HOW TO TRAIN YOUR AI: A GUIDE TO GENERATIVE TOOLS FOR NURSING EDUCATION

ALLISON PAPINI
BRYANT UNIVERSITY
APAPINI1@BRYANT.EDU
AGENDA

Introduction to AI

AI and Information Literacy

AI for Nursing Students & Faculty
Your AI challenge:

When... 

How... 

Why... 

...should you incorporate AI into your teaching/learning/nursing practice?

Allison Papini, 2024
AI TERMS
<table>
<thead>
<tr>
<th><strong>GENERATIVE AI</strong></th>
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<tbody>
<tr>
<td>Technology that creates content by identifying patterns in large quantities of training data, and then creating original material that has similar characteristics.</td>
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<th><strong>NEURAL NETWORK</strong></th>
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<td>A mathematical system, modeled on the human brain, that learns by patterns in data. It consists of layers of artificial neurons: The first layer receives the input data, and the last layer outputs the results.</td>
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<tr>
<th><strong>LARGE LANGUAGE MODEL</strong></th>
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<td>A type of neural network that learns skills by analyzing vast amounts of text from across the internet. The basic function is to predict the next word in a sequence.</td>
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<th><strong>MACHINE LEARNING</strong></th>
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<td>Focuses on the using data and algorithms to enable AI to imitate the way that humans learn, gradually improving its accuracy.</td>
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<th><strong>DEEP LEARNING</strong></th>
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<td>Use of large multi-layer (artificial) neural networks that compute with real number representations, a little like the hierarchically organized neurons in human brains.</td>
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<th><strong>TRAINING DATA</strong></th>
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<td>Dataset used to train an AI model. Some data is held out from the training data to be used as evaluation data, which tests how accurate the machine learning model is.</td>
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<td>Inability for us to see how deep learning systems make their decisions.</td>
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1. Allison Papini, 2024

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<th><strong>AI TERMS: SHORT VERSION</strong></th>
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<td><strong>GENERATIVE AI</strong></td>
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<td>Learns from lots of examples to make its own new and unique content.</td>
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<td><strong>MACHINE LEARNING</strong></td>
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<td>Uses data and algorithms to help AI mimic human learning, steadily improving its accuracy.</td>
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<tr>
<td><strong>NEURAL NETWORK</strong></td>
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<td>A computer system that learns patterns in data, from input to output through layers of 'neurons'.</td>
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<td><strong>LARGE LANGUAGE MODEL</strong></td>
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<td><strong>TRAINING DATA</strong></td>
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<td>A dataset that trains an AI model, with some data reserved as evaluation data to test the model's accuracy.</td>
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<td><strong>NATURAL LANGUAGE PROCESSING (NLP)</strong></td>
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<td>Involves techniques like text classification and sentiment analysis to help machines understand and generate human language.</td>
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<td>Involves large, multi-layer neural networks that process information in a way similar to the human brain.</td>
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GENERATIVE AI AT BRYANT UNIVERSITY
Reality sets in for everyone

Students start experimenting

ChatGPT Release

Fall 2022

Catching Up

Winter 2023

Wide range of reactions

Faculty Notice

GPT4 Release

Spring 2023

Summer 2023

Conversations & trainings

Catching Up

Fall 2023

Mixed results, plagiarism focus

Policies Launch

Fall 2023

Initial findings different than expected

Survey Distributed

Winter 2024

Moving Forward

More conversations, focus on security and institutional requirements

Moving Forward

Spring 2024

AI Gains Momentum

Ask Tupper, Syllabus Statement Reviews, Semi-Structured Interviews

Spring 2024

Summer 2024

Allison Papini, 2024

Enter the “Blog Post” (more on that in a minute)
CHATGPT: A LIBRARY PERSPECTIVE

January 27th, 2023

ChatGPT has been a hot topic since late November 2022, even surpassing AI (artificial intelligence) as a Google search term within 2 weeks of the public release. This has brought up a lot of questions about both AI and ChatGPT and the role it may play in libraries and across university campuses.

At its core, the Krupp Library team is dedicated to helping our Bryant community to access and use information as well as emerging tools and technologies, including AI. Because of this, we aren’t making any decrees about whether ChatGPT is “good” or “bad.” Instead, we’re taking this opportunity to look at it through the lens of information literacy.

The ACRL is one of the professional organizations for librarians, and we base our information literacy instruction on the ACRL Framework. Here are some places where ChatGPT intersects with the framework:

Research as Inquiry ChatGPT is good at answering general knowledge questions that could also be found in a quick google search. It isn’t always perfect, and one issue is as of this writing the program’s “knowledge” ends in 2021.

Scholarship as Conversation This frame means that different opinions and perspectives are necessary to learn. ChatGPT can’t actually offer opinions and isn’t actually an expert in anything. However, you might be having a hard time finding information about a perspective that isn’t the same as your own, or need to find “the other side” in an argument. If you phrase it correctly, ChatGPT can tell you what someone with a certain ideological perspective...
RESEARCH AS INQUIRY

• Use AI to refine research questions
• Prompt engineering works (but won’t be needed forever)
• Consider whether AI is the right tool for your task
GENERATIVE AI/LLMs ARE NOT HUMAN

DIFFERENT THAN A CALCULATOR?

BLACK BOX PROBLEM- INFORMATION ON TRAINING DATA IS NOT WIDELY AVAILABLE

AUTHORITY IS CONSTRUCTED & CONTEXTUAL

- Generative AI/LLMs are not human
- Different than a calculator?
- Black box problem- information on training data is not widely available
Most are good for brainstorming, outlining, and will do some rewriting. Accuracy isn't guaranteed. What happens if this goes too far?
SEARCHING AS STRATEGIC EXPLORATION

- More than passable reference interview (eek!)
- Closed-ended results, lose serendipitous moments
- Prompt engineering comes into play here as well
Hallucinations continue to be an issue, and are becoming less obvious in some cases. If it isn’t cited, does it exist? Confusion on when it is acceptable to cite/refer to the models.
INFORMATION HAS VALUE

- LLMs are using publicly available content
- Who owns the copyright?
- How can/should authors be credited or compensated?
AI ETHICS
ChatGPT = Information Blender
HIPAA & AI
ChatGPT is not HIPAA compliant and cannot be used to (for example) summarize patients’ notes or compile letters to patients that include Protected Health Information.
BEST PRACTICES*

- Ensure there is a business associate agreement in place
- Use a tool specifically authorized for healthcare settings
- Use minimum amount of data necessary for your query
- Check with risk assessment before using any tool
- Consider: would you post the same information on Facebook/Instagram/TikTok?

*This information is provided for general guidance purposes only and does not constitute legal advice. It is your responsibility to ensure compliance with all relevant laws and regulations, including HIPAA, before using ChatGPT or any other AI service for processing protected health information (PHI). Always consult with a qualified legal professional if you are unsure about the legal implications of your actions.
AI INTEGRATIONS

1. Chatgpt/GPT-4
2. Quillbot
3. Fotor
4. Adobe Express
5. Grammarly
6. Ottar.ai
7. Stepwise Math
8. Gitmind
9. Slidesgo
PROMPT ENGINEERING

You are a nursing [STUDENT/FACULTY/INSTRUCTOR] with excellent communication and interpersonal skills, particularly skilled in distilling and reframing complicated topics for specific audiences. Your task is to explain the concept of [COMPLEX TOPIC] in simple terms, so that [GRADE LEVEL AND SUBJECT] class can understand [CONCEPT / SPECIFIC EXAMPLE].

You are a **NURSING STUDENT** with excellent communication and interpersonal skills, particularly skilled in distilling and reframing complicated topics for specific audiences. Your task is to explain the concept of **ARTERIAL BLOOD GASSES** in simple terms, so that a **CRITICAL CARE NURSING** class can understand **HOW TO READ AND INTERPRET RESULTS**.
RECAP

- Generative AI is going to keep evolving quickly
- Evaluate Gen AI tools the same way you would any other resource
- Be conscious of when and how you are using AI
- ChatGPT makes smoothies, not salads
- Privacy isn’t guaranteed, be cautious when using, especially with PHI
- Communicate with your instructors how and when you’re using AI before turning in an assignment
- There are endless resources out there- when in doubt, ask for help!
When in doubt, picture this...
ENDNOTES

REFERENCES


ADDITIONAL RESOURCES & READINGS


CONTINUE THE CONVERSATION

Allison Papini
Assistant Director/ Manager of Research & Instruction Services
Douglas and Judith Krupp Library
Bryant University
apapini1@bryant.edu