

IDEAS THAT MATTER

2024-2025 Artificial Intelligence

Al and Academic Integrity Module

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Overview

This short module introduces students to important concepts regarding the use of AI and academic integrity. Concepts covered include a brief overview of generative AI, whether or not their use is considered plagiarism, how to use generative AI tools responsibly, and potential use cases. The module ends with a quiz where students can apply concepts from the module to three scenarios.

Introduction

If you've used tools like grammar checks or predictive text, you're already at least a bit familiar with how AI works on a day-to-day basis. These tools are so common that they're even built into most word processors, search engines, and even email platforms. Unless you're writing a paper where the goal is to demonstrate your understanding of grammar and spelling, using these tools is usually not something we'd consider a violation of academic integrity. So why are generative AI tools like ChatGPT any different?

What is Generative AI?

Generative AI, or Generative Artificial Intelligence, refers to a class of artificial intelligence techniques and models that are designed to generate new content, such as text, images, audio, or even video, that is similar to what might be created by humans. These AI systems use complex algorithms and neural networks to produce data rather than just processing or analyzing it.

Generative AI has a wide range of applications, including:

- **Text Generation:** Creating human-like text, such as in chatbots, content generation, or language translation.
- Image Generation: Producing realistic images or modifying existing ones, as seen in style transfer or generating artwork.
- · Music and Audio Generation: Composing music or generating speech.
- **Data Augmentation:** Expanding datasets for machine learning by generating synthetic data.
- **Anomaly Detection:** Identifying outliers in data by generating what's considered normal and flagging deviations.
- **Drug Discovery:** Generating molecular structures and predicting their properties.
- **Content Creation:** Generating content for video games, stories, and other creative media.

Generative AI has made significant advancements in recent years, but it also raises ethical and societal concerns, particularly regarding the generation of fake content, misinformation, and the potential for deepfakes. As a result, researchers and developers are working on ways to mitigate these risks and promote responsible use of generative AI technology.

(Note: The above text was created using ChatGPT. Why do you think the author chose to create the text this way? How does it make you feel about the authority of the information?)

"What is Generative AI?" section credit: <u>"What is Generative AI?"</u> by University Libraries, University at Albany under a <u>CC BY-NC 4.0 license</u>

Is Using AI Plagiarism?

Generative AI and the Academic Dishonesty Policy

Tools such as ChatGPT and other generative AI models are able to create new text with very little user input. While there are some more legitimate uses of generative AI that will be covered later, these Large-Language Models (LLMs) are capable of producing entire essays with a single prompt. The spread of these tools has brought up several ethical questions about the use of AI.

To better understand what this means for you as a student, let's take a look at Section V of Geneseo's Academic Dishonesty Policy:

V. For the purpose of this policy, plagiarism shall be considered to be deliberate representation of someone else's words or ideas as one's own or the deliberate arrangement of someone else's material(s) as one's own.

Any one of the following constitutes plagiarism:

- A. Direct quotation without appropriate punctuation and citation of source.
- B. Paraphrase of expression or thought without proper attribution.
- C. Dependence upon a source for a plan, organization or argument without appropriate citation.

While AI might not be a "someone", it is still considered a source. This means that you must treat Al-generated text the same as any other source you would use and clearly state your use of any LLMs at any stage of your writing. A good rule of thumb is to treat the AI model as another student - if you would be in trouble for asking a human student to do something, then it's very likely not a good use of an Al tool.

Geneseo's Al Policy

Currently, Geneseo does not have a college-wide AI policy. This means that whether Al use is acceptable or not will depend entirely on the professor. Your professor will always have final say on what is considered a breach of academic integrity, so make sure you clearly understand the rules of your assignment before deciding which tools to use.

Using AI Responsibly

My Professor Said I Could Use ChatGPT... Now What?

If your professor says that LLMs are acceptable to use for an assignment, be sure you understand any guidelines or expectations they've provided before you start working. While AI tools are constantly improving, there are a few key issues to be aware of when using generative AI:

- · Bias Issues: AI models like ChatGPT can perpetuate biases present in their training data, potentially leading to biased or inappropriate content generation, which is especially problematic in sensitive topics or essays on social issues.
- · Hallucinations and False Information: Al tools like ChatGPT can sometimes provide inaccurate or outdated information. Students must verify the information they receive and not blindly trust Al-generated content. These bits of false information are often called hallucinations, and can be difficult to spot due to the Al's ability to generate confident-sounding text.
- · Citation Issues: AI models like ChatGPT struggle with citing their sources and can range from citing information incorrectly to citing a non-existent paper, if it adds in a citation at all. If you do use AI for an assignment, it is important to fact check the output to ensure you're using accurate information.

When is a Good Time to Use AI?

LLMs such as ChatGPT are capable of producing large amounts of human-quality text, but if you were to turn in an Al-generated essay, you might find it does a decent job of summarizing an issue but lacks any sort of analysis or depth. Rather than thinking of LLMs as writers, it is more beneficial to think of them as assistants. Here are some things LLMs like ChatGPT can help with:

- · Writing Support: ChatGPT can provide guidance on structuring essays, creating outlines, and generating thesis statements. It can also offer suggestions for improving sentence structure, grammar, and overall writing style.
- Content Management and Organization: ChatGPT can assist in generating

- summaries, explanations, or sample paragraphs. It can help students brainstorm ideas and present information in a coherent manner. It can also help identify major themes or subtopics and assist with structuring an argument.
- **Revision and Editing:** Students can use ChatGPT to receive feedback on their drafts. It can identify spelling and grammar errors, provide suggestions for better word choices, and offer tips on improving clarity and coherence.

A Good Rule of Thumb

As mentioned earlier, the best way to use generative AI models is to treat them as a writing or research assistant rather than have them do the work on their own. You should always double-check any information the AI generates before turning in your assignment. Remember, if asking another student to do a certain task for you would count as academic dishonesty, that applies to LLMs as well.

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Should I Use AI?

Factors to Consider

Even if your professor says it's okay to use AI models for an assignment, there are a few factors you should take into consideration before deciding to use AI.

<u>Carleton College's Writing Across the Curriculum</u> discusses five principles of why plagiarism matters:

- 1. Education What is the goal of the assignment, and are your actions causing you to miss that goal?
- 2. Attribution of Credit Are you erasing the work of someone (or something) else by not giving them proper credit?
- 3. Maintaining Scholarly Discourse Are your actions making it difficult for scholars to trace an idea back to its original source?
- 4. Academic Integrity Are your actions devaluing the grade or credits you received?
- 5. Intellectual Property Are you stealing work that belongs to someone else?

Applying these principles to AI use can help you determine if this is a good use of the tools, as discussed in more detail on <u>Carleton University's "Plagiarism and AI"</u> page. The "How to Evaluate Your Use of AI" section states:

Education: What am I supposed to learn from this assignment? How is it intended to help me develop my writing or thinking skills, or to better understand the course material? Will a particular use of Al undermine or defeat the purpose of this assignment?

Attribution of Credit: Could a particular use of AI tools cause me to take credit for ideas that aren't my own? How might an AI obscure my use of sources or draw on sources that I'm not aware of and therefore *can't* document properly?

Maintaining a Scholarly Discourse: Will a particular use of AI help me to build on the ideas of others and express new ideas of my own? Or will it cause me to simply restate ideas that have already been articulated elsewhere?

Academic Integrity: What aspects of this assignment does the instructor expect to be the result of my effort alone? Would a particular use of AI cause me to deceive

my instructor into thinking I put intellectual labor into my writing that I did not? Is a particular use of AI likely to produce false data or misinformation, which I would take responsibility for by submitting it under my name?

Intellectual Property: Could a particular use of Al cause me to appropriate text or ideas that are owned by other people?

Keep these principles in mind as you move on to the next section, where you'll be asked to identify which of these principles are at play in two different scenarios.

Al and Academic Integrity Quiz

1. Read through the following scenario and determine which of the five principles discussed earlier are at play.

"A student in a Religious Studies class is assigned to write an annotated bibliography. The assignment calls for the student to find six academic sources on their topic and write a one-paragraph description of each source. The student will later use these sources in a formal research essay. The student asks an AI to list 'the six most important academic sources' on their topic, and the AI gives them a list of six books. The student then asks the AI to write a one-paragraph summary of each book. The AI can't manage to write citations, so the student writes those themselves, using information on Amazon.com (this also allows the student to confirm that all six books really exist, and weren't just made up by the AI). The student then turns in the annotated bibliography, which contains their citations of the six sources found by the AI and the descriptions written by the AI." (Carleton College, 2024)

- Education: This use of AI prevents the student from accomplishing the learning objectives for this assignment.
- Attribution of Credit: This use of AI causes the student to take credit for ideas that are not their own.
- Maintaining a Scholarly Discourse: This use of AI allows students to build on existing scholarly discourse and express their own new ideas.
- Academic Integrity: This use of AI tricks the instructor into thinking the student put in more work than they actually did.
- Intellectual Property: This use of AI results in the unattributed theft of someone else's ideas.
- 2. Read through the following scenario and determine which of the five principles discussed earlier are at play.

"A student in an Economics class is having difficulty getting started on an essay assignment with a fairly open prompt, so they enter the prompt into a generative AI tool multiple times to see a range of different topics and approaches. Ultimately, the student decides to write on one of the topics the Al came up with, but as soon as they do they delete the Al's essay and write the paper themselves." (<u>Carleton College</u>, 2024)

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- 3. Read through the following scenario and determine which of the five principles discussed earlier are at play.

"A student in a Political Science class is writing a position paper in response to the argument in one of their readings. They create a detailed outline that includes multiple quotes from the reading and long bullet points laying out the student's response. They paste this outline into a text generator and ask it to 'write a position paper that follows this outline.' The resulting essay is roughly 90% text written by the student, but the AI has added connecting words, punctuation, and transition sentences at the beginning of each paragraph. The student revises this essay, making various changes to both their language and the AI's, before turning in the final draft." (Carleton College, 2024)

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Answer Key

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