

Responsible use of Generative and Predictive Artificial Intelligence

1. Responsible use of Generative AI & Predictive AI

Before using Artificial Intelligence (AI), County employees must understand the benefits, risks, and how they can use generative AI tools to support their work responsibly.

Generative AI tools can generate inaccurate content, amplify biases and violate intellectual property, privacy and other laws. When County employees use these tools, they must protect personal information and sensitive data.

To assist in mitigating risks associated with the use of these tools, it is recommended that employees restrict their use to activities where they can manage the risks effectively. AI risks should be assessed by each department and reviewed annually.

Questions to ask yourself

1. Is there an existing process, procedure or tool that I should be using instead of AI?
2. Have I ensured that there will be human oversight over the AI output?
3. Have I ensured that biases in the AI tool's output have been identified and mitigated?
4. Have I clearly documented and disclosed the use of AI to all stakeholders, and am I prepared to provide explanations for its use in my work?
5. Am I fully certain that no sensitive, confidential or personal data is at risk of being compromised?
6. Have I consulted with legal or policy experts regarding regulatory implications?
7. Am I prepared to take full responsibility for use of the AI tool's output?

1.1 Responsible use of Generative AI

Generative Artificial Intelligence generates new, original digital content from text to images, music, and more by learning from existing data.

What can it do?

- Content creation
- Generating first draft
- Can generate content from text to audio to video.
- Language translation

Limitation

- Lack of real-world experience and limited understanding of the physical world or emotions
- Lack of trust and authenticity, Gen AI can create false news, misinformation, and ‘deep fakes’ which is why human oversight is extremely important.
- Training Data Bias: reflects the documents and data sources used to train the model
- Occasionally fabricates data to generate a response
- Any and all content generated by AI is not original resulting in issues related to copyright, ownership, intellectual property and lack of authoritative legislation.

1.2 Responsible use of Predictive AI

Predictive AI helps organizations prepare for the future, and make informed decisions by anticipating outcomes based on data-driven insights

What can it do?

- Forecast future demands: water, electricity, shelters
- Identify at risk citizens: health, homelessness
- Predict weather changes
- Emergency response optimization
- Anticipate event outcomes: sports results, market trends

Limitations

- Reliance on historical data which may not accurately reflect future trends or events
- Potential for bias
- Inability to handle unforeseen events, struggles with “out-of-distribution” data, meaning it cannot reliably predict outcomes for events or scenarios it has not encountered before.
- Requires large amounts of clean, accurate, and relevant data to produce reliable predictions.
- Unlike Generative AI, Predictive AI focuses on forecasting outcomes, not creating new content or insights.

Government of Canada – Generative AI in your daily work

The table below, published by the Government of Canada, outline their “FASTER” principles to reduce risks and make sure you use generative AI tools responsibly.

Principle	Do	Don’t
Fair	<ul style="list-style-type: none"> • Write your instructions in a way that will produce comprehensive, impartial responses 	<ul style="list-style-type: none"> • Use outputs that are biased or exclusionary, or that misrepresent population groups

	<ul style="list-style-type: none"> • Check that the generated output is representative and inclusive and doesn't contain harmful stereotypes 	
Accountable	<ul style="list-style-type: none"> • Take responsibility for what you prepare using AI • Review generated content to make sure it's accurate • Check that it doesn't contain material that is protected by copyright; to do this, search the Internet and compare the output with published materials 	<ul style="list-style-type: none"> • Assume the output is correct • Delegate tasks that should be completed by a person
Secure	<ul style="list-style-type: none"> • Use public tools with unclassified data only • Understand the terms of use of the tool • Set the tool so it does not save your conversation 	<ul style="list-style-type: none"> • Input personal, sensitive or protected information into public tools • Try to find ways around the tool's safety rules
Transparent	<ul style="list-style-type: none"> • Indicate on the final product that you used generative AI • Let your manager know that you used an AI tool in your work 	<ul style="list-style-type: none"> • Pass off AI-generated content as your own work
Educated	<ul style="list-style-type: none"> • Learn how to use generative AI • Find out about the strengths, weaknesses and risks of generative AI • Take courses and read articles on using generative AI 	<ul style="list-style-type: none"> • Use generative AI tools to generate material you don't have the expertise to verify • Assume that a single training session is enough (keep learning as the tools evolve)
Relevant	<ul style="list-style-type: none"> • Remember that generative AI isn't appropriate for all uses • Use it only when it helps you do your work 	<ul style="list-style-type: none"> • Use generative AI tools for tasks that research shows they don't do well, such as arithmetic and tasks involving nuanced or emotional language • Overly rely on generative AI tools

Source: <https://www.canada.ca/en/government/system/digital-government/digital-government-innovations/responsible-use-ai/generative-ai-your-daily-work.html>

Main source information for this document:

<https://generative-ai.leeds.ac.uk/intro-gen-ai/strengths-and-weaknesses/>

<https://www.canada.ca/en/government/system/digital-government/digital-government-innovations/responsible-use-ai/generative-ai-your-daily-work.html>

<https://nvlpubs.nist.gov/nistpubs/ai/nist.ai.100-1.pdf>

[Ottawa Responsible use of Generative Artificial Intelligence \(GenAI\) - Guide \(1\).pdf](#)