INSTRUCTIONS FOR USING AI ON ROSKILDE UNIVERSITY

Artificial intelligence (AI) has been gaining ground everywhere in recent years, including in the university world. This document provides guidance on what to consider if you would like to utilize AI in your work at Roskilde University, whether as a researcher, teacher or administrative employee.

[TL;DR] If you want to go directly to the instructions, click here: Instructions

Scoping:

There are many ways to use artificial intelligence, but this document is primarily about generative artificial intelligence (AI), i.e. using artificial intelligence to produce texts based on a large language model (LLM) with a text generator (generative Artificial Intelligence or **GenAI**). This can be via tools such as ChatGPT, Bing, MS Copilot, Google Bard, etc. However, the basic considerations and principles will apply to any use of AI.

Confidential data, etc.

It's quick and easy to have artificial intelligence analyse documents and formulate answers or analyses of the text. However, the models make use of all available inputs stored in the large language model, so the AI is trained (developed) as it is used. Therefore, it can use the content from one document to generate text for another user. The GenAI does not distinguish between what is confidential and non-confidential data in this process. This means that if you send confidential or personal data through GenAI, you run the risk of that data ending up in a response to another user. When it comes to personal data, there must be a (legal) basis for passing on information to others. This is not the case with the standard GenAI.

Guideline #1 is therefore not to send trade secrets, confidential information, copyrighted material, or personal data through GenAl on the internet.

Responsibility for texts

When you receive an output from GenAI, it can be used, but under responsibility. The GenAI is very good at guessing which words should appear in an answer and structuring them in a coherent way. However, there have been examples of GenAI inventing sources to support their answer or answering incorrectly based on the input the machine is prompted with. It will always be the user's job to validate and vouch for the text. In other words, you cannot forward an incorrect text and defend yourself by claiming that the text was generated by artificial intelligence. As a user, you must check, professionally understand and be able to vouch for the output used.

Guideline #2 is therefore that even if you use AI to generate a text, you are still responsible for the correctness of the content when using or forwarding it.

Declaration of content generated by artificial intelligence

Roskilde University can use artificial intelligence in our ongoing counselling of students. However, if artificial intelligence is used to provide automated guidance, e.g. in the form of a question/answer robot, this must be clearly declared and all answers must be accompanied by a disclaimer explaining that the text is auto-generated and may therefore be subject to errors. As a minimum, it must be clear to the user (the student or an applicant to our programmes) that the answer *may be* subject to errors as the text is generated using artificial intelligence. The user should also be guided to contact a person if the answer gives rise to questions. In addition, there should be a process for quality assurance of the answers to the questions asked to regularly check that the answers meet our standards.

Guideline #3 is therefore that the use of AI in automated guidance and question/answer robots must be clearly declared to recognize that it is GenAI that is answering. All AI-generated answers should be accompanied by a disclaimer stating that the answer is auto-generated and therefore may be subject to errors.

GenAl work, as mentioned above, by an artificial intelligence guessing the probability of a certain answer from a huge amount of underlying data. But Al doesn't consider whether the result is "true", nor does it produce any actual intellectual work of its own. It just collates information from its big language model. Al-generated text is therefore not primary literature that you can quote from. Al-generated text cannot be assigned a truth value either because the text is a guess based on a probability calculation. However, if you use Al-generated text, you can declare this by describing which GenAl you have used, which version of the GenAl has generated the text and how the artificial intelligence has been prompted to deliver the text, etc. Read more here: https://libguides.ruc.dk/c.php?g=1370073&p=10172445

Guideline #4 is therefore that GenAl is not a source that can be quoted or given truth value.

When GenAls work by having artificial intelligence guess the probability of a certain answer from a huge amount of underlying data, it follows that it will choose the answer that follows the majority of the sources available to it. And those sources may have a preponderance of gender, race or other demographics. Thus, GenAl have a built in bias. See a more detailed description of the phenomenon by IBM here: https://www.ibm.com/blog/shedding-light-on-ai-bias-with-real-world-examples/

For example, IBM cites that artificial intelligence is less accurate at diagnosing people of colour than white people. And if you're male and exposed to GenAl marketing, you're more likely to be exposed to high-paying positions than if you're female.

Guideline #5 is why you should be aware that artificial intelligence can have bias, i.e. it chooses the most likely outcome and thus follows the majority opinion / majority of available data.

Sustainability and use of systems

It is estimated that the use of GenAl has an energy consumption of up to 10 times¹ the use of common search tools (google, duckduckgo, bing, etc.). Therefore, you should consider whether you are using Al for tasks that can be solved with more energy-efficient tools.

Guideline #6 is therefore, only use AI when you can't use more energy-efficient tools such as regular search engines to solve a task.

System usage and procurement of new systems:

Every IT system costs something. Either you pay with money, or you pay with information that the company behind the IT system can monetise.

To ensure cost-effective IT operations, Roskilde University has centralised its IT functions in RUC Digital. Procurement and approval of IT systems must therefore be done through RUC Digital. RUC Digital ensures that the systems fulfil applicable standards in terms of security, integrity, and availability. If you independently purchase or use an unauthorised IT system - and this also includes AI systems on the web - you do not comply with Roskilde University's guidelines for purchasing IT systems. At the same time, it becomes unclear what systems Roskilde University have and what they cost. It is also not possible to reap economies of scale by buying licences in the right quantities.

Instruction no. 7 is therefore that the purchase of systems is a central task that must be solved in collaboration with Digital for the entire Roskilde University, so that the purchases are justifiable from both a financial and a technical assessment.

Other considerations:

Intellectual property rights: If the response from GenAl contains copyrighted material, it may only be used in accordance with the rules of copyright law, which otherwise applies to all material.

Automated decisions: As a person, you have the right not to be subject to an automated decision² - including profiling - in cases where the decision has a significant impact on your person unless mandated by law, consent or as part of a contract.

The instructions in short:

- 1. You may not transmit trade secrets, confidential information, copyrighted material or personal data through GenAl on the internet.
- 2. Even if you use AI to generate a text, you are still responsible for the accuracy of the content when you use or forward it.
- 3. The use of AI in automated guidance and question/answer robots must be clearly declared to recognise that it is GenAI that is answering. All AI-generated answers should be accompanied by a disclaimer stating that the answer is autogenerated and therefore may be subject to errors.
- 4. GenAl is not a source that can be quoted or given truth value.
- 5. You should be aware that GenAl can have bias, i.e. it chooses the most likely outcome and follows the majority opinion / majority of available data.

¹ https://www.sciencedirect.com/science/article/abs/pii/S2542435123003653

 $^{^{2} \ \}underline{\text{https://www.datatilsynet.dk/borger/hvad-er-dine-rettigheder/ret-til-ikke-at-vaere-genstand-for-} \ \underline{\text{en-automatisk-afgoerelse}}$

- 6. Only use AI tools when you can't use more energy-efficient tools like regular search engines to solve a task.
- 7. The procurement of systems is a key task that must be solved in collaboration with Digital for the entire Roskilde University so that the purchases are sound from both a financial and a technical perspective.

Read more:

The Danish Agency for Digitisation's *Guide for public authorities on the responsible use of generative artificial intelligence* - https://digst.dk/media/29727/guide-til-offentlige-myndigheder-om-ansvarlig-anvendelse-af-generativ-kunstig-intelligens.pdf Wikipedia about ChatGPT - https://en.wikipedia.org/wiki/ChatGPT Wikipedia on Artificial Intelligence (AI) -

https://en.wikipedia.org/wiki/Artificial_intelligence Wikipedia on artificial intelligence in Danish:

https://da.wikipedia.org/wiki/Kunstig intelligens

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