

Discover the Benefits of Responsible Artificial Intelligence (AI) Use

Bruce D. Crawford
Osher Lifelong Learning Institute (OLLI) at the
University of Delaware

August 22, 2024

Acknowledgments

- Thanks to Linda McSweeney for sharing her slide deck on using AI for planning recreational vehicle (RV) trips.
- Thanks to Lewis Martin, Jr. for collaborating with me on this project and for providing useful input.
- Thanks to Ralph Begleiter and Derek Cole for providing tips for improving this presentation.

Contents

- Introduction
- Practice writing some prompts for AI Large Language Models (start with a hobby interest)
- Connect with the University of Delaware AI for Teaching and Learning Working Group via their seminars
- Discover AI Literacy resources from the University of Delaware Library including their online tutorial

Contents (cont'd)

- Explore OLLI course offerings on AI topics
- Check out visual bookmarks on AI Literacy and Tools from Lauren Kelley via Padlet.
- Consult books such as “AI and the Future of Education” by Priten Shah
- Look for discipline-specific AI teaching and learning resources from the University of Delaware Center for Teaching & Assessment of Learning (CTAL)

Contents (cont'd)

- Get some hands-on experience planning individual classes and a full-semester course
- Summary and conclusion
- Questions?

Introduction

- ChatGPT
- Google Gemini
- Perplexity.ai
- Microsoft Copilot

Practice writing some prompts

A photograph of a rocky coastline. In the foreground, a fluffy, light-colored dog is sitting on the rocks, looking towards the camera. The rocks are large and layered, extending into the ocean. The water is a light blue-grey color, and the sky is overcast. In the distance, a small island or headland is visible. The text "Trip Planning with AI" is overlaid on the upper left part of the image.

Trip Planning with AI

Linda McSweeney
Winnie Bs National Rally
Rodanthe, NC
May 2024

Let's start chatting...

“I'm planning a trip to Acadia National Park in September. We'll be traveling with a dog. Provide a 7-day itinerary which includes dog-friendly things to do. Include dog friendly restaurants on Mount Desert Island.”

Image source: Linda McSweeney, Osher Lifelong Learning Institute at the University of Delaware

ChatGPT

See results [HERE](#)

Grade: A

Conversational in tone; mapped out each day of the itinerary, included dog friendly activities including pet-friendly kayak rentals and even a dog-friendly whale watch tour; included dog-friendly restaurants.

Offers a 'copy' icon at the bottom of the itinerary to make it simple to copy and paste into a document of your choosing



It is important to evaluate the output from the Large Language Model (in this case ChatGPT). Keep feeding it prompts until you get what you want.
Image source: Linda McSweeney

Gemini AI

See Results [HERE](#)

GRADE: A+

Conversational in tone; mentioned dog-friendly accommodations; included dog-friendly Carriage Paths (ChatGPT didn't include these); included dog friendly restaurants and useful suggestions AND...includes photos on each day of your itinerary.

With a Gmail log in there are one-click options to email the itinerary or create a Google doc



If the first Large Language Model doesn't provide a response that works for you, try another one. Here Linda put the same prompt into Google Gemini.
Image source: Linda McSweeney

Creating Prompts



Build as much context as you can into your AI prompts. By carefully crafting your prompts, you are more likely to get the response that you desire.

Image source: Linda McSweeney

A Prompt to get us started...

I'm traveling from the Outer Banks to St Louis, MO in my van camper. I have 5 days to stop and see natural & cultural attractions. I like to eat lunch and dinner at well-reviewed local restaurants. I like to park overnight at Cracker Barrel restaurants & Walmarts. Plan a 5 day itinerary.

You can use AI to create all kinds of schedules, timetables, plans and so forth. Use your creativity to see what you can create! Image source: Linda McSweeney

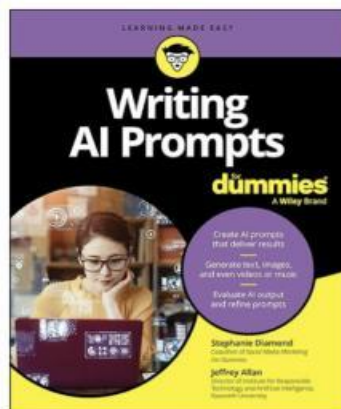


(Image created using Gemini with this prompt—

“Create a humorous image of a bee planning a trip with a map”)

Thank you, and you're welcome!

Generative AI can also create images for you via the prompts that you specify. Image source: Linda McSweeney

[Back to results](#)

Roll over image to zoom in

[Read sample](#)**Follow the author**

Jeffrey Allan

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Writing AI Prompts For Dummies 1st Edition

by [Stephanie Diamond](#) (Author), [Jeffrey Allan](#) (Author)4.0 3 ratings [See all formats and editions](#)

Learn the art of writing effective AI prompts and break into an exciting new career field

Unlock the full power of generative AI with *Writing AI Prompts For Dummies*, a comprehensive guide that will teach you how to confidently write effective AI prompts. Whether it's text, images, or even videos and music you're aiming to create, this book provides the foundational knowledge and practical strategies needed to produce impressive results.

Embark on a journey of discovery with *Writing AI Prompts For Dummies* and learn how to:

- Craft AI prompts that produce the most powerful results.
- Navigate the complexities of different AI platforms with ease.
- Generate a diverse range of content, from compelling narratives to stunning visuals.
- Refine AI-generated output to perfection and integrate that output effectively into your business or project.

This resource is brimming with expert guidance and will help you write AI prompts that achieve your objectives. Whether you're a marketer, educator, artist, or entrepreneur, *Writing AI Prompts For Dummies* is your indispensable guide for leveraging AI to its fullest potential. Get ready to harness the power of artificial intelligence and spark a revolution in your creative and professional efforts.

[^ Read less](#)

If you need help writing good AI prompts, books and other resources are available. Image source: amazon.com

8:53 AM Sat Feb 10 support.google.com

Gemini Apps Help Describe your issue Sign in

Why Gemini Apps are experimental

Gemini Apps are part of our long-term, ongoing effort to develop LLMs responsibly. Throughout the course of this work, we discovered and discussed several limitations associated with LLMs, including five areas we continue to work on:

- **Accuracy:** Gemini Apps' responses about people and other topics might be inaccurate, especially when asked about complex or factual issues.
- **Bias:** Gemini Apps' responses might reflect biases or perspectives about people or other topics present in its training data.
- **Persona:** Gemini Apps' responses might suggest it as having personal opinions or feelings.
- **False positives and false negatives:** Gemini Apps might not respond to some appropriate prompts and provide inappropriate responses to others.
- **Vulnerability to adversarial prompting:** users will find ways to stress test Gemini Apps further. For example, they may prompt Gemini Apps to hallucinate and provide inaccurate information about people and other topics.

We focused on addressing these areas before launching Gemini Apps. And with the broader field, we continue to research solutions. We at Google are committed to working to improve over time. [Learn more](#).

https://support.google.com/gemini/answer/13594961?hl=en#exp_tech

AI systems sometimes come with model cards which are data sheets that specify changes made to the model over time. These features include lists of added guardrails and lists of abandoned features and the justification for their inclusion or exclusion.

Constructing optimal prompts is difficult

Prompts are the primary interface for both users and developers to interact with large language models, but consistently developing effective prompts is a challenge

- Precise prompt composition is critical in achieving the desired LLM output, with semantically similar prompts yielding significantly different, sometimes incorrect, outputs (Jiang et al 2020).
- Writing effective prompts can require significant effort, including multiple iterations of modification and testing (Jiang et al 2022).
- Prompt behavior can be brittle and non-intuitive:
 - Seemingly minor changes, including capitalization and spacing can result in dramatically different LLM outputs (Holtzman 2021, Arora et al. 2023)
 - The order of prompt elements, such as sections, few-shot examples or even words can significantly impact accuracy, in some cases varying from near random chance to state-of-the-art (Zhao et al. 2021, Kaddour et al. 2023).
 - The same prompt can result in significantly different performance across model families, even with models of similar parameter size (Sanh et al. 2022).
 - While many prompting techniques have been developed, there is little theoretical understanding for why any particular technique is suited to any particular task (Zhao et al. 2021).
- End users of prompt-based applications struggle more than prompt engineers to formulate effective prompts (Zamfirescu-Pereira et al. 2023).

Jiang, Z. et al. (2020). How Can We Know What Language Models Know? Transactions of the Association for Computational Linguistics, 8.
Jiang, E. et al. (2022). PromptMaker: Prompt-based Prototyping with Large Language Models. Extended Abstracts of the 2022 CHI Conference on Human Factors in Computing Systems
Holtzman, A. et al. (2021). Surface Form Competition: Why the Highest Probability Answer Isn't Always Right. EMNLP.
Arora, S. et al. (2023). Ask me anything: A simple strategy for prompting language models. The Eleventh International Conference on Learning Representations.
Zhao, Z., et al. (2021). Calibrate Before Use: Improving Few-shot Performance of Language Models. Proceedings of the 38th International Conference on Machine Learning.
Kaddour, J., et al. (2023). Challenges and Applications of Large Language Models. arXiv preprint.
Sanh, V. et al. (2022). Multitask Prompted Training Enables Zero-Shot Task Generalization. International Conference on Learning Representations.
Zamfirescu-Pereira, J.D., et al. (2023). Why Johnny Can't Prompt: How Non-AI Experts Try (and Fail) to Design LLM Prompts. (CHI '23).

Image source: Microsoft. (2023). *Microsoft new future of work report 2023*, p. 12

AI for Teaching and Learning Working Group

Considerations for Integrating AI Within Teaching and Learning

Executive Summary¹

Purpose and Audience: This resource aims to provide educators at the University of Delaware (UD) with practical and ethical guidance on integrating AI into teaching and learning. Targeting educators across all levels and academic unit leaders, it is designed to initiate, not conclude, discussions about AI in education.

Context and Scope: With the advent of generative AI, new ethical, practical, and pedagogic challenges have emerged, necessitating the guidance and considerations included herein. This resource deliberately excludes AI applications unrelated to education, such as self-driving cars, and does not reference specific AI tools to maintain relevance in a rapidly evolving field.

Reasons for Integrating AI in Education:

1. **Improvement in Education:** AI can enhance educational priorities by providing immediate feedback, fostering creativity, and enabling critical thinking.
2. **Prevalence in Society:** The growing ubiquity of AI tools in society makes it essential for educators to prepare learners for their ethical and effective use.
3. **Awareness of Risks:** Educators should ensure learners are aware of the risks associated with AI to guide its positive development.

Key Considerations for AI Integration:

1. **Human-Centered Approach:** AI should amplify human abilities without replacing the human elements in education. Educators should remain central to and responsible for teaching and decision-making.
2. **Transparency:** Clear expectations regarding AI use should be set, with educators modeling ethical AI usage and appropriate disclosure, especially regarding data privacy.
3. **Ethical Considerations:** Educators should ensure that AI tools are accessible, are used in ways that protect learners' personally identifiable information, and that an examination of possible bias is considered and unpacked in the classroom. Educators should also develop and maintain their own knowledge of these tools.
4. **Educational Effectiveness:** AI usage should align with best instructional practices and theories of learning.

¹ Executive summary produced with the assistance of ChatGPT 4.0. All output was evaluated and revised to ensure accuracy of content and preserve the authors' intended meaning of key concepts and terms.



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Previous seminars:

Large Language Models – Challenges and Opportunities

Sept. 26, 2023 – Large language models (LLM) such as ChatGPT are changing many aspects of our lives, such as how we access online information and how we learn. This talk explored the mystery of LLMs and discussed the challenges and opportunities in this new era of AI.

Watch the recording of the seminar [here](#)

Ethical Considerations in AI

Oct. 19, 2023 – This seminar presented two engaging talks. One delved into ethical and conceptual issues surrounding Generative AI, particularly Large Language Models (LLMs), in the context of research misconduct. The second explored the duty of teachers to support students in learning to use AI and to resist the temptation to limit teaching to the tools that happened to be available in the past.

Watch a recording of the seminar [here](#).

Pitfalls and Promise: Generative AI, Disability, and Access

Nov. 6, 2023 – This talk considered the duality of two realities disabled people face in the context of their everyday lives, and specifically, generative AI. The first, considerations of people with disabilities and our experiences are often left out of decision-making processes which produce policy, like those being made within the university and individual classrooms. The second, we are often the "test market" and expert users of many tools used by the masses to gain more physical and electronic access to the world around us, like closed captioning, descriptive audio, voice to text, and other predictive and generative AI tools.

Watch a recording of the seminar [here](#)

Navigating the AI Landscape: A Framework for Evaluating Assessment Tools in Higher Education

Nov. 29, 2023 – Advanced automated tools, including generative AI open a world of new possibilities for assessing student learning. They can provide immediate, personalized feedback. But determining if a particular tool should be used is complex with many potential questions and decisions. The presenters shared a draft framework that will help faculty make well-informed decisions about the use of AI tools to assess student learning.

Watch a recording of this seminar [here](#). Download the slides [here](#).

University of Delaware (UD) AI seminars will continue through 2025.
Recordings of previous seminars are available.
<https://www.udel.edu/home/artificial-intelligence/>

AI Literacy tutorial from the UD Library

The screenshot shows a mobile browser interface for the University of Delaware Library's AI Literacy tutorial. The browser address bar displays 'guides.lib.udel.edu'. The page header includes the University of Delaware logo and navigation icons. Below the header, the breadcrumb trail reads: 'University of Delaware Library / Research Guides / Special Topic Guides / AI Literacy: Algorithms, Authenticity, and Ethical Considerations in AI Tools / Home'. The main title is 'AI Literacy: Algorithms, Authenticity, and Ethical Considerations in AI Tools', followed by a search bar with the placeholder text 'Enter Search Words' and a 'Search' button. A vertical sidebar on the left contains a list of navigation options: 'Home' (highlighted in yellow), 'How AI works', 'Authenticity when writing with AI', 'Prompting effectively', 'Citing AI tools', 'Emerging issues with AI', and 'Quiz'. The main content area contains a paragraph: 'AI literacy is a new term that describes skills associated with the ability to comprehend the basic principles, concepts, and applications of artificial intelligence, as well as the implications, limitations, and ethical considerations associated with artificial intelligence. In this tutorial, you'll learn the basics of how AI technology works, ways to incorporate AI that maintain your authentic voice and ideas, effective prompting skills, and explore complicated issues that surround AI such as copyright, bias, and transparency. You'll navigate through 9 pages and a review quiz. The whole tutorial should take about 1 hour.' Below this text is a large blue button with a double arrow icon and the word 'Next'. In the bottom right corner, there is a yellow button labeled 'Ask UDStax' with a chat icon.

<https://guides.lib.udel.edu/AI>



Recommendation on
**the Ethics
of Artificial
Intelligence**

Adopted on 23 November 2021

<https://unesdoc.unesco.org/ark:/48223/pf0000381137>

Explore OLLI course offerings on AI topics

INFORMATION TECHNOLOGY

ARTIFICIAL INTELLIGENCE: HOW DID WE GET HERE?



Trinity Faith Education Building, Lewes (L244-01)

Class limit: 40



UD OLLI Online (L244-13)

Class limit: unlimited

Tuesday 10:45 a.m.–noon

10/15/2024–11/19/2024

Instructor: Paul Collins

Number of class sessions: 5

Course format: Discussion, Lecture, Video Based

In this class we discuss the technologies that enabled the development of artificial intelligence (AI) and the main players, including Geoffrey Hinton: from the father of neural networks to naysayer. What is generative AI and where is it going? Will distributed AI provide the necessary controls? Plus, we have a special guest speaker.

Hours of outside preparation: *0-1 **1-2 ***2 or more

Image source: Osher Lifelong Learning Institute at the University of Delaware. (2024, Fall). *Course catalog*, p. 45

ARTIFICIAL INTELLIGENCE AND THE NEWS MEDIA



UD OLLI Online: On Demand (S274–07)

Flexible—viewing is on your own schedule

Number of class sessions: 5

Instructor: Ralph Begleiter

Course format: Lecture

Advances in computer software—broadly known as “artificial intelligence”—raise prospects of dramatically increasing productivity and knowledge sharing, affecting many aspects of life including work, learning, art and culture. This course explores effects of artificial intelligence on how news is gathered, presented and consumed by journalists and the public and manipulated by governments and others. The course also covers how world affairs could be affected by AI-prompted changes in journalism. View this class on your own schedule. Viewing link is emailed to participants prior to the semester start.

Image source: Osher Lifelong Learning Institute at the University of Delaware. (2024, Fall). *Course catalog*, p. 57

ARTIFICIAL INTELLIGENCE: INTRODUCTION WITH COMPUTER ACTIVITIES*



Arsht Hall, Wilmington (L242-01)

Tuesday 2:30–3:45 p.m.

9/3/2024-12/3/2024

Instructors: Lewis Martin Jr., Anita Sterling

Number of class sessions: 13 · *Class limit:* 17

Course format: Discussion, Lecture, Active (Hands-on)

Prerequisite: Familiarity with using browsers and saving documents from the internet

This comprehensive course is for anyone who wants to explore the significance and capabilities of AI, and aims to equip participants with a deep understanding of artificial intelligence (AI), its implications, and its practical applications in daily life.

Image source: Osher Lifelong Learning Institute at the University of Delaware. (2024, Fall). *Course catalog*, p. 45



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Artificial Intelligence and the Future of Teaching and Learning

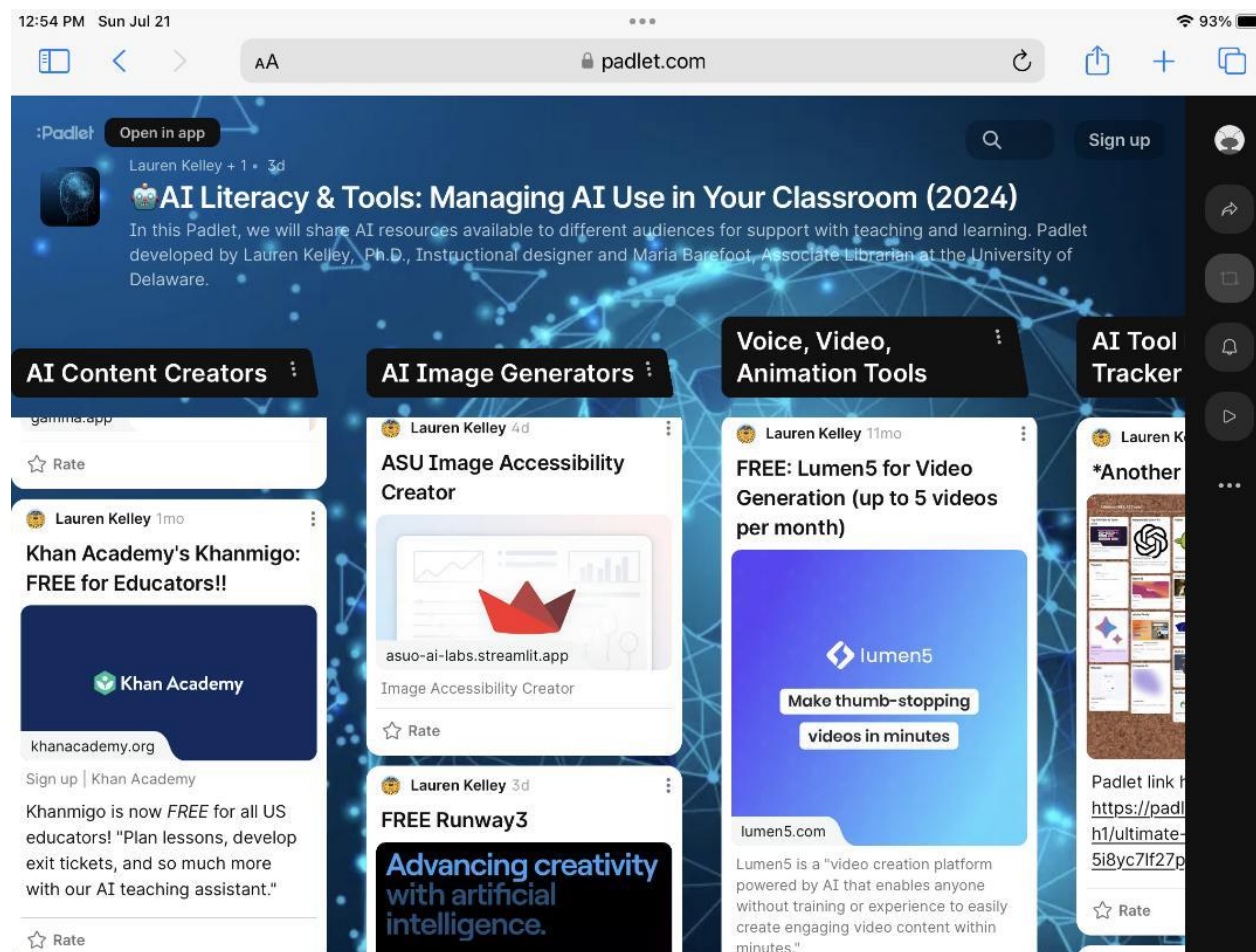
Insights and Recommendations

May 2023



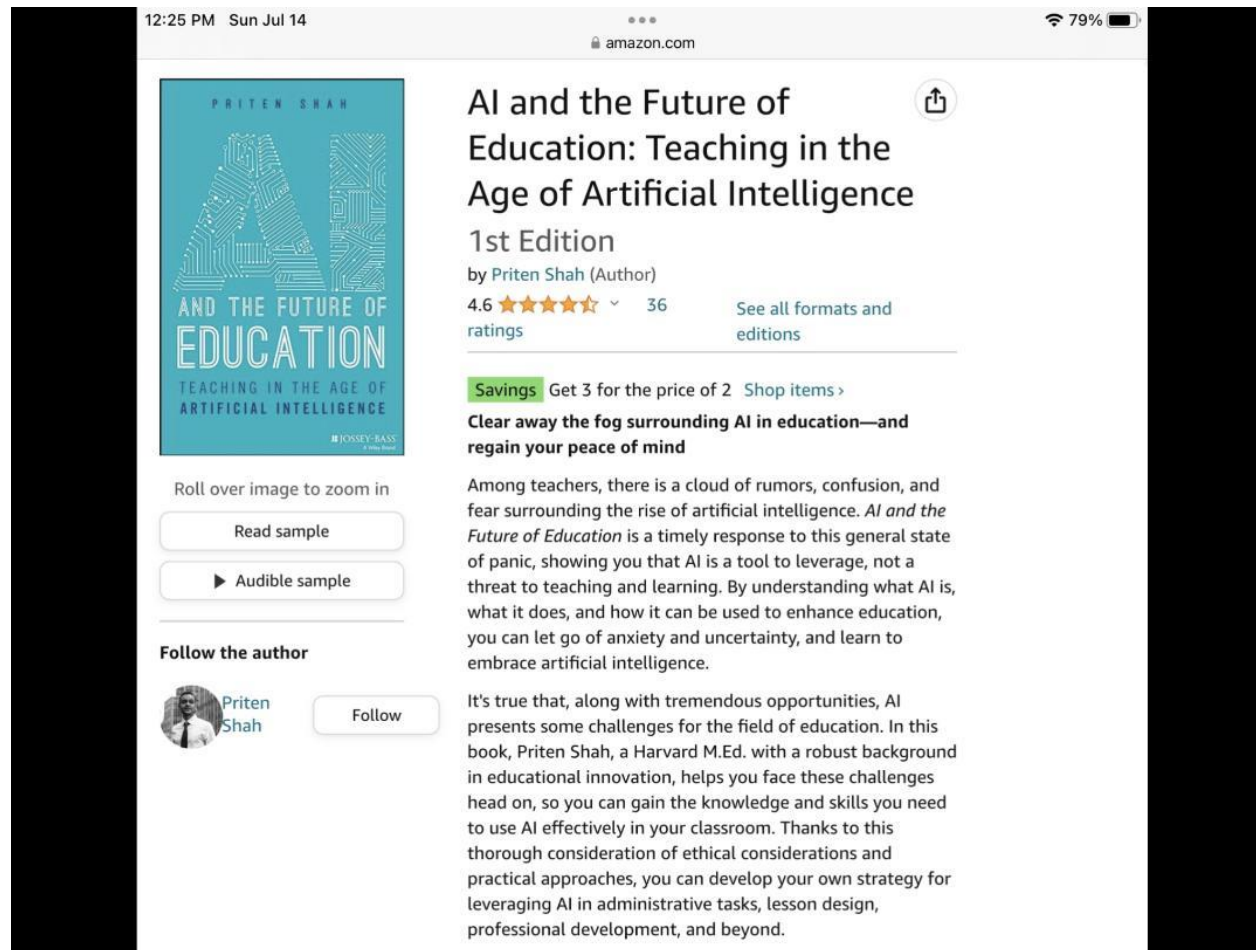
<https://www2.ed.gov/documents/ai-report/ai-report.pdf>

Visual bookmarks on AI literacy and tools from Lauren Kelley via Padlet



<https://padlet.com/laurenkelley0523/ai-literacy-tools-managing-ai-use-in-your-classroom-2024-bltxjux1zs3q6idg2>

Consult books such as “AI and the Future of Education” by Priten Shah



The screenshot shows the Amazon product page for the book "AI and the Future of Education: Teaching in the Age of Artificial Intelligence" by Priten Shah. The page is displayed on a mobile device, with the time 12:25 PM and date Sun Jul 14 at the top. The Amazon logo and "amazon.com" are visible in the header. The book cover is on the left, featuring a blue background with a large white letter 'A' composed of circuit lines. The title and author's name are on the cover. To the right of the cover, the book title is displayed in large black text, followed by "1st Edition" and "by Priten Shah (Author)". Below this, the book has a 4.6-star rating from 36 reviews. A green "Savings" banner indicates a price reduction. A promotional blurb reads: "Clear away the fog surrounding AI in education—and regain your peace of mind". Below the blurb, there is a paragraph of text describing the book's content. At the bottom left, there is a "Follow the author" section with a profile picture of Priten Shah and a "Follow" button. The page is framed by black vertical bars on the left and right sides.

12:25 PM Sun Jul 14

amazon.com

AI and the Future of Education: Teaching in the Age of Artificial Intelligence
1st Edition
by Priten Shah (Author)

4.6 ★★★★★ 36 ratings [See all formats and editions](#)

Savings Get 3 for the price of 2 [Shop items >](#)

Clear away the fog surrounding AI in education—and regain your peace of mind

Among teachers, there is a cloud of rumors, confusion, and fear surrounding the rise of artificial intelligence. *AI and the Future of Education* is a timely response to this general state of panic, showing you that AI is a tool to leverage, not a threat to teaching and learning. By understanding what AI is, what it does, and how it can be used to enhance education, you can let go of anxiety and uncertainty, and learn to embrace artificial intelligence.

It's true that, along with tremendous opportunities, AI presents some challenges for the field of education. In this book, Priten Shah, a Harvard M.Ed. with a robust background in educational innovation, helps you face these challenges head on, so you can gain the knowledge and skills you need to use AI effectively in your classroom. Thanks to this thorough consideration of ethical considerations and practical approaches, you can develop your own strategy for leveraging AI in administrative tasks, lesson design, professional development, and beyond.

Roll over image to zoom in

[Read sample](#)

[Audible sample](#)

Follow the author


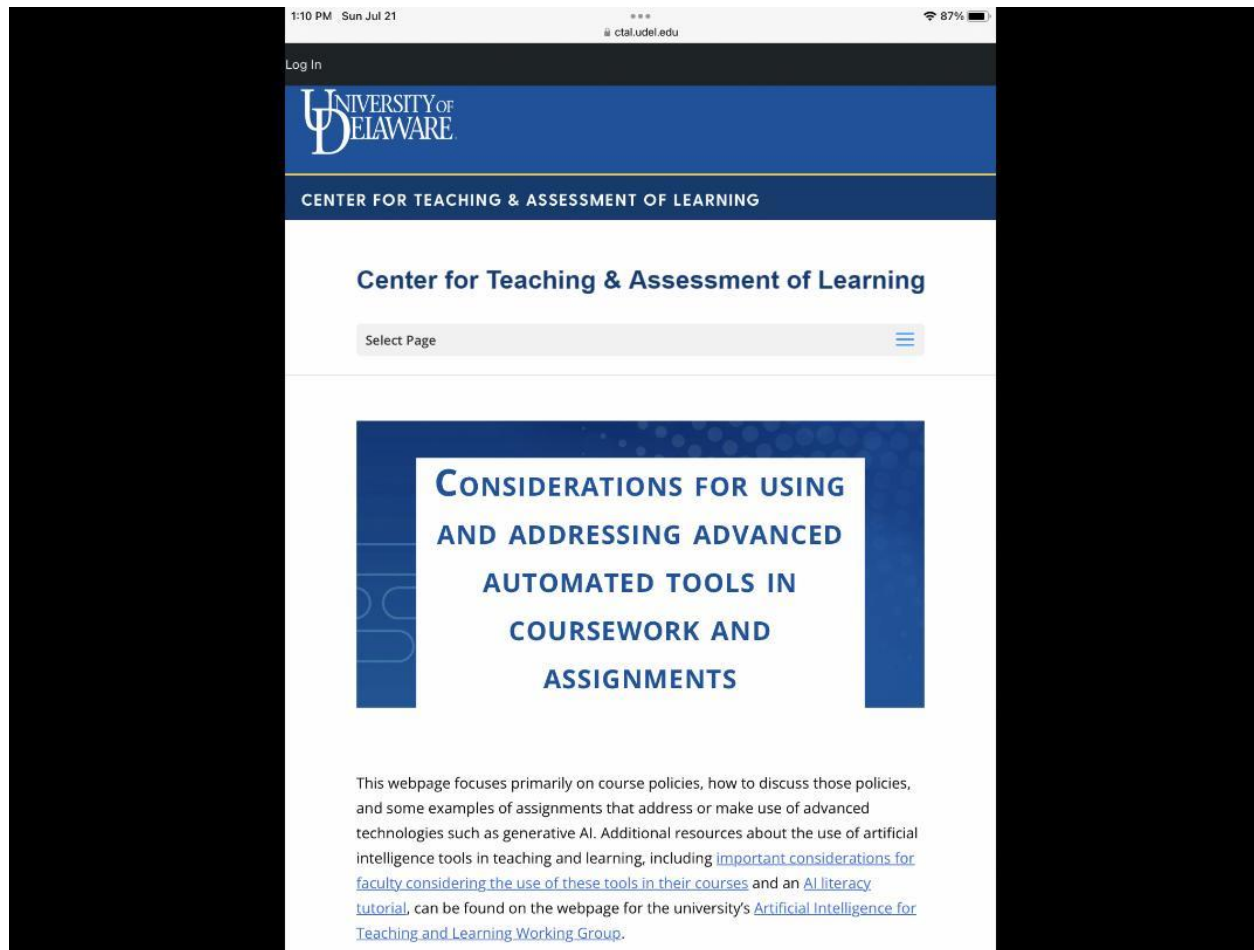
 Priten Shah [Follow](#)

Image source: amazon.com

Discipline-specific AI teaching and learning resources from CTAL



The screenshot shows a mobile browser view of the CTAL website. At the top, the University of Delaware logo is displayed, followed by the text 'CENTER FOR TEACHING & ASSESSMENT OF LEARNING'. Below this is a navigation menu with a 'Select Page' dropdown and a hamburger menu icon. The main content area features a large blue box with the title 'CONSIDERATIONS FOR USING AND ADDRESSING ADVANCED AUTOMATED TOOLS IN COURSEWORK AND ASSIGNMENTS' in white, bold, uppercase letters. Below the title, a paragraph of text provides context: 'This webpage focuses primarily on course policies, how to discuss those policies, and some examples of assignments that address or make use of advanced technologies such as generative AI. Additional resources about the use of artificial intelligence tools in teaching and learning, including [important considerations for faculty considering the use of these tools in their courses](#) and an [AI literacy tutorial](#), can be found on the webpage for the university's [Artificial Intelligence for Teaching and Learning Working Group](#).'

<https://ctal.udel.edu/advanced-automated-tools/>

Discipline-specific Generative AI Teaching and Learning Resources

University of Delaware Center for Teaching & Assessment of Learning

Available at: <http://www.udel.edu/0010896>

Contact us at CTAL-info@UDel.edu

Introduction

The University of Delaware's Center for Teaching & Assessment of Learning (CTAL) began developing lists of discipline-specific examples of generative AI teaching and learning resources in the summer of 2023 in response to specific queries and requests for assistance from UD faculty. A central part of our [vision](#) is "work[ing] in partnership with individuals and groups to identify evidence-based solutions that are tailored to unique learning environments, advance university priorities, and that reflect individual teaching philosophies, educational goals, and **disciplinary values**" [emphasis added]. Moreover, we find that sharing examples and information from a faculty member's specific discipline or ones that are closely related is often more effective and useful than sharing more generic resources or ones from far afield.

When selecting resources to include in this document, we strongly prefer resources that (a) have been peer-reviewed, (b) include specific, detailed examples of using these tools (not just opinions or perspectives) in post-secondary education, and (c) do not rely exclusively on surveys or other self-reported measures of learning. In some cases, however, there aren't yet materials that meet both of those criteria so we sometimes include other resources that still appear to be well-informed and informative.

We have also chosen to include a handful of very high quality, discipline-agnostic resources. These resources provide excellent examples of how generative AI tools can be used in teaching and learning at the postsecondary level. They are also potential paths to further resources, including discipline-specific resources; searching for papers that cite these specific articles is one powerful strategy for locating additional resources.

This is not an exhaustive list of resources. We add resources as we come across them, particularly when we are preparing for a consultation, planning a workshop, or otherwise responding to the needs of our faculty. If you have any questions about the content below, please contact us at ctal-info@udel.edu.

<https://www.udel.edu/0010896>

Hands-on experience planning an OLLI talk – the prompt

Interaction with Google Gemini asking for an outline of a future lecture on cobalt mining for use in electric vehicle batteries.

Prompt:

I am planning a 45 minute lecture for sophisticated adults age 50 and up that mostly have Master's, Doctorate and/or professional degrees. The talk will be about cobalt mining for use in electric vehicle batteries. Include information on mining operations in the Democratic Republic of the Congo as well as Finland. Include information on Chinese and Swiss operations and include economic, environmental, geopolitical, societal and technological perspectives in the form of an outline for this lecture and provide questions to stimulate further discussion.

Response:

Lecture Outline: Cobalt Mining for Electric Vehicle Batteries

****Target Audience:**** Sophisticated adults, ages 50+, with Master's, Doctorate, or professional degrees

****Length:**** 45 minutes

****I. Introduction (5 minutes)****

- * Briefly explain the increasing demand for electric vehicles (EVs) and the role of lithium-ion batteries.
- * Introduce cobalt as a key component in these batteries and highlight its growing importance.
- * Briefly mention the lecture's structure and its focus on economic, environmental, geopolitical, societal, and technological perspectives.

Image source: Google. (2024). *Google Gemini* (February 13, 2024 version) [Large language model] (emphasis added) <https://gemini.google.com/?hl=en>

Hands-on experience planning an OLLI talk – the response

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Image source: Google. (2024). *Google Gemini* (February 13, 2024 version) [Large language model] (emphasis added) <https://gemini.google.com/?hl=en>

****II. Global Cobalt Landscape (10 minutes)****

*** **Global Distribution:**** Show a map highlighting major cobalt-producing countries.

*** **Focus on the Democratic Republic of the Congo (DRC):****

- * Discuss its dominance in cobalt production (around 70%).

- * Explain the artisanal mining sector and its challenges (child labor, safety risks, environmental damage).

- * Briefly mention ongoing efforts to improve responsible sourcing and ethical practices.

*** **Compare with Finland:****

- * Showcase its focus on large-scale, mechanized mining with stricter environmental regulations.

- * Discuss the potential for more sustainable cobalt production.

****III. Key Players in the Cobalt Supply Chain (15 minutes)****

*** **China:****

- * Discuss its dominance in cobalt refining and battery manufacturing.

- * Explain its strategic interests in securing cobalt supplies and its investments in the DRC.

- * Raise concerns about potential control over the EV battery market.

*** **Switzerland:****

- * Introduce Swiss trading companies as major players in the cobalt trade.

- * Discuss their role in financing mining operations and logistics.

- * Raise questions about transparency and accountability in the supply chain.

Image source: Google. (2024). *Google Gemini* (February 13, 2024 version) [Large language model] (emphasis added) <https://gemini.google.com/?hl=en>

****IV. Multifaceted Impacts of Cobalt Mining (15 minutes)****

*** **Economic:****

- * Discuss the economic importance of cobalt for producing countries and companies.
- * Highlight concerns about economic exploitation and uneven distribution of profits.
- * Briefly mention potential economic opportunities from responsible mining practices.

*** **Environmental:****

- * Explain the environmental damage caused by cobalt mining, including water pollution, deforestation, and soil contamination.
- * Discuss the challenges of balancing economic development with environmental sustainability.

*** **Geopolitical:****

- * Explain the potential for geopolitical tensions over control of cobalt resources.
- * Discuss the role of international cooperation and regulations in ensuring responsible sourcing.

*** **Societal:****

- * Raise concerns about human rights abuses and social injustices associated with artisanal mining.
- * Discuss the importance of community development and fair labor practices.

*** **Technological:****

- * Introduce potential alternatives to cobalt in battery technology and their development stage.
- * Discuss the role of innovation in reducing reliance on cobalt and minimizing its impact.

Image source: Google. (2024). *Google Gemini* (February 13, 2024 version) [Large language model] (emphasis added) <https://gemini.google.com/?hl=en>

****V. Conclusion and Discussion (5 minutes)****

- * Briefly summarize the key points covered in the lecture.
- * Pose questions to stimulate further discussion among the audience:
 - * What are the ethical implications of relying on cobalt for EVs?
 - * How can we balance the need for clean energy with responsible mining practices?
 - * What role can consumers play in promoting sustainable cobalt sourcing?
 - * What technological advancements are needed to reduce our reliance on cobalt?
 - * What can be done to ensure fair labor practices and community development in mining regions?

****Additional Notes:****

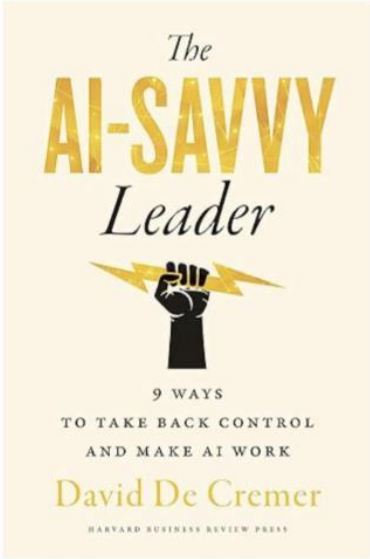
- * Use visuals like maps, charts, and photographs to enhance the presentation.
- * Encourage audience participation through questions and discussions throughout the lecture.
- * Provide references and resources for further exploration of the topic.
- * Tailor the level of detail and complexity to the specific interests and background knowledge of the audience.

I hope this outline helps you structure your lecture and engage your audience in a meaningful discussion about this important topic.

Image source: Google. (2024). *Google Gemini* (February 13, 2024 version) [Large language model] (emphasis added) <https://gemini.google.com/?hl=en>

Summary and conclusion

12:21 PM Sun Jul 14 amazon.com 80%



The
AI-SAVVY
Leader

9 WAYS
TO TAKE BACK CONTROL
AND MAKE AI WORK

David De Cremer
HARVARD BUSINESS REVIEW PRESS

Roll over image to zoom in

Read sample

▶ Audible sample

The AI-Savvy Leader: Nine Ways to Take Back Control and Make AI Work

by David De Cremer (Author)

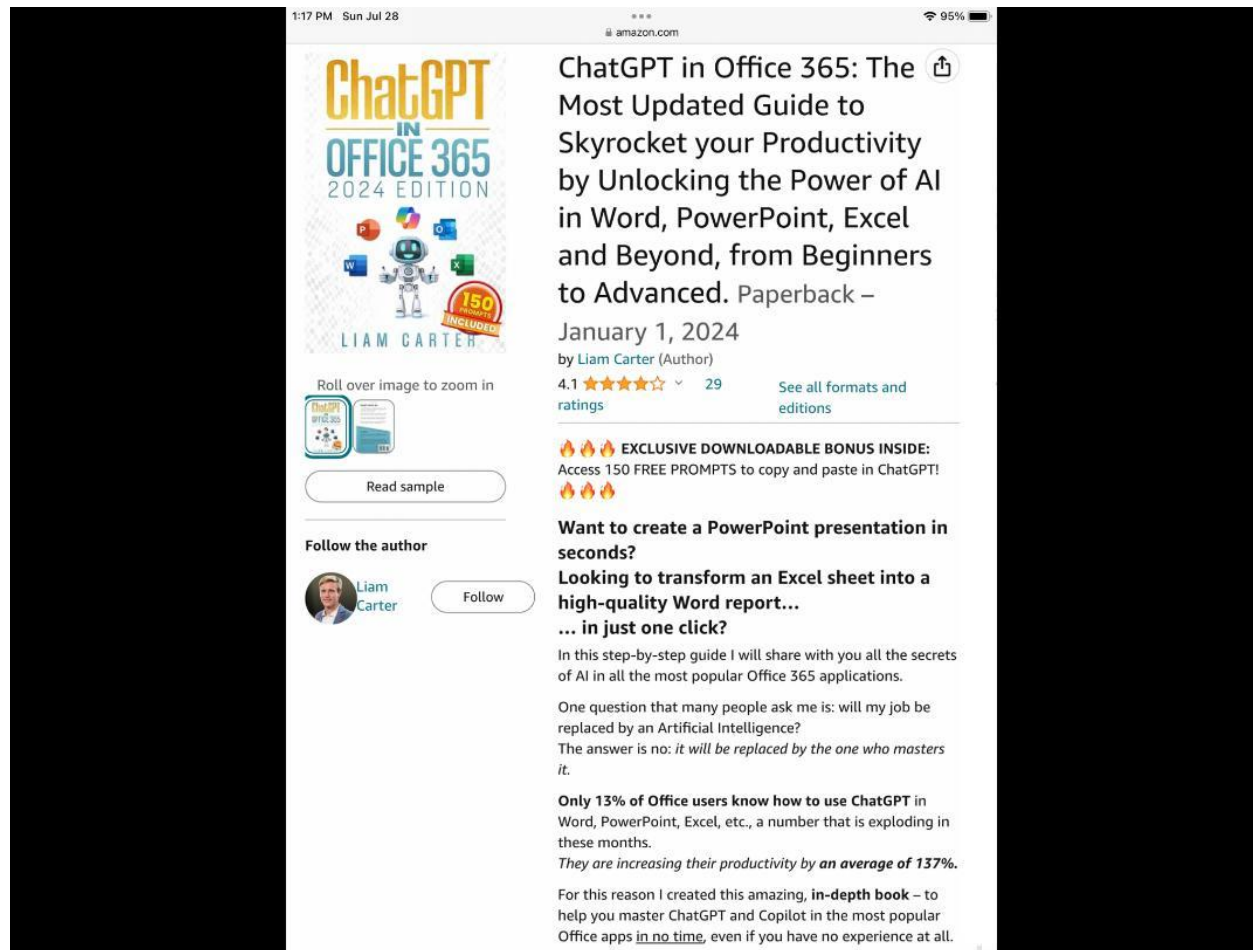
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Leaders, don't let AI get the best of you.

The AI transformation is underway, but where are the leaders who will ensure their companies implement AI successfully and responsibly? Up until now, leaders have largely ceded their role in the AI transformation, pushing strategy formulation out to tech teams and leaving investment decisions to groups that don't have a full view of the organization or its goals. Just when responsible leadership is more crucial than ever, leaders are abdicating their role in understanding and executing in the new world of human-machine collaboration. A generation of AI transformation failures awaits if leaders don't connect their use of AI to their strategies.

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Questions?



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ChatGPT in Office 365: The Most Updated Guide to Skyrocket your Productivity by Unlocking the Power of AI in Word, PowerPoint, Excel and Beyond, from Beginners to Advanced. Paperback – January 1, 2024

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