UNIVERSITY-WIDE FRAMEWORK FOR RESPONSIBLE USE OF GENERATIVE AI AT GHENT UNIVERSITY

INTRODUCTION

Artificial intelligence (AI) is developing at breakneck speed. Recognising its transformational potential, Ghent University wishes to embrace this technology while upholding responsible practices. The rise of AI poses new challenges for an education and research institution like ours, challenges that are inextricably linked to our core values (as set out in the university-wide code of conduct).

This document draws on the university-wide code of conduct to formulate core values for the responsible use of AI by various end users. These values serve as a guide for the entire Ghent University community and all activities that constitute university life. Responsible use encompasses the following fundamental principles: (1) accountability and independent action, (2) honesty, (3) accessibility and respectful use, (4) careful and sustainable use, (5) privacy and confidentiality, and (6) exemplary behaviour.

The university-wide framework for responsible AI use at Ghent University can serve as a starting point for the various divisions (education, research, HR, finance, etc.) to elaborate on. As AI use, its specific applications, challenges, and risks are highly field- and discipline-bound, this framework does not aim to provide an exhaustive, all-encompassing answer to every (Gen)AI-related question. Rather, it serves as a broad frame of reference. It is the prerogative of each university division to make additional arrangements or to lay down specific policy stances or codes of conduct that specify or elaborate these fundamental principles. Each of these principles harks back to and aligns with the other policy areas, including academic

integrity, diversity, sustainability, data security, etc. In so doing, they coherently shape the professional environment in which our university community operates daily.

The text structure follows the key values, offering corresponding good practices at the institutional and individual levels of the Ghent University community.
In addition to this overarching framework for responsible AI use, the Education and Research Divisions each developed their own guidelines. There are also supplementary regulations for Ghent University staff operating in highly specific contexts.[1] Ghent University researchers and lecturers can, among other things, rely on

- the Intranet site on Artificial Intelligence (in a research context) (responsible use and development, (inter)national rules and regulations, etc).
- various Research Tips containing practical and specific advice and guidelines for particular cases and research aspects (e.g., GDPR, data protection, writing scholarly articles or project applications; transcription tools, peer review and assessment, etc.)
- a comprehensive Education Tip for lecturers on our approach and the impact of GenAI on Ghent University.
- university-wide guidelines for lecturers to negotiate the impact of GenAI on Master's dissertations and written assignments, and to rethink them accordingly.
- a Ufora information site for lecturers and researchers on GenAI, including its operations, risks, and applications.
- an offer of training and information sessions, accessible via UTOP.

For students, we provide information and guidelines on the use of GenAI in the form of...

- a page on the Student Portal on GenAI in Ghent University education.
- a separate Ufora information site for students on GenAI, including its operations, risks, and applications.
- a university-wide elective, "Essentials of Artificial Intelligence: A Beginner's Guide".

These information sites, Ufora sites, guidelines, course units, and training sessions are continuously updated and, if necessary, complemented by new initiatives.

They provide additional information and guidelines specifically on (Gen)AI within the Education and Research Divisions.

The current framework, in addition to covering (Gen)AI and (Gen)AI use in an education and research context, also aligns with prevailing rules, regulations, and policy lines, including...

- the Education and Examination Code and Education (OER) and Examination Code for Doctoral Matters (OER-D)

[1] last updated on 29/01/2025.

- the European Code of Conduct for Research Integrity, also known as the ALLEA Code
- Ghent University's general data protection policy, the General Code of Conduct for Processing Personal Data and Confidential Information, and GDPR.
- Ghent University's information security policy, the Rules for Proper Use of Ghent University IT Infrastructure
- IT safety recommendations for staff and students (Ghent University help desk pages)
- Guidelines on the Classification of Information and Data (in the context of handling confidential information and data)
- general working arrangements in the respective divisions (Education, Research, Finance, Communication and Marketing, Internationalisation, HR, ...)
- Ghent University's policy on academic integrity and ethics

All of the above must be complied with, as they form the context for this framework.

Section 1: Operation of AI Systems

To explain the guidelines for responsible use, we first need to understand AI and how it operates. A good understanding of AI will give the user a better grasp of the rationale behind our fundamental principles and an incentive to act accordingly.[2]

Current AI systems are highly complex. Their operation is not determined by scripts in a computer program, but by a multitude of examples. Adapting an AI system to approximate the desired functionality is called 'training'. Almost every powerful AI system today runs on neural networks. These networks manage large numbers of parameters to ensure the generated output closely resembles the available examples of the desired output (i.e., the training data). The information contained in those examples has been 'summarised' into the parameters in a way that humans can no longer interpret. This makes it hard to determine why an AI system generated a specific result.

Neural networks have enabled systems that automatically process or generate images, make all sorts of recommendations (whether we want them or not), generate text, and communicate in natural language. AI systems that generate new content are called generative AI systems. Text generators are based on neural networks called Large Language Models (LLMs). In addition to text generators, there are also systems that can generate code, images, videos, and more. Based on massive amounts of training data, these systems have learnt to predict the next word in a text fragment they have been fed. They can generate extensive texts by randomly selecting the word most likely to follow a given word. Take a chatbot, for instance. In addition to an LLM, they also contain other AI models and/or traditional software. These components work together to retrieve additional input from the internet or evaluate whether the prompt you have entered is appropriate. Your prompts or text fragments are also always supplemented and adjusted

[2] For more information and knowledge clips on (Gen)AI and how it works, please visit the Ufora information site for lecturers and researchers and the Ufora information site for students.

before they enter the actual LLM. This way, the model can take into account the desired speech patterns, context, behaviour, etc. It is important to keep in mind that neither chatbots nor LLMs can reason as we do. They have learnt to replicate human-written texts, and they have learnt to do so well.

Once launched, an AI system will not usually continue training on new data it collects. However, once the new data (user input) has been checked against ‘desirable’ behaviour, a human expert can make that decision.

Section 2: AI Systems and Their Challenges

All these AI systems share a significant limitation: the data they use. An AI system cannot learn about situations that do not feature in the training data. Conversely, an AI system will replicate any pattern present in the training data, including undesirable ones.

The training data are limited to what is digitally available. Although this may seem like a lot, the dataset is not wide enough to cover every possible situation correctly and comprehensively. This means that the systems can make mistakes.

If they have insufficient or no data to answer a specific question, you will nevertheless receive a plausible, though not necessarily truthful, answer. The plausibility of these so-called hallucinations makes it hard for people to assess whether the generated answer contains genuine information.

The examples used to train the systems do not necessarily reflect how we want the systems to function. Texts or images plucked from the internet may contain falsehoods or prejudices. Moreover, because not every population group creates an equal number of digital documents, 'reality' as represented in these online sources does not align with the reality of underrepresented population groups. This bias, in the form of undesirable examples and an imbalance in the training data, is reflected in the model's output. When specific groups of people are disadvantaged as a direct result of biased outputs, this can create additional deontological challenges, such as unfairness.

The data also contains licensed and copyrighted material. Intellectual property rights are not recognised in the output of chatbots or the profits generated. This is another deontological challenge.

Last but not least, there is the ecological footprint. Developing and using AI requires enormous computing power, with significant environmental and climate impacts. Training neural networks requires more than a simple personal computer. Data centres are needed, which consume huge amounts of electricity (to power the computer chips) and water (to cool them). Non-LLM-based AI applications consume less energy after training. LLM-based applications, or generative AI, however,

largely exceed the initial training costs in their energy and water consumption. This impact becomes even higher due to the easy consumer access to the applications.

CHAPTER 1: FUNDAMENTAL PRINCIPLES

Section 1: Accountability and Independent Action

Ghent University facilitates the responsible use of artificial intelligence (AI) and supports all staff and students in this area. At Ghent University, we develop codes of conduct and policy lines, provide information on the responsible use of AI, for example, on the Intranet, in our Research and Education Tips, on our Student Portal, on a Ufora information site or through training sessions on UTOP, and we provide access to AI tools. Each of these instruments can be used for general or more specific purposes, by the entire Ghent University Community or by specific target groups in an education or research context (ut supra, Introduction).

All members of the Ghent University community adhere to the rules and regulations (see our Research Tip, "Legislation and Guidelines on GenAI") and the relevant policy lines (ut supra, Introduction). Within that regulatory framework, all members of the Ghent University community carefully consider whether to use AI (and, if so, how) in their professional activities, studies or research. They need to weigh the advantages against the disadvantages and possible (ethical) implications. At Ghent University, we encourage all members of our community to acquire the knowledge and skills necessary to make well-considered choices about the responsible use of AI. We expect all users to check the output, review it critically and adjust it if necessary.

A critical approach to AI tools and their output is indispensable, not least from a basic legal perspective. Everyone is entitled to receive diverse information and ideas, and to freedom of opinion based on them. This safeguards academic freedom at our university. When AI tools are used in teaching and research, we must also ensure that a wide range of perspectives and ideas is offered (cf. the list included in the Introduction).

Section 2: Honesty

At Ghent University, we communicate transparently, honestly and proactively about the use of AI in our operations (when and how). If necessary, we will launch targeted communication initiatives for our stakeholders, using our Intranet page, Research and Education Tips, the Student Portal, the Ufora information site for students, a Ufora information site for lecturers (and researchers) or additional training sessions[3] on AI in a research and education context.

All members of the Ghent University community are committed to complying with any working arrangements established to safeguard the open and honest use of AI in the respective divisions (Research, Education,

[3] UTOP has a training offer on AI literacy for researchers and lecturers, as well as other Ghent University staff.

Finance, Communication and Marketing, Internationalisation, HR, etc.). This means that the recipient of a finished product/service/... will always be able to correctly evaluate its origins and genesis.

The Ghent University Community must be especially observant of copyright law when an AI tool generates a text, image, etc. that is (1) identical or strongly similar to others' copyrighted materials; (2) not yet copyrighted by a third party, and the user of the AI tool can claim copyright; or (3) not copyrighted by a third party or the user of the AI tool.

Section 3: Accessibility and Respectful Use

At Ghent University, we aim to ensure equal access to AI technologies for our students and staff, irrespective of their demographics. This commitment naturally follows from our non-discrimination policy. 'Access' in this context means more than the mere availability of the tools. We also want our students and staff to have the skills to use them responsibly.

All members of the Ghent University community are aware that the data, underlying algorithms, and, by extension, the generated output may contain prejudice and bias, which may, in turn, lead to unfairness. Please visit the Intranet page, the Research Tip "GenAI: Translating Academic Integrity into Responsible (Gen)AI Use", the Education Tip "Generative AI in Ghent University Education: Impact and Approach", the Student Portal and the Ufora information site for students, a Ufora information site for lecturers (and researchers).

All users endeavour to critically review the data and outputs, and to make adjustments if necessary.

Section 4: Careful and Sustainable Use of Our Organisation's Time and Resources

Specific tasks will be carried out more quickly and more efficiently with the assistance of AI tools. However, the quality of the work must be maintained at all times. If well considered, the use of AI can contribute to more efficient use of time and resources, which in turn may result in sustainability benefits.

All members of the Ghent University community commit to carefully considering whether more complex or simpler models are needed (taking into account speed, efficiency, quality and environmental impact). When using AI, they use the university's tools as much as possible.

At Ghent University, we strengthen the (cost-) efficiency of these tools through framework agreements and provide training for our staff and students.

At the same time, we take into account the environmental impact of AI and do not strive for a generalised use of AI for everything. In specific cases, it may be more preferable to use systems with a lower environmental impact. At Ghent University, we raise awareness among our staff and students regarding the ecological footprint of AI systems, cf. the Intranet page, the Education Tip, the Student Portal and the Ufora information site for students, as well as the Ufora information site for lecturers (and researchers).

Section 5: Privacy and Confidentiality

At Ghent University, we inform users about the safety of the tools we offer and/or support (e.g., the terms and conditions in the framework agreement regarding the recovery of our data, actions, and use for training purposes). In addition, we support all members of the Ghent University community in conducting a risk analysis of other tools in terms of privacy-sensitive and confidential information when using AI applications, cf., among others, the Research Tip "GDPR: What to Take into Account When Developing or Using AI?".

At Ghent University, we inform our community about the relevant rules and regulations, e.g. via the Intranet page "GenAI: an Overview of National and European Rules and Regulations". We provide additional frameworks and more specific policies as needed, e.g. when processing personal data or other confidential information, information protected by intellectual property laws, or copyrighted information. We also support our community in adhering to the rules, focusing on the optimal protection of the data itself and the (further) processing of the generated output.

All members of the Ghent University community commit to staying up to date with the latest developments and to applying the knowledge and skills they acquire to process their data safely and confidentially. In that respect, it is crucial to consider the type of tool and how it operates, whether it is a commercial or open-source application.

Section 6: Exemplary Behaviour

Using AI responsibly is a collective responsibility. We encourage, facilitate and support this wherever possible.

Members of the Ghent University community commit to engaging in professional development in AI and to supporting and encouraging others to use AI responsibly.

Our university fosters a safe learning environment for questions and doubts about responsible use. We ensure that AI use is discussed during feedback interviews, giving managers, lecturers, and supervisors the opportunity to explicitly address responsible use and provide constructive feedback.