Ethical Standards and Appropriate Use of AI

by Sophia

1. What Is Generative AI?
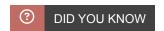
Generative AI is **artificial intelligence** technology that uses machine learning to generate content, including text, images, computer code, audio, and graphics, in response to user **prompts**. OpenAI released ChatGPT, its AI-powered **chatbot** with a user-friendly interface, to the public in November 2022. Since then, the availability of other generative AI tools such as Google Bard, Microsoft Bing, and DALL-E has expanded rapidly. The landscape of generative AI technology is evolving quickly, and many new companies and applications are sure to come.

Chatbots like ChatGPT have the ability to generate human-like responses to natural language questions and prompts input by a user. To do so, these **large language models** train on vast quantities of textual data from a variety of sources—including the input of their users—to recognize language patterns and make predictions about how to respond.

Generative AI models like ChatGPT have been trained on large quantities of text from the internet. The use of copyrighted material in their training raises complicated ethical and legal questions that are still being answered. While their output may sound logical and human-like, these models also cannot know whether their output is accurate or inaccurate, nor can they judge if the information they've been trained on is malicious or biased in some way.

This ability to understand and generate unique, human-like dialogue and content is what separates generative AI from traditional search engines like Google, and why it stands to transform how we learn, work, and carry out everyday tasks in the 21st century.

TERMS TO KNOW

Generative AI
A type of artificial intelligence that uses machine learning to generate content (including text, images, computer code, audio, and graphics) in response to user prompts.

Artificial Intelligence
The ability of a computer or machine to perform cognitive functions we usually associate with humans, like logical reasoning or problem-solving.

Prompts
Questions or sets of instructions input by a user that tell generative AI what to do.

Chatbot
Software application that simulates human conversation when responding to user questions and prompts.

Large Language Model
A type of artificial intelligence that has been trained on vast quantities of text and has learned how to process and predict language.

2. Why Is It Important to Use AI Ethically and Appropriately?

Like any new technology, generative AI presents many opportunities, questions, and challenges. The transformative possibilities of AI are exciting, especially in education, as it has the potential to function like a personal tutor. However, using AI in the wrong way can be a disservice to your education if you rely on technology to short-circuit your learning. We'll discuss what this means in more detail below. For now, consider the following reasons why learning how to use AI ethically and appropriately is a smart idea:

Workplace skill: Comfort with generative AI technology may be useful in the workplace because of its ability to enhance productivity. Many employers value people who can use workplace tools effectively

and with integrity—so it's a good idea to start developing these skills now.

Academic integrity: Knowing how to use AI ethically and appropriately will help you to follow the letter and spirit of **Sophia's Code of Conduct** and **Academic Integrity Policy**, which focus on respect, honesty, and the quality of your educational experience.

Ongoing success: Many degree-granting institutions are thinking about and monitoring the ethical and appropriate use of these tools, so learning to use them responsibly now is important for progress along a higher education path.

This tutorial will help you follow the Sophia Honor Code by providing you with the tools you need to identify the difference between ethical and unethical applications of AI in your education. It will also support your success in school or in the workplace by helping you to act with personal and academic integrity.

REFLECT

Consider your own personal and professional goals. In what ways are personal and academic integrity important to achieving those goals?

3. Ethical and Appropriate Uses of AI

A good strategy to evaluate whether you're using AI in an ethical way is to ask whether or not it's helping you build the knowledge and skills you're seeking to acquire. Although many skills are subject-specific, such as computer coding, mathematical operations, or speaking a second language, other skills are more general, such as the ability to:

- Learn
- Be creative
- Express your voice and ideas
- Think critically
- Perform quantitative and logical reasoning
- Complete thorough and strategic research
- Make informed decisions

BIG IDEA

Like our muscles, these skills can only grow through the effort of doing. Therefore, uses of AI in education are only ethical and appropriate if they enhance these skills, rather than serving as a replacement for them.

⇗ EXAMPLE Felicia is writing a research-based argumentative essay for her history class. She aims to improve her skills in the areas of historical research and supporting arguments with evidence. She starts by outlining her thesis statement, several key points that support her thesis, and evidence that supports those key points. Her instructor encourages her to input her outline to ChatGPT and ask it to suggest counterarguments that she hasn't considered. Felicia reviews the chatbot's suggestions and determines

which ones are valid. By doing so, she is able to find more historical evidence to refute these counterarguments, making her essay even stronger.

⤷ EXAMPLE For his final exam, Dominic has to write a simple computer program that will solve a real-world problem or automate an everyday activity. He's having trouble getting started, so he asks ChatGPT to help him brainstorm ideas for problems that he could try to solve. Once he settles on an idea, he sits down and starts designing and writing the code himself.

⚙ **THINK ABOUT IT**

What role do you think AI chatbots should play in your thinking, learning, and writing?

3a. Learning and Growth

Here are more ethical ways that chatbots could be used to support or facilitate your personal and academic growth:

- Seeking feedback on drafts before you submit an assignment
- Asking for help understanding or breaking down a difficult concept
- Generating ideas for writing or research topics
- Checking whether you understand a concept correctly
- Viewing a sample or a model of a particular style or type of writing
- Improving your grammar, sentence structure, or vocabulary

You may notice that many of these uses apply to the planning and prewriting stages of an assignment, or to the later stages of revising and editing. This ensures that your independent thinking, creativity, and demonstration of understanding can shine through.

Even so, keep in mind that these uses are not always appropriate in every case. Remember, the key is to reflect on the learning outcome of the assignment, task, or activity, and to evaluate whether your plans for how to use AI will encourage your learning or get in the way of it. If you're enrolled in a degree-granting institution now or in the future, you should also refer to your institution's policies or check with your instructor to confirm what is or is not allowed.

⤷ EXAMPLE Farah has to write an essay in the narrative mode for her English Composition class. She asks ChatGPT to give her a sample essay so she can review it and try to identify its use of the narrative writing techniques she learned. Then, with renewed confidence, she opens a new document on her desktop and starts planning her own, original narrative essay.

3b. Critically Evaluating Information

A big part of using AI technology ethically and appropriately is approaching it with a critical eye. In this way, AI is no different than the internet. You already know that when you search for information on the internet, you can't take everything at face value. You need to verify that the webpages you go to are credible and that the information you read is accurate, by evaluating the authors and checking to see if other reliable sources say the same thing.

Just like Wikipedia is not considered a reliable and scholarly academic source, chatbots are also not acceptable sources for academic writing or research. Wikipedia is an excellent starting point for learning basic information about a topic. However, because it uses **crowdsourcing** methods to populate its entries and it can be updated by anyone at any time, you must always verify the accuracy of its information by consulting other sources. Similarly, you must vet all information provided by ChatGPT or other AI applications for accuracy, and they should never be interpreted as a scholarly source.

One of the major limitations of chatbots is that they produce plausible and logical-sounding content that makes it hard to identify inaccurate information. However, they are known to provide false information or to simply make things up. The output of generative AI must be authenticated. Remember that these models cannot independently verify whether their information is accurate or not, so put on your fact-checking hat.

TERM TO KNOW

Crowdsourcing
> The act of collecting content or information from large groups of people, often through the internet.

4. Unethical and Inappropriate Uses of AI

Unethical and inappropriate uses of AI are those that get in the way of or replace the learning process. The most obvious unethical use is presenting the output of a chatbot as your own.

> ⤳ EXAMPLE Adam's instructor gives his business management class a case study and asks the students to make strategy recommendations for increasing the company's market share. Adam prompts ChatGPT to analyze the case study and make recommendations for him. He copies the output word for word and submits it on the due date.

> ⤳ EXAMPLE Like Farah, Mizuki has to write an essay in the narrative mode for her English Composition class. She asks ChatGPT to write a narrative essay about a memorable trip to Paris. She copies the output, changes certain details here and there to personalize it and to meet the assignment instructions, and submits it to her instructor.

Both of these are examples of **plagiarism**—the act of presenting someone else's ideas or writing as your own. Even though AI is not a person, the same rules apply.

Plagiarism occurs when you copy words or ideas from a source without giving it credit, or when the words or ideas from one or more sources comprise the majority of your work, whether credit is given to those sources or not. Plagiarism can be avoided by acknowledging the source of words or ideas that are not your own, and by ensuring that your work showcases your own words and ideas too.

Often, assignments will require some element of research. It is also inappropriate to use AI to shortcut the research process.

↪ EXAMPLE For part of her presentation, Carla has to summarize three scholarly articles that support her thesis. Rather than do the research, Carla asks ChatGPT to give her three references that relate to her topic and a brief summary of each. What Carla doesn't realize is that two of the articles are not even real! It turns out that ChatGPT "hallucinated" them, meaning it made them up. If she'd taken the time to find and read real scholarly articles, she could have avoided having to redo her assignment.

Remember, AI is at times a reasonable starting point for information, but it should never be used without verifying the accuracy of its information. Chatbots are tools with a lot of potential for transforming how we work and learn, but they are not a substitute for **critical thinking** or for human creativity and expression. Using these tools unethically or inappropriately can set you up for failure by impeding your learning and by negatively impacting your grade.

📄 **TERMS TO KNOW**

Plagiarism

The act of presenting someone else's ideas or writing as your own.

Critical Thinking

A set of skills related to analyzing, evaluating, and synthesizing information and ideas in a thoughtful manner.

5. How to Cite AI

There may be instances when you want to incorporate AI-generated language or ideas in your assignment. Just like with any other source of information, you must include a **citation** in order to avoid plagiarism.

An in-text citation should be used to credit ChatGPT or other AI software. In-text citations appear within the text of an essay or other piece of writing. Whenever in-text citations are used, a reference page must also be provided. The reference page includes properly formatted bibliographic data for all cited sources. According to current APA guidelines, in-text citations and reference page entries for AI models and software should include the following elements:

- Author (of the software model you used)
- Date (the year of the version you used)
- Title (the name of the software)
- Version number (included after the title in parentheses)
- Web link

IN CONTEXT

Here's how you would format an in-text citation for ChaptGPT:

(OpenAI, 2023)

And here's how you would format the reference page entry:

OpenAI. (2023). *ChatGPT* (Mar 14 version) [Large language model]. chat.openai.com/chat

🧠 LEARN MORE

Even if you include citations to avoid plagiarism, an assignment that contains a large amount of AI-generated text is unlikely to receive high marks. For more guidance on how to avoid plagiarism and how to format in-text citations and reference pages in APA style, check out the Touchstones: Academic Integrity Guidelines.

📄 TERM TO KNOW

Citation

A formal reference or acknowledgment given to a source of information, and that is necessary for avoiding plagiarism.

6. Hazards of AI

You've already learned about some of the shortcomings of generative AI, such as its potential to make up facts, communicate misinformation, and "hallucinate" sources. You've also learned that relying too much on AI can be counterproductive to your own learning. There are a few other hazards to be aware of:

Plagiarism detection software: AI chatbots have a tendency to use the same or similar language in response to basic prompts. Relying on it too much may trigger negative outcomes like being flagged for plagiarism by plagiarism detection software. Plagiarism detection software works by comparing submitted work against written content on the internet or other work that has previously been submitted to its database and highlighting matches. Chatbots will recycle information, which could trigger a high plagiarism score with these anti-plagiarism programs.

Privacy concerns: These large language models learn from their users. What you put in becomes part of its learning, meaning there is a risk of your own words coming back as a plagiarism flag because another AI user has been given them. Chatbots can also disclose your private information if you enter it, so always be cautious about sharing sensitive information.

Bias and other data set limitations: Large language models absorb the biases of the data set they were trained on. As a result, they have the potential to perpetuate harmful stereotypes or discriminatory attitudes. Their output is dependent on the quality and recency of their data set, and by the quality of the user's prompts.

📋 SUMMARY

In this lesson, you learned a bit about **what generative AI is**, and **why it is important to use AI ethically and appropriately**. You learned some strategies for identifying **ethical and appropriate uses of AI**, viewed examples of ethical uses to support **learning and growth**, and considered the importance of **critically evaluating information** provided by chatbots. Finally, you learned about some **unethical and inappropriate uses of AI**, **how to cite AI**, and other **hazards of AI**, so that you are better prepared to use this technology. As AI evolves, guidelines about using it ethically and appropriately may also evolve, but the importance of personal and academic integrity is unchanging.

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REFERENCES

McAdoo, T. (2023, April 7). *How to cite ChatGPT.* American Psychological Association. **www.apastyle.apa.org/blog/how-to-cite-chatgpt/**

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