative AI.
2. For specific use, Chapter 0 provides general guidelines that can be used in learning with AI.
3. For those unfamiliar with the technological background and features of the current Big Language Models (such as ChatGPT) or just want to check their knowledge, you should read Chapter 0. - those familiar with the subject can skip it.
4. Those who already know the basics may find further help from the target devices presented in Chapter 4.
5. Chapter 5 shows how to proceed and mark the facts and methods of using AI - including brief guidance on clarifying whether AI can be used for a particular subject (including interpretation of administrative information in subject fiches).
6. Chapter 6 helps you to identify strategies for using AI for independent work and learning activities that AI tools can support.
7. Chapter 7 aims to provide a summary of the hazards and risks.
8. Chapter 8 reminds us to be careful when using AI.
9. If you need further assistance, chapter 9 provides information on who to contact with which problem and where to start.

1 How to approach AI in learning

To be well prepared for the tasks and challenges expected from current trends in AI, all students need to learn how to approach and effectively use AI-based text-generating and conversational bots (and AI-based tools in general) to benefit rather than be disadvantaged by them by developing various related individual skills such as writing, coding, communication, and critical thinking.

The institutional use of AI requires self-directed learning, autonomy, responsibility, ethical behaviour, and (in terms of use) norm-following behaviour. Students' use of AI has institutional conditions and minimum obligations. These must be known and respected by all students. Further details are provided in the following chapters of this guide.

Figure 1 provides a graphical summary of how it is appropriate and ethical for students to approach AI in learning and problem-solving.

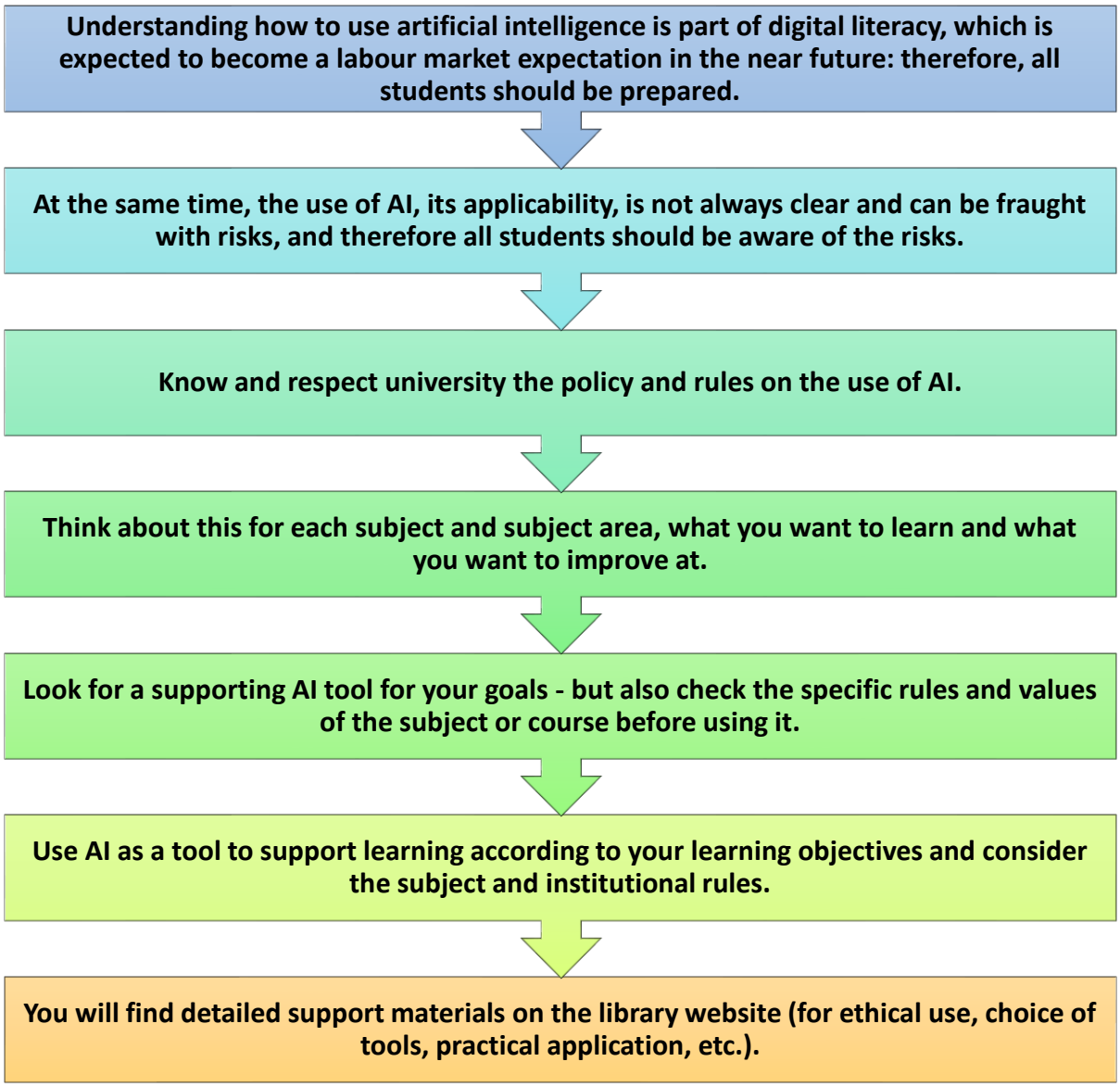

Figure 1 How to approach AI as a student

2 Compass for students

The basic requirements for using AI at the Corvinus University of Budapest are: autonomy, responsibility, ethical behaviour and compliance with standards (a concise, visual summary of the main points is provided in Figure 2).

Before using any AI-based assistive technology for a course**, you should clarify the conditions of use** for that subject. Each instructor is allowed to set different expectations from the general university standards for using AI for a particular student application. This is indicated in the subject fact sheet (if not, the institutional expectations apply). If you are unsure what is or is not allowed, please ask the course leader or supervisor.

Therefore, **be aware of and respect the institutional framework** and the obligations related to the use of AI. There are three main institutional documents (currently under development) to browse through: the sections of the Study and Examination Regulations relating to AI, the Plagiarism Code, and the Code of Ethics.

Since the requirements for each subject are different, you should **familiarise yourself with the subject matter** to clarify the requirements for using AI in that subject before using any AI-based tools.

Instructors may have **different expectations** about how students use AI in their courses. For further clarification, please contact the course leader, the course supervisor, or the course supervisor.

If you are using AI for your own reasons, such as text generation or text manipulation applications, consider **what information you need** and how to access it. Language models address different types of problems with different effectiveness, so tailor your questions to the problem and the specific tool.

Learn about the most important or most appropriate **tools for** the job. ChatGPT is not the only one, there are many dedicated tools available online, many of which have free versions. Find out about the options available.

Learn to use AI-based texting tools, chatbots, and general AI tools **effectively.** Several interactions are often needed to achieve an acceptable response, which requires practice. [1]

Develop your skills and abilities in using AI, such as writing, coding, communication, and critical thinking. Perhaps one of the most useful skills that AI can help you develop is the habit of control.

Remember: **always treat results with scepticism**. Check the AI-generated content, including the substantive information, writing style, and grammar. Even carefully trained AI, based on the best language models, can make mistakes (this is due to the way it works - see there) and phrase things strangely. Let's look at the results before using them.

[1] See more (in English): https://hbsp.harvard.edu/inspiring-minds/are-your-students-ready-for-ai

Figure 2 Concise summary of student guidelines (Prepared by Krisztián Hegedüs)

The main goal should always be **self-improvement**, which includes regular self-reflection. On the one hand, users should reflect on what they have learned, and reflexively check where they are headed in developing their skills. They must consider whether they have achieved their goals by completing each task or work. The aim of university education is not to pass subjects and get grades but to develop individual (and group) skills consciously - and AI should play a dominant role in the latter rather than the former.

When using the app, **avoid using sensitive**, personal, or health-related **data** - your own or others - if possible, and always check the data usage policy of the device you are using.

Be careful when using **publicly available AI models**: check the developer's background, look for tool reviews, check the published privacy notice, and ask the education technology team for help if needed.

If you use the results in a task related to a subject, always **state and clearly indicate** which language model you have used: which one, how, and to what extent.

3 What everyone should know about AI and chatbots

The term Artificial Intelligence (AI) refers to technologies and applications that are developed to represent some aspect or subset of human thinking and abilities, to implement them in machine form, and to solve complex tasks that require specific cognitive abilities usually attributed to humans. This could be, for example, the recognition of objects (images), the interpretation of texts or writing.

One type of AI is the so-called Large Language Model (LLM). LLMs and image-generating applications (e.g., Midjourney or DALL-E) belong to the generative AI group. Another category is machine learning models (now considered traditional).

LLM includes ChatGPT, which burst onto the scene at the end of 2022 as the best-known representative of this category of AI.

ChatGPT is a special text generation and question-answering solution built on top of the GPT base (English) language model version 3.5 or 4, on which additional applications, add-ons, and plug-ins can be built (such as the latest version of Bing or Bing.AI).

A typical LLM algorithm can analyze the relationships between words and put them together probabilistically to form grammatically correct sentences. So, if you ask it a question or give it a prompt, it will find the answers based on the probabilistic relationships between the words in the prompt and the answers in the multilayer mesh model.

The data of the model, i.e. its probabilistic relations, are built by training. A basic language model is responsible for the linguistic correctness of the input and generated sentences. At the same time, knowledge relations are built on top of this by fine-tuning.

When you 'talk' to the model, you can further refine the question/instruction (e.g., clarify the context), as it will keep the previous steps (at least for a while) and then adjust which words, phrases, or phrases to search on based on the modification. The input query can be a longer text, depending on the model's sophistication (more powerful models usually require a fee, such as ChatGPT, version 4, which currently costs around 7000Ft per month).

On top of ready-made language models or even chatbots built on top of them, new, more specific models can be built (e.g. with exact information, books, and articles in a particular field of science) or linked to search engines (MS Bing.AI is built on top of ChatGPT, but there is also Google Bard or Meta LLaMa).

Although these large language models produce spectacular results in many areas and tasks - e.g., summaries, text ordering, and searching for concrete facts - they also have many problems due to their technical structure. The most common error is the so-called hallucination, where the language model does not know the answer but still produces the text elements with the highest probability index based on internal relations. They often do not provide facts or concrete data but somewhat related, sometimes incorrect sentences. There may be cultural or other biases, which, in extreme cases (in the case of hidden texts used in teaching), may be racist, sexist, or offensive to certain minority groups.

Teaching them consumes a lot of resources - thousands of high-end machines, energy, human labour, etc. - and takes a lot of time (months or years). In principle, it is possible to deliberately attack and modify the base model with undesirable content, although filters are usually used to avoid this.

Although there are fears that the model might learn private data or a typical prompt from a user to the best of our knowledge (at the time of writing), current models are not technically capable of doing this. Instead, they can, in principle, teach the lessons from prompts to the model after verification (anonymization). This means the model operator can see our prompts even if other users cannot. They may contain personal information, which is then available to the developer and (with a slight chance) can, in principle, be stolen.

Finally, we would like to draw your attention to some basic data protection and privacy issues that everyone should be aware of when using AI in their institution:

- If it is not clear what data or material each chatbots were trained from
    - The question arises whether materials were used without authorization.
    - More specifically, they used texts that were supposed to be freely available on the web - but without question.
- There is no way of knowing exactly what _isn't_ in the device.
- As you use it, it collects the questions and comments you enter - and you can use or reuse them freely.
- Individual developers use various so-called fine-tuning techniques, about which little is known (especially about the content).
- The data used to train AI may be one-sided and contain bias.
- The long-term effects of using AI and language models are not known.

4 Some target-AI tools

The tools presented here are mainly examples of specific types of applications, but we have tried to select those that we found useful. This allows students to see and try out what the latest solutions can do - but it also makes later descriptions, methods, and explanations easier to understand if you look at more examples.

IMPORTANT: Any device may only be used for assessment tasks with the instructor's permission - and the use of the device must be clearly indicated in the materials submitted.

Conversion AI platforms such as ChatGPT help with text generation, writing tasks facilitation, and content marketing (e.g., generating engaging social media posts, emails, or other written content based on specified parameters, maximizing the style and format of the content):

https://writesonic.com/

https://app.copy.ai/

The AI interfaces **for text writing, rewording, and paraphrasing** allow you to reformulate, edit, and improve copy-pasted texts to make them more expressive, understandable, and comprehensible, e.g., from informal to formal, from longer to shorter, from tidal to focused:

https://app.wordtune.com/editor/

https://quillbot.com/

https://jenni.ai/

Tools supporting the **creation** and semi-automatic **generation of educational videos:**

https://app.elai.io/

https://www.synthesia.io/

Conversion platforms are available and **can be used** primarily **as research tools**, where the AI tool does not generate its answers based on a large language corpus unknown to the user. Still, the user can upload documents in a typical .pdf format and ask the tool specific questions about their content.

Solutions based on this principle are, e.g., "docalysis," "chatpdf" or "askyourpdf."

"Connected Papers" is an online platform for connecting and visualizing scientific papers based on keywords, DOI identifiers, or titles. This tool allows researchers to discover connections between different scientific publications, making related research areas more easily accessible and helping researchers to find relevant literature faster and discover new connections. The database is constantly expanding (there are still gaps in it at the moment), but it has the advantage of visualizing the publication date, citation, and how strongly correlated the literature is to the title we have provided.

Finally, "Consensus" uses intelligent algorithms to link content and explore connections, thus facilitating more efficient information gathering, e.g., by recommending existing literature references to answer a specific research question.

https://docalysis.com/

https://www.chatpdf.com/

https://askyourpdf.com/

https://www.connectedpapers.com/

https://consensus.app/search/.

5 How to proceed in case of AI

5.1 Clarifying the role of AI for all subjects

It is important to clarify whether AI can be used for each subject or course. In principle, checking the datasheet for the subject in question for any specific requirements is necessary. You can also contact the course tutor with any questions, but please refer to the end of this Guide (Chapter 9), where you will find more information on who you can turn to with your questions. It has already been mentioned that the institutional status is set out in the TIB. You should contact the course leader if you find a discrepancy, don't understand something, or are unsure about the options or expectations. It is also worth asking, even if the interpretation of the administrative information in the course information sheets is unclear.

5.2 Always check and follow the rules

Comply with institutional, professional, and subject-specific regulations and guidelines on using artificial intelligence. The basic rule is that a student may use AI unless the course instructor explicitly states otherwise. However, if a student uses AI, the facts and details of the use requested by the instructor must be indicated in the materials prepared or submitted (in the institutional policy or as requested by the instructor). The student must ensure that their work is original, independent, and appropriately referenced as expected.

When submitting any independent work, the instructor should be informed whether the student has used AI in the development, which ones, and how - the exact method of doing so may be specifically required in the course syllabus.

Generally, the university expects students to complete the assignments independently, based on their knowledge acquired in lectures and seminars and their own study of the assigned literature. The typical approach is that students are allowed to use AI bots in source research while enabling generative functions to move at the three (or finer) levels above. The point is that students should not claim as their own if they have used any form of AI, especially a conversational bot. The forthcoming university policy will provide statement templates, which may be required by the instructors.

Please note that according to § 4 (2) and (3) of the University Plagiarism Regulations,[2] students are expected to refrain from violating the rules of scientific citation in any seminar or class work, homework, presentation, examination paper, thesis, dissertation, any publication, abstract or other publication of any kind, whether in the general or a wider context. Furthermore, the student is only entitled to be listed in the capacity (editor, author, etc.) of a manuscript to the extent and in the capacity in which they actually participated in the creation of the work. Submitting documents under your own name created entirely with an AI platform is a clear violation of the scientific citation rules and may result in sanctions.

The university policy contains sample texts on the main cases of how to indicate the use of AI in a homework assignment, independent work, or even a thesis.

[2] See https://www.uni-corvinus.hu/contents/uploads/2023/03/I.20_Plagiumszabalyzat_2018_junius_19.ee1.pdf downloaded 06/06/2023

5.3 Draftback: a possible tool to prove your own work

Draftback is a Google Docs extension that can be used in Chrome and Edge browsers. Instructors only need to install it on their devices; students do not.

The plugin makes the writing and editing process of the document visible, showing that the text is indeed the student's original work.

It also displays errors and how to correct them, which helps to demonstrate the student's independent work. It's important to note that **it only works with documents written in Google Docs**, and editing information **is only retained in the online version**, so this information is lost in the downloaded version of the document.

Using the extension is simple: the text is written to a Google Docs file as you work, and then, if necessary, a link to view it is sent to the instructor with the "*anyone with a link can view*" option.

The use of DraftBack can be recommended as a voluntary self-protection tool for students to provide evidence of independent work and avoid plagiarism. All students need to do is keep the original Google Docs document online. It is important to note, however, that the absence of a '*record*' does not in itself prove plagiarism, that institutional policies should be checked to see how they interpret the use of such tools, and, finally, that the instructor of the subject or course should always be consulted before usage.

6 How to use AI consciously in learning

Corvinus University encourages students to use artificial intelligence consciously, efficiently, and competently. In addition to what is described here, it is worth looking for supporting material and ideas on the Internet, especially on leading universities' websites - see, for example, the Monash University in Australia's website: https://www.monash.edu/learnhq/build-digital-capabilities/create-online/using-artificial-intelligence.

However, it is important to note that the currently available tools (July 2023) are in English. Materials originally written in other languages (websites, documents, books, etc.) have been included in the teaching material by first translating them into English. So, when communicating in English or other languages, the questions asked are translated into English with some solution, and then the generated answers are translated back into the language of the question. These steps may have side effects, which should be considered when using them in learning. In many cases, the available tools are most accurately used in English - so their performance in English on a specific topic should be checked and experimented with. There are also tools available in Hungarian (such as HuBERT or Puli), but they fall short of the leading English solutions regarding knowledge content.

6.1 Strategies for learning while using AI

Remember that you still need to learn concepts, contexts, systems, models, and processes. A thorough knowledge of them is essential to carry out higher-level operations and solve complex problems.

Using AI is not a substitute for critical thinking, problem-solving, and analysis. The conscious and responsible use of AI in the teaching-learning process is inevitable.

A vital competence will be the careful, critical evaluation of the answers given by AI and the understanding of their accuracy and relevance. Awareness of what AI can and cannot do. These should be borne in mind when evaluating the given answers. Students are responsible for how they use the answers they receive in their work.

6.2 Which learning activities can rely on AI

Artificial intelligence can improve the efficiency of learning in the following ways:

- AI can monitor the learning process.
    - Based on individual characteristics, it can personalize the learning path by analysing the student's answers and questions in real-time,
    - so that professional and generic competencies can be developed by carrying out appropriate tasks.
- It provides personalized, targeted interactivity in the learning process.
    - Everyone has the opportunity to get concrete answers and advice to their questions and problems about learning.
- Providing ongoing, immediate feedback, assessment, and support.
- Provide students with learning tips and methods.
- It can provide ideas on time management and task prioritization, which students can use in their learning.
    - see the example in subsection 6.3.
- Continuously monitoring students' learning activities provides an opportunity to give early warning of any risk of regression.
    - You can help catch up with personalized recommendations.
- You can support students with learning difficulties, disabilities, or special needs with personalized learning pathways.
- In group work, it can help to create optimal groups for tasks that require cooperation.
    - Work can be facilitated by moderation.
- Connecting with like-minded learners with similar characteristics and attributes supports community building.
- It can help you solve problems by processing large amounts of data and text and synthesizing information.
- As a conversationalist or as a partner, it helps you to practice tasks and acquire routines
    - For example, in an interview situation, you can practice using ChatBot by explaining the job and context and asking appropriately - see the example in 6.3 subsection 6.2.

6.3 Examples and tips for using generative AI (chatbots) in learning

You can use generative AI (e.g., ask the ChatGPT for help) **to create a text task**. A typical example might be writing a 4–5-thousand-character summary of a particular market. When formulating the request, it is worth indicating the level (e.g., university) and the discipline for which you are preparing the solution.

Better tools may ask for references and a bibliography (beware: ChatGPT 3.5 is particularly weak in this respect).

It is essential to pay attention to the following:

- ✓ *The precise formulation of the question and the task is essential. But* to ask questions well, you need to learn the material.
- ✓ *Keep refining the question you ask the AI so that you can get a more precise answer.*
- ✓ Remember that if you ask the same question more than once, the AI will produce more versions of your answer. It is worth taking advantage of this opportunity to compare the versions you receive and prepare your own version using the material you have learned.
- ✓ *Be sure to mark the AI-generated parts in the work in progress***.** The texts generated by the AI are taken from other people's texts, articles, or studies, so you cannot use them as your own.
- ✓ Consider the university regulatory environment, citation, and plagiarism rules!
- ✓ *Always check the bibliography and references you receive***!** ChatGPT tends to cite sources that are not real or accurate.

Use a generative AI or chatbot (e.g., ChatGPT) for a task where you can try simulated conversational situations where the user is the respondent, and the AI asks questions, e.g., exam, job application practice.

1. Teach the program what role/position it should respond from and a situation description/role assignment: e.g., "You are an HR generalist, and I am applying for a job. Ask me typical job interview questions to practice. Give me feedback on my answers. Ask one question at a time."
2. Based on the feedback, answer the questions and try to find ways to give better answers (see *the procedural suggestions in* the example above)!

Using a generative AI or chatbot (e.g., ChatGPT) for a task where the student **must try out how to ask questions in a simulated situation** (e.g., interviewing, consulting situation with a client)

1. Describe the specific situation in which the program should work.
    - For example, "*I need to simulate a situation so I can practice the situation. I am a marketing company representative. You are a client who wants to order a TV advertising campaign. Answer from the client's point of view*."
2. Ask the questions you want to practice.
3. Ask for feedback on the process we followed and the results!

A generative AI or chatbot (e.g., ChatGPT) can help you prioritize **your tasks and to-dos**. This allows you to manage your time more efficiently, helping you to focus on the most critical tasks. You can ask for reminders and notifications for important events or tasks. This will allow you not to miss anything and to prepare in time for the following activities. Time tracking tools will enable you to track how much time you spend on a particular activity. This helps you to manage your time more consciously and avoid excessive time wastage, becoming more transparent where there are opportunities to improve time efficiency.

For example, ChatGPT can be used to prioritize and create a healthy and sustainable agenda:

1. First, let's formulate what we need to do and what my tasks are. e.g., "Help me prioritize *my tasks*."
2. Ask a specific question, e.g., "Give me tips on how to prioritize *my tasks*."
3. Provide precise information that the program can use to generate a solution based on the hints, e.g., "*list of tasks with deadlines*."
4. Specify the task according to your own needs: e.g., "*Make me a daily schedule that gives concrete details of my daily tasks for a week*."

7 What are the dangers we face

Students may accept false or misleading information as accurate without questioning its validity. To mitigate this risk, students should be familiar with the advantages and disadvantages of AI models.

The primary language models currently perform less well in Hungarian, so getting an incorrect answer is easier (to avoid this, you may want to query in English instead).

There are potential copyright problems. When generating text using large language models, the response may contain a whole sentence or even a paragraph of text, leading to copyright and plagiarism problems.

One problem with the responses of large language models is the potential bias. If, for example, a model is trained on data biased towards certain groups of people, the model may produce discriminatory results against these groups (e.g., local knowledge of minorities, such as small ethnic groups or cultures, may be overshadowed).

Some argue that if students rely too heavily on generative AI solutions, it negatively affects their critical thinking and problem-solving skills. To overcome this risk, it is crucial to be aware of the limitations of large language models.

Using large language models in education also raises concerns about data protection and security. Some privacy experts describe the privacy risks associated with ChatGPT as a "nightmare". Large language models like ChatGPT require a significant amount of data to operate and evolve. The data that makes up ChatGPT also involves the collection of personal data without permission or compensation. As we use ChatGPT, the program also stores our questions and uses this information for learning.

Generative AI solutions and other technological developments may also increase inequalities between students, for example, if students have access to different quality and sophistication of services depending on their financial situation (see the difference between the free ChatGPT 3.5 and the paid ChatGPT 4).

8 What to avoid

How to avoid the above traps, solve the problems

- don't accept your AI proposals literally without checking
- don't use an AI device without knowing how it works and its possible faults
- do not accept the first answer
- do not hand in material (homework, essays, group work, your own material, etc.) without indicating which AI tool you have used, where and how - if you have used it)
- remember, AI cannot be a co-author.

Most importantly, always remember to check the specific requirements of the object - because if you follow them, there should be no problem (nothing to avoid).

9 Who to ask for help

More information can be found at:

Course leader, instructor:

How should the use of artificial intelligence be interpreted in the subject fiches?

Why can or cannot artificial intelligence be used in certain subjects and tasks?

Administrative issues (e.g., the subject data sheet is not interpretable, there is no precise wording for using AI, etc.).

Library:

How can accidental infringements be avoided?

What is plagiarism?

How can we use artificial intelligence ethically and responsibly?

What tools are available, and which AI can solve different tasks?

Managing technical equipment.

Computer science:

What are the IT risks of using AI?

Managing technical equipment.

Student services and learning support:

How should the requirements and expectations set for artificial intelligence be interpreted?

How can we manage our fears and anxiety about AI?

Methodological support for learning.

Managing technical equipment.

Moodle course interface (maintained by the Centre for Educational Quality Development and Methodology):

Learn about the ethical use of artificial intelligence at university level;

Get advice on where and how to use it in the learning process;

Contains advice and suggestions on how to avoid potential risks;

The course content is constantly evolving and updated as opportunities grow.

Office of the Vice-Rector for Education:

Feedback on the Guide.