Virginia Cooperative Extension
Virginia Tech • Virginia State University
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Virginia Cooperative Extension Guidance for Use of Generative AI

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Overview

Emerging technologies like artificial intelligence (AI) will play a growing role in helping Virginia Cooperative Extension connect with its clients and how it provides them with tools and resources. To remain a trusted and reliable source of research-based information, AI tools must be used strategically, ensuring that generated content is **accurate**, **ethical**, and **aligned with VCE's mission**.

What is AI?

Artificial intelligence enables computers and digital devices to perform tasks that typically require human intelligence, such as analyzing data, generating text, recognizing images, and making recommendations.

Definitions

- **Large Language Models (LLM):** Advanced AI programs trained on large datasets to understand and generate human-like text. Examples include LLMs GPT-3.5, GPT-4, and LAMDA.
- **Generative AI:** AI that creates new content such as text, images, music, and videos based on patterns learned from data. It is only as reliable as the data it was trained on.
- **Public generative AI:** Openly accessible AI models hosted on platforms like ChatGPT, Bing AI DALL•E, and Midjourney.
- **Private generative AI:** AI models are deployed in a controlled environment with organizations, ensuring privacy and security, such as the Extension Foundation's ExtensionBot.

Examples of AI Tools

- **ChatGPT**: A chatbot interface for large language models.
- **DALL•E**: An AI system that generates images from natural language descriptions.
- **Copilot**: Microsoft's AI assistant is integrated into productivity tools.

Ways AI Can Be Used to Support Your Work

AI can assist in many areas of Extension work, provided that human oversight ensures accuracy and alignment with VCE's mission.

Content Creation

- Generate **presentation materials** from existing content.
- Brainstorm and develop **ideas**, **outlines**, and **agendas**.
- Suggest **headlines**, **keywords**, and **social media content**.
- Summarize articles to **create abstracts** or to **explain concepts**.

- Convert text to **HTML markup** for websites.
- Translate content for **multilingual communications**.
- Generate **alt text** for accessibility.
- Create **artwork**, **diagrams**, and **other illustrations**.

Project Management

- Assist in **project planning**.
- Draft **project briefs** and **reports**.
- Automate **scheduling** and **reminders**.
- Create **accessible tables**.

Research Support

- Summarize capabilities of **new tools and technologies**.
- Compare and contrast **programs and methods**.
- Define technical terms.
- Analysis and visualize data trends and correlations.

What AI Should NOT Be Used For

- **Personal expressions** (e.g., apologies, gratitude, empathy).
- **Sensitive or confidential data**, including client and research information.
- **Unverified research** or **subject-matter expertise**.
- **Final decisions** without human verification.

Resources
"How ChatGPT Works Technically" | ChatGPT Architecture (ByteByteGo)
"Five things you need to know about AI" (BBC)
"20 Key Generative AI Examples in 2024" (EWeek)

Guidelines for Responsible AI Use

1. Verify AI-Generated Content

AI can produce incorrect or biased information. Always review AI-generated results for:

- **Accuracy:** Are the facts correct and supported by trusted sources?
- **Bias:** Does the response favor one perspective unfairly?
- **Tone and Appropriateness:** Does the content align with VCE's professional and --educational standards?

2. Maintain Transparency

Employees must disclose AI assistance in public-facing materials.

Faculty, staff, and students who use AI and AI-assisted technologies to create VCE documents, images, graphics, or other resources must be fully transparent about their use of AI.

AI or AI-assisted technologies should not be listed as authors or co-authors in your work. They cannot be credited with authorship or cited as such. However, if you incorporate AI-generated content, such as

text, images, or data analyses, in a way that would require citation if taken from another source, you must disclose that you have used AI to generate this content to avoid plagiarism.

Sample Disclosure Statement (Elsevier):

> *"During the preparation of this work, the author(s) use [AI TOOL} to [PURPOSE]. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication."*

For AI-generated images, credit the source as you would for an image.

In the caption for the image or in nearby text, include wording such as:

> *"This image was created with the assistance of DALL•E 2."*
>
> *"This image was created with the assistance of AI."*
>
> *"This image was created by [AUTHOR] with assistance from [AI Tool/Service]."*

- A disclosure statement is not needed for tools that check grammar, spelling, references, etc.
- If you have edited the AI-generated sample text, say so (e.g., edited for style and content).
- Do not cite AI tools in the reference list.
- Do not include the unique URLs the AI tool provides.

Disclosure Resources
"Declaration of generative AI in scientific writing" (Elsevier, accessed March 1, 2024)
"How should I credit DALL•E in my work?" (OpenAI, accessed March 1, 2024)
"How do you recommend citing content developed or generated by artificial intelligence, such as ChatGPT?" (The Chicago Manual of Style, accessed March 1, 2024)

3. Be Mindful of Privacy

AI tools like ChatGPT store user inputs, so do not enter any confidential or sensitive information. Do not include anything you don't want in the cloud!

- Do not share **personal ID details**, **client/stakeholder information**, **proprietary research**, or **account credentials**.

4. Understand AI's Limitations

- AI lacks common sense and can generate **misleading** or **fictional information** (a phenomenon known as "hallucination").
- AI is only as good as the **data it was trained** on, which may be **biased**, **outdated**, or **incomplete**.

5. Use AI as a Support Tool, NOT a Replacement

- AI should augment expertise, not replace human judgment.
- Employees should input their own knowledge and critically evaluate AI outputs.

Writing Effective AI Prompts

To get the best results from AI tools, craft clear and specific prompts:

Prompt Components:

1. **Background / Role** — Tell the AI about the brand and/or your program, along with the role it should play. Set context (e.g., “You are a marketing manager creating content for VCE’s website.”)
2. **Core Task:** What do you want the AI to do (and to whom is it talking)? Clearly state the request (e.g., “Write a short social media post promoting an upcoming workshop.”) Add details as needed.
3. **Output formation:** What do you want the output to look like? Define constraints (E.g., “Make it under 300 characters and ready to post on Facebook.)
4. Remember that these tools are interactive, so if you don’t like your first response, revise and/or add more detail and try again.

Example Prompt:

> *“You are an educator writing a newsletter for Virginia Cooperative Extension. Generate a summary of a research study on sustainable farming practices in clear, engaging language for a general audience.”*

Writing Prompts Resources

"How to write ChatGPT prompts for the best results" **(ZDNET)**
"7 advanced ChatGPT prompt-writing tips" **(ZDNET)**

AI Policy and Compliance with Virginia Tech and Virginia State University

VCE employees must follow Virginia Tech’s and Virginia State University’s policies, including:

- **Use Microsoft Copilot** through Edge as the recommended AI tool.
- **Adhering to copyright laws and terms** of service for AI-generated content.
- Following **research integrity guidelines** for AI use in academic settings.

Virginia Tech Resources

Considering Generative AI and ChatGPT at Virginia Tech (VT)
Guidance for using artificial intelligence during research activities (VT)
AI: Tips & Tools from Your Librarians (VT Libraries)

Virginia State University Resources

Professional Development and Training

To enhance AI literacy, VCE employees are encouraged to explore these courses:

LinkedIn Learning:

- What Is Generative AI?
- How to Boost Your Productivity with AI Tools
- Introduction to Prompt Engineering for Generative AI
- What is Copilot? Get Started with Microsoft's Everyday AI Companion

Virginia Tech (VT-TLOS) Courses:

- Exploring Generative AI as an Assistant with Course Design
- Using Generative AI to Enhance Canvas Quizzes Question Banks
- Generative A. I. Faculty Share

Conclusion

AI is a powerful tool that, when used responsibly, can enhance VCE's ability to deliver accurate, engaging, and efficient educational resources. However, human oversight is essential to ensure quality, integrity, and trustworthiness. By embracing AI thoughtfully, VCE can leverage its benefits while upholding its mission of providing research-based knowledge to the public.

Additional Resources

Guidelines for EDIS Authors When Using AI Tools https://ics.ifas.ufl.edu/media/icsifasufledu/docs/edis/EDIS-AI-Factsheet.pdf

Understanding Artificial Intelligence: What It Is and How It Is Used in Agriculture https://edis.ifas.ufl.edu/publication/AE589

During the preparation of this document, the author(s) used Virginia Tech ChatGPT Edu to review the content for clarity, completeness, and accessibility. The author(s) reviewed and edited the content as needed and take(s) full responsibility for the publication's content.

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