

Best Practices for Generative AI Use in NC State Extension

Generative Artificial Intelligence (Generative AI) is a type of AI that can create brand new content, such as conversations, stories, images, music, or computer code, in response to a simple command or "prompt" from a user. Unlike traditional software that only searches or organizes existing information, Generative AI models (like Gemini, CoPilot, or ChatGPT) are trained on large amounts of data to learn the patterns and structures of human creativity. This allows Generative AI tools to produce original, realistic, and often human-like outputs.

This guide outlines best practices for the responsible and ethical use of Generative AI by NC State Extension employees and volunteers. It provides guidance to ensure AI tools are used to support, and not replace, the expertise, judgment, and integrity that define Extension's mission.

Core Principles for Responsible AI Use

Generative AI should be used responsibly to maintain trust, accuracy, and integrity in all public-facing Extension materials and professional activities. Every employee is responsible for the final output, regardless of whether AI assistance is used. AI is a tool to assist employees in their daily tasks. It should enhance, not replace, the expertise and judgment of Extension professionals.

1. Verification and Accuracy

- **Verify AI-Generated Content:** Always review and fact-check all content produced by Generative AI tools for accuracy, relevance, and reliability.
- **The Author Bears Responsibility:** The human author bears the legal, ethical, and professional responsibility for ensuring that all information, including data and graphics, is correct and supported by expert, research-based sources.
- **Critically Evaluate:** Be aware that Generative AI models can produce incorrect or fictional information ("hallucinations"). Their outputs are only as accurate as their underlying training data, which may not reflect the most current research or events. This limitation is especially important for time-sensitive Extension topics.
- **Source Blindness:** Generative AI may fail to cite sources accurately or, when prompted to cite, may invent citations that appear credible but do not exist. This may undermine the professional credibility of Extension content.
- **Inherent Data Biases:** The information produced by Generative AI is shaped by its training data. This fundamentally embeds specific viewpoints and potential biases. It is your responsibility to be aware of and scrutinize any generated content for these underlying biases.

2. Transparency and Attribution

- **Disclose AI Use:** Employees must disclose content created by AI in all public-facing materials, including documents, images, and graphics.
- **AI is Not an Author:** AI or AI-assisted technologies are intended only as tools for editing, analysis, or research, and must not be used to generate any content, articles, factsheets, or publications. As such, AI should never be listed as an author or co-author.
- **Image Attribution:** For AI-generated images, include a credit line in the caption or nearby text, such as: “This image was created with the assistance of Generative AI ([tool or service used]) for illustrative purposes.”

3. Data Privacy and Confidentiality

- **Do Not Input Sensitive Data:** Do not enter sensitive, confidential, or proprietary information into any publicly available Generative AI tool, as user inputs may be stored or used to train the system.
- **Protect Client Information:** Adhere to strict data privacy guidelines. When using AI for data analysis, remove all personal or demographic information that could identify participants before inputting the data into the tool.
- **Follow University Policies:** Only use approved AI tools in your work. Ensure that all AI use complies with NC State University's policies on data security and acceptable use. See [NC State Recommended Artificial Intelligence \(AI\) Tools](#) for the latest approved tools.
- **Turn Off Data Sharing:** You should never use unapproved AI tools with NC State data. Most free versions of AI tools are not approved for work use because they may use your data for training their AI models. If you use a free version of a tool like ChatGPT or Grammarly for personal use, you should consider opting out to all data sharing by visiting settings — i.e. “Data Controls → Improve the model for everyone” in ChatGPT or “Product Improvement and Training” in Grammarly — and turning it OFF.

4. Copyright and Intellectual Property

- **Respect Copyright:** Do not input copyrighted material (e.g., text from a journal article, text from another online source or publication) into a Generative AI tool in a way that would violate copyright.
- **Acknowledge Potential Copyright Risks:** Generative AI is trained on massive amounts of data. While its output is novel in its generation, there is still a risk of the inclusion of material that is substantially similar to copyrighted material. As such, it is the author's responsibility to ensure that content that uses Generative AI does not infringe on another's intellectual property rights.

Appropriate and Inappropriate Use Cases

Generative AI should be utilized as a support tool to augment human expertise, rather than replacing expert knowledge, human judgment, or professional decision-making.

Appropriate Uses (DO)	Inappropriate/Prohibited Uses (DO NOT)
Content Creation: Drafting outlines, agendas, and presentation materials using existing content.	Sensitive/Confidential Data: Inputting client/stakeholder information, proprietary research, or account credentials.
Communication Support: Suggesting headlines, keywords, social media content, and drafting tailored communication materials.	Personal Expressions: Generating content that requires genuine human emotion, such as apologies or expressions of gratitude or empathy.
Summarization: Summarizing meetings, long articles, reports, or research findings to create abstracts or easy-to-understand summaries for your use.	Unverified Expertise: Relying on AI for subject-matter expertise.
Program Planning: Brainstorming program ideas, drafting project briefs, suggesting milestones, or assisting with resource allocation.	Final Decisions: Using AI to make final decisions without critical human review and verification.
Research Support: Generating lists of resources with basic summaries to find information more quickly.	Unauthorized AI: Using tools not approved or licensed by the University for business use.

Tips for Effective Prompting (The CRAFT Framework)

To obtain the most useful and reliable results from a Generative AI tool, craft your prompts with clarity and specificity. The CRAFT framework provides a robust approach to structuring your requests, guiding the AI toward the desired output.

Component	Description	Example Detail
Context	Provide the necessary background, situation, or audience. This frames the AI's understanding of the request.	"The audience is first-time home gardeners in the Piedmont region who are planning their fall vegetable gardens."
Role	Instruct the AI to adopt a specific persona, expertise, or point of view.	"Act as an N.C. Cooperative Extension Horticulture Agent."
Action/Task	Clearly state the specific output or task the AI must perform. Be explicit about the goal.	"Generate five bullet points outlining the steps for proper soil testing and preparation."
Format	Specify how the output should be structured (e.g., list, table, email draft, social media post).	"Present the information as a concise, numbered list with bolded keywords."
Tone	Define the required style, voice, or emotional coloring of the output.	"Use an accessible, encouraging, and research-backed tone suitable for a public-facing Extension fact sheet."

Note on Verification: While the CRAFT framework focuses on prompt structure, always remember the core principle of **Verification**. After the AI generates a response, you must critically assess the accuracy, relevance, and reliability of the information before using it. Refine your prompt (i.e., iterate on your CRAFT instructions) until you achieve an output that meets your needs.

Using AI in Extension

Improving Efficiency

Generative AI is a powerful tool for improving efficiency in Extension's work. AI excels at automating routine, repetitive tasks, freeing up time for more strategic and interpersonal work. Agents and Specialists can use AI for administrative tasks such as summarizing meetings, drafting program outlines or reports, and creating tailored communications, such as social media posts or email announcements.

AI can also streamline tasks related to knowledge management and outreach. Consider using it to analyze data from sources such as evaluations, budget reports, and needs analyses. By applying AI to these operational workflows, we maximize the capacity of Extension employees, allowing them to dedicate more time to Extension's core mission.

Extension Content

Extension is widely recognized as a trusted and research-based source of reliable information. This commitment to credibility is what sets Extension apart from other sources. When using AI tools, we cannot afford to risk this public trust.

When addressing the use of Generative AI, it is crucial to reinforce that Extension Agents and Specialists are the definitive experts and the primary authors of Extension content. AI is intended solely as a support tool to enhance the communication of their established knowledge, not as a replacement for it.

The value of Extension lies fundamentally in our human expertise — the years of experience, localized knowledge, and deep connection with research-based insights. AI can assist with tasks such as drafting outlines, summarizing research, or tailoring language for different audiences, thereby enhancing efficiency and improving the quality of our content. However, the final product must always be verified by and attributed to the Agent's or Specialist's subject-matter expertise and professional judgment.

We must ensure that AI tools never become shortcuts that bypass the need for the expert to write, review, and ultimately own the research-based information shared with the public.

What's Next?

Generative AI is evolving rapidly. Stay up-to-date with the latest technologies and recommendations. Seek new information from trusted sources to ensure continuous responsible use.

- Search for EIT Gemini Training and AI Jam Sessions in the [Extension Learning Management System](https://xlms.ces.ncsu.edu) - <https://xlms.ces.ncsu.edu>
- [Extension IT Website](https://eit.ces.ncsu.edu) - <https://eit.ces.ncsu.edu>
- [Extension Marketing and Communication AI Guidance and Best Practices](https://marketing.ces.ncsu.edu/ai-guidance/) - <https://marketing.ces.ncsu.edu/ai-guidance/>
- [AI at NC State](https://ai.ncsu.edu) - <https://ai.ncsu.edu>
- [NC State Approved AI Tools](https://software.ncsu.edu/artificial-intelligence-it-purchase-process/) - <https://software.ncsu.edu/artificial-intelligence-it-purchase-process/>

As Generative AI continues to evolve, NC State Extension remains committed to using these tools responsibly, upholding the standards of accuracy, trust, and public service that define our work.