

# Guidelines for Student Use of Artificial Intelligence in Academic Programs

### Introduction

As part of American Public University System (APUS)'s culture of continuous improvement and innovation, artificial intelligence (AI) technologies are embraced as tools for learning in and out of the classroom. APUS aims to support students in understanding the potential benefits and risks of AI tools by exploring their ethical and appropriate uses in academic and professional contexts. The University encourages the use of AI tools as part of the students' academic experiences. As an outcome of this, APUS students are expected to demonstrate ethical and appropriate use of AI in their courses.

The APUS Generative AI policy (below) can be found in the <u>Student Handbook Code of Conduct</u>, which is linked in the Course Syllabus and referenced in the Gen-AI Learning Object module.

The University supports the transparent and ethical use of generative artificial intelligence (Gen-AI), which refers to technologies that can create text, images, or multimedia. All use of Gen-AI programs must comply with all University policies, including without limitation, the University's academic integrity policy in the "Prohibited Student Conduct" section of the Student Handbook and any guidelines provided by individual departments.

While Gen-AI may be used to begin the process of researching and to provide editing assistance, Gen-AI-generated content is not considered original, so it must be cited as borrowed ideas, images, or wording. Any use of Gen-AI that appears in a submission must be attributed or cited appropriately, e.g., (OpenAI, 2024). Students are responsible for originality and accuracy of content developed from research or writing tools, including Gen-AI. When requested, students must reveal how and to what extent Gen-AI tools were used.

Failure to adhere to this Gen-AI Policy or any other policies and guidelines, may result in disciplinary action up to and including dismissal from the University.

All use standards may differ among academic programs. Students should consult the course syllabus or connect with their faculty member if they have any questions regarding how All may be used in their course assignments.

# What is artificial intelligence, and some of its limitations?

In the broadest context, artificial intelligence (AI) encompasses both the theory and creation of computer systems and software capable of performing tasks generally associated with human intelligence. Generative-AI (Gen-AI) is a form of artificial intelligence that can generate text, images, or other data or media using generative models in response to prompts.

#### Please note the following:

- The large language models (LLM) used in the development of Gen-Al tools generate text and media based on training against very large data sets (e.g., published works) using predictive statistics. For example, it predicts the highest probable word that will follow the words that precede that new word.
- As a result, the LLM may select a word or words that may or may not be appropriate or accurate within a given context; high probability does not always equate with accuracy.
- Therefore, it is imperative that you review in detail, and correct or update as required, content produced by Gen-Al tools.

More broadly, artificial intelligence can be described as follows (and, as is fitting for this topic, an AI tool was used to generate the text below).

[Microsoft Copilot Pro (June 2024) was used to generate the following three paragraphs]

"Artificial intelligence (AI) is a term that describes the ability of machines to perform tasks that normally require human intelligence, such as understanding language, recognizing images, making decisions, or solving problems. AI is not a single technology, but a collection of methods and tools that can be applied to different domains and purposes.

One of the main tools of AI is a large language model (LLM), which is a computer program that can generate text and media by learning from a huge amount of data, such as books, articles, websites, or social media posts. The LLM analyzes the data and tries to predict the most likely word or words that will come next based on the previous words. For example, if you give the LLM the words "The sky is", it might predict "blue" or "cloudy" or "dark" as the next word.

However, this does not mean that the LLM always produces accurate or appropriate content. Sometimes, the LLM might choose a word that does not make sense or contradicts the facts or the context. For example, if you give the LLM the words "Paris is the capital of", it might predict "France" or "Europe" or "love" as the next word. The LLM does not know the difference between these words; it only knows how often they appear together in the data. Therefore, you should always review

and edit the content that the LLM generates and use your own judgment and knowledge to decide whether it is correct or suitable for your purpose.

Al can be a powerful and useful tool, but it also requires certain skills and responsibilities from the users. To use Al effectively, you need to learn how to design good prompts, which are the instructions or questions that you give to the LLM to generate the content that you want. You also need to follow ethical and professional standards when using Al, such as respecting the rights and privacy of others, avoiding plagiarism and bias, and acknowledging the limitations and risks of Al' [Microsoft Copilot Pro, June 2024].

# Best practices in the use of AI in an ethical and appropriate manner

Below are some high-level recommendations for the use of AI in an ethical and appropriate ways that will keep students in alignment with the APUS Gen-AI Policy:

- Provide Proper Citation and/or Attribution: Students must display an
  understanding of how to use generative/AI in ethical and appropriate ways by
  clearly differentiating original content that is generated by them from the work
  generated by AI tools. Gen-AI content should be properly cited or attributed (see
  below).
- Validate the Accuracy Al-Generated Content: In academic discourse, writing is a distillation of research into a chosen topic. By themselves, gen-Al tools—like Copilot, for example—are not credible, academic sources. Al-generated content may contain errors, inconsistencies, or even hallucinations, which are words or phrases that do not exist or make sense in the context. These errors or inconsistencies may result from the Al tool's lack of understanding of the meaning, logic, or facts behind the text. Therefore, students should always verify the accuracy and relevance of Al –generated content before using it in their academic work.
- Do Not Submit Confidential Information to Al Tools: Do not submit personally identifiable information (e.g., name; physical or email address; health and medical records; or confidential or commercially sensitive information) to Al tools. They do not have the capacity to recognize personal information from public information. Thus, personal information may become publicly accessible information and may, therefore, appear in other people's Al-generated work.

Again, students must review in full the requirements regarding the use of AI in each assignment for individual courses.

# Giving Credit in Academic Work: Citation versus Attribution

In academic assignments, using ideas and/or words from outside sources often enhances the submitted work. When students use outside sources, including those from Gen-Al sources, they must give credit to the original author(s) and creator(s).

#### Citations

Citations and references are the most common way to give credit to another's work. They support ethical use of content and allow students to avoid plagiarism, or the unauthorized use of another's work. Citations are not limited to human-generated content; citing Al-generated content is also required to maintain academic integrity.

Citations appear in the text as a shortened version of the full reference that appears on the first new page after the writing is completed, often titled References. Citations are governed by a specific format or style connected to the discipline students are addressing in their projects. For most of Humanities, for example, writers use the *Modern Language Association* (MLA) format while History uses the *Chicago* style. The sciences, for the most part, use the *American Psychological Association* (APA) format. Although each style is slightly different from the other, they all share a basic premise of providing the readers with the information necessary to find the ideas and/or words borrowed from another source.

At times, Al-generated work may contain direct quotes. When writers include them in their documents, they must follow standard formatting requirements, including placing the Al-generated direct quote in quotation marks (""), adding a citation at the end of the sentence, and generating a full reference on the reference page. At APUS students typically use MLA, APA, Chicago, or other citation standards based on the individual department's professional requirements. Students should check the syllabus or ask the professor for guidance on which to choose. Finally, students must validate each direct quote, citation, and reference that appears in Al-generated documents to ensure that they are credible (see below).

### In-text Citation Examples for AI Content

Citing Al-generated *images and text* depends on the citation style of the discipline. Here's a general guideline for the most common styles. If necessary, confirm the documentation style required for the assignment.

### MLA Style

Humanities disciplines like language, literature, and cultural studies, use <u>MLA Style</u> formatting for works-cited lists and in-text citations. The documentation style generally requires the following information:

- Title of Source: Describe what was generated by the Al tool.
- Title of Container: Name the Al tool.
- Version: Name the version of the AI tool as specifically as possible.
- Publisher: Name the company that made the tool.
- Date: Give the date the content was generated.
- Location: Give the general URL for the tool.

For example, when using an image generated by an Al tool, cite it as follows in the works-cited list:

"Description of the prompt used for generating the image." AI Tool, version, Company, Date of generation, URL.

#### The in-text citation will look like this:



Young college student is studying under a tree with a laptop on her lap and books stacked beside her. Students are walking and talking together in the background (Dall-E 3, 2024).

Similarly, producing an MLA in-text citation for the following text about world literature would look like this:

"The integration of world literature into American higher education has encouraged a more inclusive and comprehensive approach to literary studies, moving beyond the confines of European literary traditions to embrace a diverse array of global voices and narratives" (Copilot, 2024).

#### **APA Style**

Generally used in the social sciences (including sociology, psychology, criminal justice and others), nursing, business, and education fields, <u>APA Style</u> references and in-text citations for an AI-generated image will require the following information:

- Figure Title: Use a description of the prompt, followed by the AI tool, version, and date created.
- Caption Note: Include a description of the image mentioning the prompt and Al tool.

In the body of the text, caption an image like this:



Figure 1. College student studying on campus under a tree, Dall-E 3, 2024.

Note: This gen-ai image is of a young college student studying under a tree with a laptop on her lap and books stacked beside her. Students are walking and talking together in the background (Dall-E 3, 2024).

Similarly, producing an APA in-text citation for the following text about world literature would look like this:

"Sociology in Germany is a vibrant field of study with deep historical roots, as it's the birthplace of influential sociologists like Karl Marx and Max Weber" (Copilot, 2024).

#### Chicago Style

Used in science, history, government, and other disciplines, <u>Chicago Style</u> is often preferred for its detailed footnotes and endnotes. Gather the following information for citing Al-generated material.

- Use a caption below the image to give the citation information.
- Each image caption starts with the word "Figure" and a unique number.

While some courses require footnote or endnote formatting, a Chicago Style in-text citation will look like this:



Figure 1. College student studying on campus under a tree.

This AI-generated image (Dall-E 2024) is of a young college student studying under a tree with a laptop on her lap and books stacked beside her. Students are walking and talking together in the background.

#### A Chicago Style citation for text may look like this:

The US government has established AI protocols guided by principles that prioritize safety, security, transparency, and ethical considerations.<sup>1</sup>

1. "Protocols for AI Use in US Government." Copilot Pro, Microsoft, 3 July 2024.

Remember to adjust these formats and other documentation styles based on the specific requirements of the citation style and the guidelines required in your course. If unsure, it's always best to consult the official style guide or the course instructor.

To learn more about citing and referencing quoted, borrowed, or paraphrased material, visit the Trefry Library's <u>Citing Sources (apus.edu)</u> page.

# Giving Credit: Attributions

While students typically use formal citations based on their discipline's writing style, there may be situations where informal attribution is appropriate. For example, in an email, in a class discussion, or in an assignment where the instructions specifically allow for it, an informal attribution is a way to give credit to the original author of ideas, words, images, and/or videos. Attribution can be as simple as informally mentioning the author or the Gen-Al tool used to generate the work.

# Virtual Writing Assistants

Virtual Writing assistants offer significant value to a student writer—they save time, improve quality, and enhance productivity. Using Grammarly or other gen-Al writing assistants requires careful consideration. *Instructors and course assignments will outline the scope and limitations of using these tools.* In the event a writing assistant is

permitted and used for an assignment or learning activity, acknowledge the scope of use applied to the task.

# Short Glossary of Terms Associated with Al and Generative Al (Gen-Al)

Below is a glossary of ten terms often used when describing AI and Gen-AI (as generated by Microsoft Copilot Pro [June 2024]):

- "AI (Artificial Intelligence): The simulation of human intelligence in machines programmed to think and learn.
- Algorithm: A set of rules or instructions given to an AI program to help it learn and make decisions.
- Creativity: The ability of generative AI to produce original and imaginative content."
- Deep Learning: A complex neural network with many layers, enabling advanced learning and generation capabilities.
- Generative AI: A type of AI that can generate new content, such as text, images, or music, based on learned data.
- Hallucination: The phenomenon where a generative AI model produces content that is not based on reality, but rather on its own errors or biases learned from the training data (Copilot, 2024).
- Machine Learning: A subset of AI where machines learn from data to improve their performance over time.
- Model: The representation of what an AI has learned during training, which it uses to make predictions or generate content.
- Natural Language Processing (NLP): The ability of AI to understand and generate human language.
- Neural Network: A computer system modeled on the human brain that helps Allearn from data.
- Training Data: The dataset used to teach AI models how to perform tasks."
   [Microsoft Copilot Pro, June 2024]

# Summary

Al tools can be extremely helpful in expanding degrees of creativity, knowledge, and understanding. However, Al tools are just that...tools. Students are still the creative geniuses behind what they develop and present to others. The guidelines above provide an overview regarding how to ethically and appropriately use Al in academic and professional work.