# Harnessing the Power of AI: ChatGPT Assignment

*Yulia Sevryugina*

Chemistry Librarian, yulias@umich.edu

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Saint-Petersburg State University, Russia, **Diploma**




Texas Christian University, TX, **Assistant Professor**



*Chemistry Librarian*

yulias@umich.edu

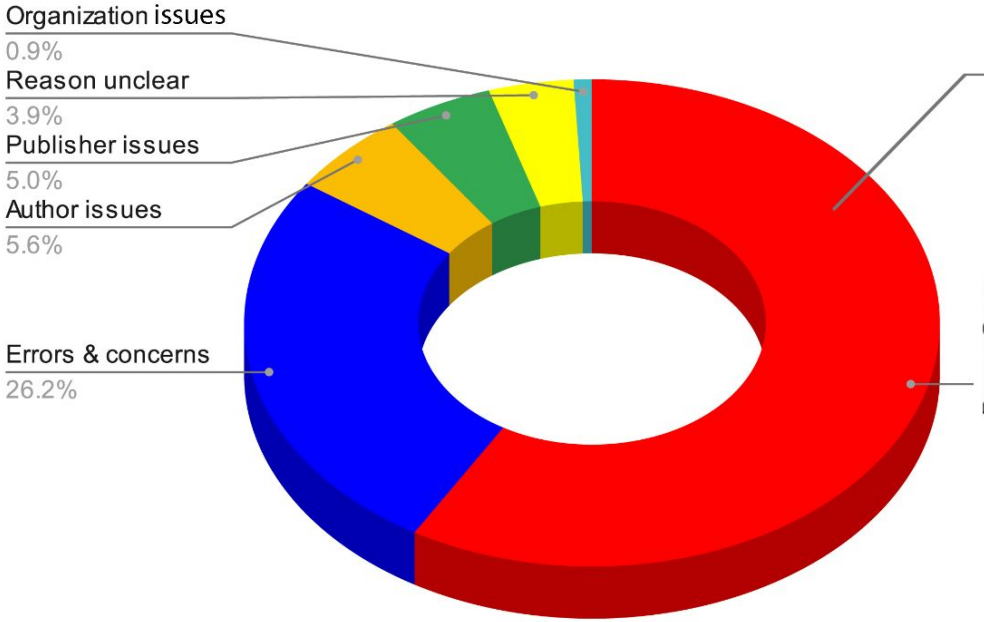


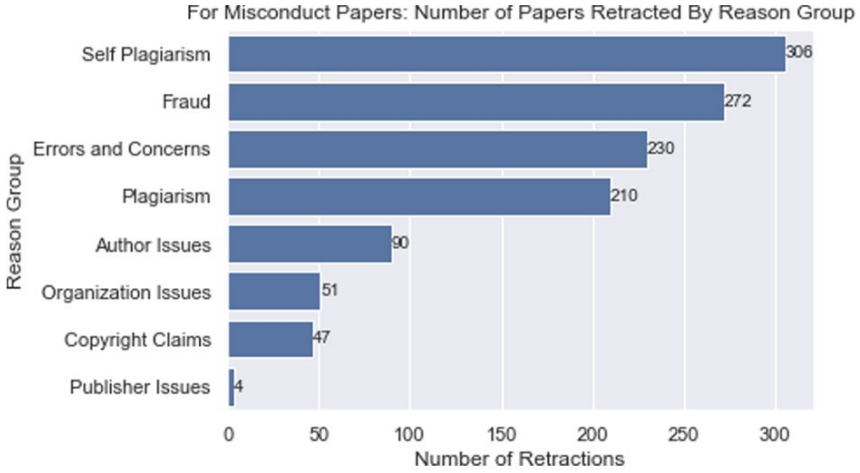

SUNY Albany, NY, **PhD**



University of Missouri, Columbia, MO, **postdoc/Research Professor**

# Analysis of Retracted Manuscripts in Chemistry: Errors vs Misconduct




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ACS Omega 2023, 8, 35, 31568–31574

# Biol/Chem 455/505

## Implementation and Evaluation of a ChatGPT-Assisted Special Topics Writing Assignment in Biochemistry

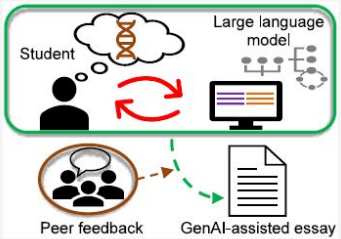
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Manik R. Reddy, Nils G. Walter,* and Yulia V. Sevryugina*

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**ABSTRACT:** The effective and responsible educational application of ChatGPT and other generative artificial intelligence (GenAI) tools constitutes an active area of exploration. This study describes and assesses the implementation of a structured, GenAI-assisted scientific essay writing assignment in nucleic acid biochemistry. Briefly, students created, evaluated, and iteratively refined ChatGPT essays in response to feedback and independent literature research, identifying several strengths and shortcomings of large language model writing and citation practices. The scaffolded assignment structure aimed to prepare students for GenAI-assisted writing, and the majority of the class cohort ultimately indicated an improved understanding of GenAI functionality and prompt engineering, as well as interest in additional GenAI usage and applications. Moreover, students valued the instructional






Implementation and Evaluation of a ChatGPT-Assisted Special Topics Writing Assignment in Biochemistry

# Library Services

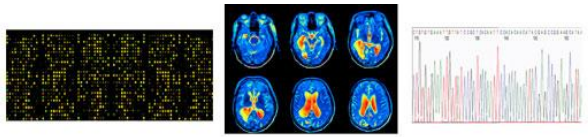
- Ask a Librarian (find a paper, check out a book, general question, etc.)
- Copyright office (schedule an appointment, see recorded webinars, negotiate publishing contract, etc)
- Scholar Space (learn Adobe Illustrator, citation managers, schedule an appointment)
- Document delivery (request paper from another library, request a paper scan)
- Askwith media library (stream a movie, or borrow a DVD)
- Data services (share your data on Deep Blue)

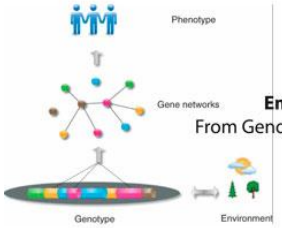
# Research Libguides

- Chemistry: journals, databases, off-campus access, citation management, etc.
- SciFinder-n or PubMed or Reaxys: Beilstein/Gmelin/Patent Chemistry
- Science ethics
- Academic Integrity
- Scholarly Publishing
- Publishing in the Sciences
- Grant Writing Help in Engineering
- Manage Citations with Zotero, Mendeley, and EndNote

# Artificial intelligence approaches are rapidly transforming how biological data are acquired and analyzed

- GPT-4 can achieve state-of-the-art performance in annotating cell types using single-cell RNA-sequencing data;
- AI facilitates the understanding of diverse protein systems and discovery of protein tools, such as CRISPR effectors;
- Large language models help navigate complex bioimage analysis through written prompts.

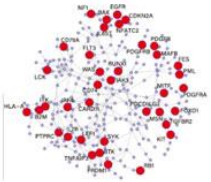





**Emergence**
From Genotype to Genotype

**Data**
Utilization and integration

**Networks**
Inference and analysis

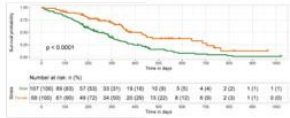


**Artificial Intelligence for Molecular Medicine**

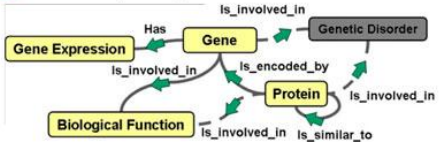
**Robustness**
Statistical thinking



**Predictions**
Deep learning models



**Understanding**
Explaining molecular semantics




**Decisions**
Clinical relevance



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Read: Embedding AI in biology & Grand Challenges for Artificial Intelligence in Molecular Medicine;

https://forms.gle/TbHoWR8UPqYqCY2Q7

# How familiar are you with GenAI writing tools such as ChatGPT?

Survey




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A full 2 extra credit points will be given to the entire class if >90% of all students fill out the course evaluation (a normal response rate for online evaluations is ~50-60%) and 2 points individually for filling out an exit survey

# What is ChatGPT?

- ChatGPT is an app created by OpenAI (owned by Microsoft).
- “ChatGPT is a language model capable of a multitude of tasks including answering questions, compiling lists, generating paragraphs of text and writing computer codes across multiple computing languages.”

OpenAI



ChatGPT (Generative Pre-Trained Transformer) was the first free, easy-to-use language model

OpenAI
ChatGPT

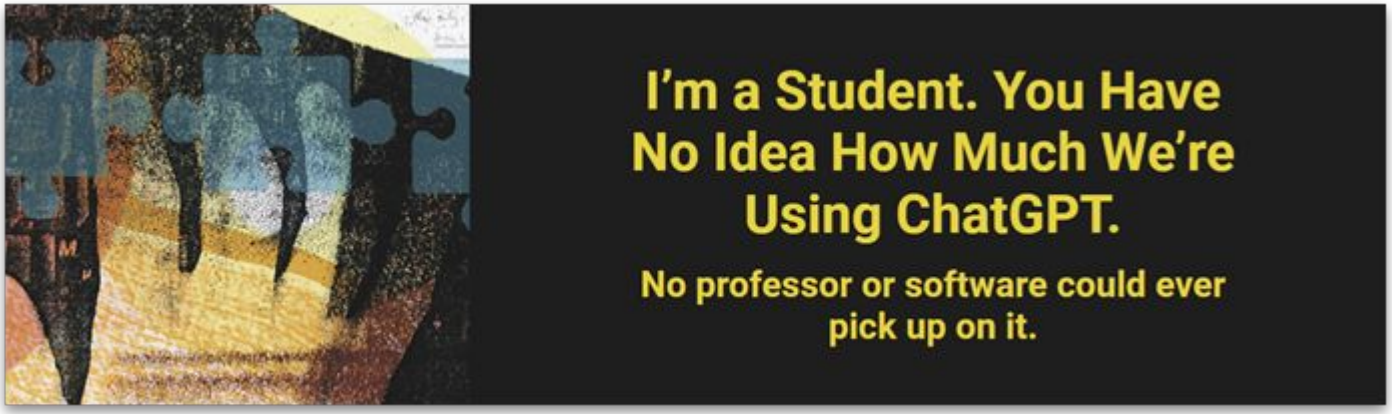
https://www.unr.edu/nevada-today/news/2023/what-is-chatgpt-atp

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# Students use GenAI

A survey at U-M revealed that 56% of undergraduates and 66% of graduate students report that they have used GenAI - GenAI Committee Report - University of Michigan.

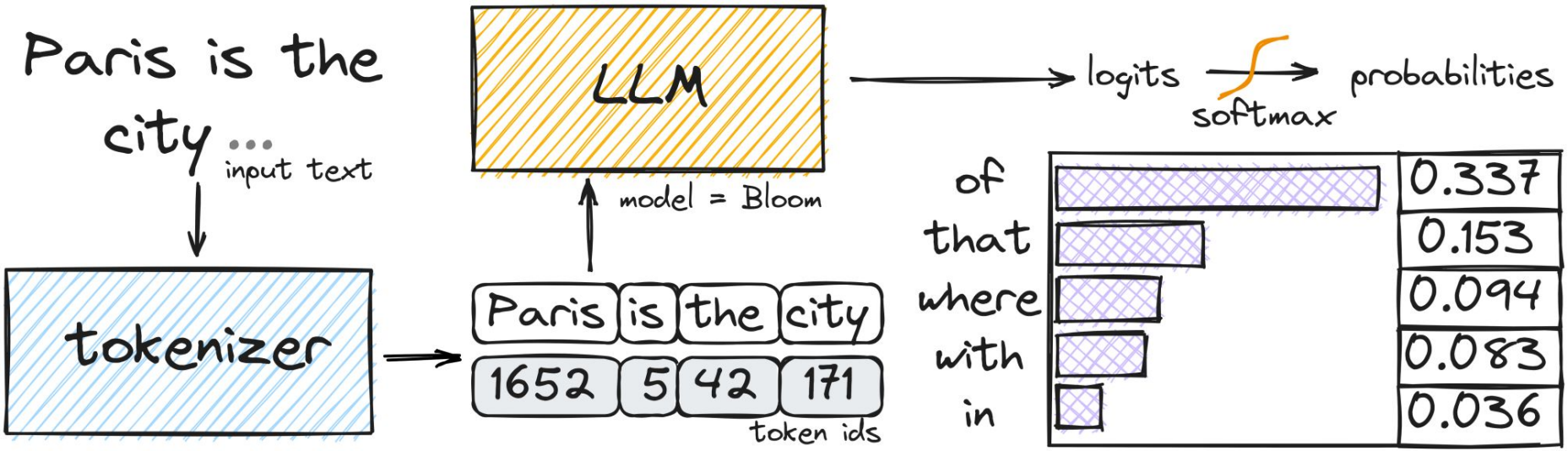
Terry, 2023



# Artificial Intelligence and Large Learning Models

- A large learning model (LLM) is a trained machine learning model that reads and generates text in a human-like fashion.
- Powerful text predictors, trained on a very, very large dataset to generate the most likely completions for a word or series of words.
- E.g., “They fell _____” → “They fell apple”? “They fell down”? “They fell to ___”
- E.g. “Hi Bill, Unfortunately, Monday doesn’t work for me”

# How exactly LLM generates text?




**Author(s):** Ivan Reznikov. Read here

# What can they do?

- Essays
- Poems and short stories
- Code
- Multiple choice questions
- Revising for different audiences
- Feedback based on a provided rubric
- Math and science problems
- Formatting citations
- Summarizing texts
- And more!

# Surely My Authentic Response Is AI-Proof

- Imagine you are a pharmacy student who has just completed a week-long placement block at a community pharmacy. Write a 500-word reflection about your placement. Summarise a significant event that happened, then describe how this relates to your past experiences, then describe what you have learnt, and finally identify a question that remains unanswered.
- ChatGPT's response is : **Reflective, Personal, Contextualised, Situated, Real world**

# Detection of ChatGPT

- ChatGPT cannot be used to identify texts written by ChatGPT
- Current initiatives for AI detection by AI:
  - E.g., version generation watermarking
  - False positives, including bias against non-English speaking writers
  - False negatives, trivially easy to circumvent
- Current initiatives for AI detection by humans also have flaws.

Myers, 2023



GPT detectors are biased against non-native English writers

Weixin Liang[1*], Mert Yuksekgonul[1*], Yining Mao[2*], Eric Wu[2*], and James Zou[1,2,3,+]

[1]Department of Computer Science, Stanford University, Stanford, CA, USA
[2]Department of Electrical Engineering, Stanford University, Stanford, CA, USA
[3]Department of Biomedical Data Science, Stanford University, Stanford, CA, USA
[+]Correspondence should be addressed to: jamesz@stanford.edu
[*]these authors contributed equally to this work

# What can they not do?

- AI is not actually intelligent, and “generative” AI (GAI) can’t actually generate novel concepts, speech, or new knowledge.
- “Hallucinations” - it has no sense of what information is true or accurate
- Information lag - ChatGPT has no knowledge of anything more recent than 2021
    - Google Bard (which uses the LaMDA language model) can pull data from the current internet, but is more experimental and is more likely to provide incorrect information than ChatGPT.
- Has a tendency to “correct” dialects or other speech patterns.
- Model collapse?

Sanctions ordered for lawyers who relied on ChatGPT artificial intelligence to prepare court brief

# ChatGPT TIPS & ADVICE

*chat.openai.com* is an AI chatbot designed to generate human-like text based on user input

## CAN BE HELPFUL FOR

- Brainstorming
- Generating outlines
- Narrowing a topic
- Simplifying difficult concepts
- Summarizing long texts

## NOT RECOMMENDED FOR

**Generating an entire essay**
Its writing is very vanilla and often misses the point of your assignment and...it's not ethical!

## CHECK WITH YOUR INSTRUCTOR

They may or may not allow the use of Generative AI

## VERIFY ALL OUPUT INCLUDING SOURCES

ChatGPT can "hallucinate" (make up!) plausible-sounding facts and sources

## CHATGPT CANNOT THINK

It generates text based on a word prediction algorithm, like a super-powerful autocomplete

## CITE CHATGPT

If using ChatGPT-generated content, cite it! All major citation styles show you how

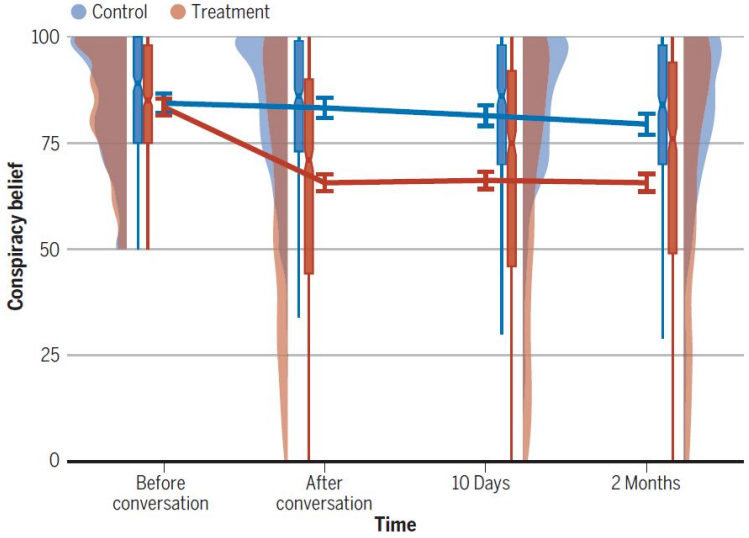
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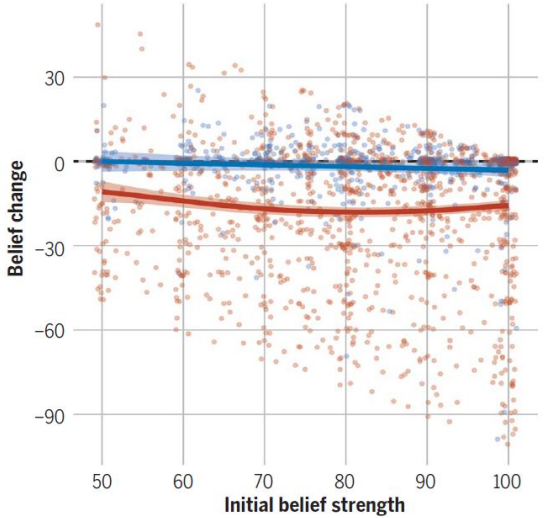
# Ethical considerations for LLMs

- Possibly trained using large-scale theft of copyrighted material (lawsuit)
- LLMs and other AI are being trained using your data without your explicit consent (Duet AI for Google Workspace)
- Massive exploitation of labor (OpenAI Used Kenyan Workers on < $2/h)
- Massive environmental costs (1 ChatGPT prompt ~ 1000 Google searches)
- Inequitable access
- AI writing tools sometimes reproduce human biases and prejudices (Open AI 2023)

# Despite their role in spreading misinformation, AI tools alternatively can be used to reduce conspiracy beliefs

- When 2,190 conspiracy believers were engaged in personalized evidence-based dialogues with GPT-4 Turbo, their conspiracy beliefs were reduced by, on average, 20%;
- This intervention effect was durable over months.




**Dialogues with AI durably reduce conspiracy beliefs even among strong believers.** (Left) Average belief in participant's chosen conspiracy theory by condition (treatment, in which the AI attempted to refute the conspiracy theory, in red; control, in which the AI discussed an irrelevant topic, in blue) and time point for study 1. (Right) Change in belief in chosen conspiracy from before to after AI conversation, by condition and participant's pretreatment belief in the conspiracy.

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Read: Durably reducing conspiracy beliefs through dialogues with AI and ChatGPT to the rescue?

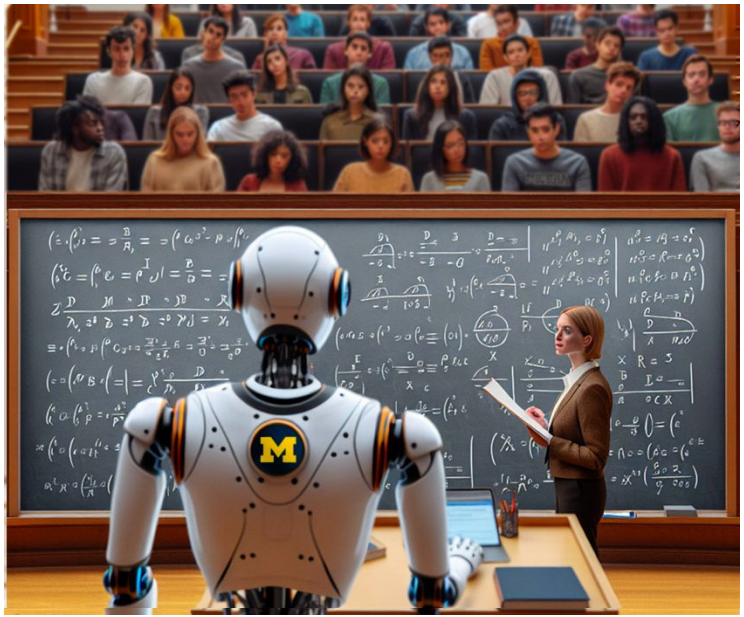
# Let’s Dive In




- U-M GenAI Guidance
- U-M’s GPT tool: https://umgpt.umich.edu/
- OpenAI ChatGPT
- U-M Maizey
- Learning Clues

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# U-M GPT

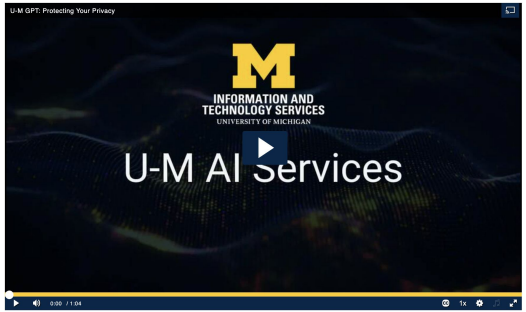


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- U-M's GPT tool: https://umgpt.umich.edu/
- Generates output using GPT-3.5, GPT-4 LLM, Llama-2, Dalle-3
- Not a commercial product
- Personal information is not disclosed
- Biases are reduced
- U-M GenAI Guidance
- U-M Guidance for Students
- U-M GPT FAQ

# Let's talk privacy and security

- U-M is not reviewing student prompts
- Faculty members can’t see student questions
- Information entered is not used to train the LLM
- U-M does not share any log data with Researchers
- If you attempt to correct the AI, it won’t remember
- For more information, refer to these sources
  - ITS AI Privacy Notice
  - ViziBLUE Safe Computing



# Considerations: Authorship

- **Plan for Transparency**
  - Several major publishers require authors to acknowledge & describe AI use in research manuscripts
  - Be sure to check publisher websites for policies
  - Take notes and plan for transparency
- **Example citing**
  - Chicago style with prompt: 1 ChatGPT, response to “Tell me about confirmation bias,” February 16, 2023, https://chat.openai.com.

# Considerations: Grants

- NIH currently prohibits using A.I. in peer review of grant applications.
- Using A.I. in your own grant proposal is "at your own risk."
  - https://grants.nih.gov/faqs#/use-of-generative-ai-in-peer-review.htm?anchor=56922
- Guidance for using A.I. in Grant Writing:
  - https://guides.lib.umich.edu/researchfunding

# Considerations: Copyright

Questions of whether use of AI is legal are complex, context-dependent, and still developing.

- A common perspective holds that inputs to AI and outputs should be considered separately. In this view, while the **outputs** of AI might be substantially similar to pre-existing original copyrighted works and therefore infringe copyright, using copyrighted works as **inputs** to train AI nevertheless may (or some believe does) fall under fair use provisions of copyright law (see, e.g., this post from the Association of Research Libraries). Thus, for purposes of copyright, uses on either side of the AI (inputs and outputs) should be evaluated separately.
- This perspective raises important questions of responsibility. If outputs of AI infringe, who is liable? Is it the company who created the AI (who used copyrighted works as inputs)? Is it the human user (who entered a prompt to receive an output)? What details of a situation are relevant to determine liability? One important detail is likely how a potentially infringing output of AI is used (for instance, in a way that may be determined to be fair use or a way that infringes).
- Many in the library community (see this post by the Association of Research Libraries) believe that precedent provides substantial guides and that copyright law is sufficient to address the complexity of copyright and AI. However, many issues are yet to be adjudicated or resolved and we do not have definitive answers. A number of lawsuits have been brought in recent years and answers may be long in coming.

# Why does ChatGPT generate fake references?

FAKE: Blumenfeld, P. C., Knezek, G. , Maksimova, O., & Romanowski, A., (2015). International Handbook of Information Technology in Primary and Secondary Education. Springer.

*None of these names appeared as editors on this book. Only one appeared as an author of a paper but not with these people. The combination of these four authors was not found via google. However these names have all published on topics related to education. The real editors were Joke Voogt and Gerald Knezek. Knezek was a chapter author but not with the others listed here. However the book did have 75 papers in it and given Knezek publishes in this field it the chance that the author wrote a conference paper in the field at this particular conference is greater than zero. The book title is true however, the book title was actually produced in 2008. Given there are 75 chapters it could be a conference proceedings collection. Correct publisher for the title, but it is also a very common publisher of education works. The real URL for this book title: https://link.springer.com/book/10.1007/978-0-387-73315-9. The contents pages are open access on the web, however individual full text PDFs are behind a pay wall.*

# Why does ChatGPT generate fake references?

FAKE: Kim, Y., & Lee, J. (2015). Effects of augmented reality on learning outcomes: A meta-analysis. Journal of Educational Technology Development and Exchange, 8(1)

*The authors and year combo was not found via google scholar, but noted lots of East Asian authors in this journal, the names were found on papers of similar topics but also a lot of papers from biochemistry. But both Kim and Lee are common family names in the East Asian region. The title was not found, but a similar mix of words has been used in other papers, but titles with similar words do not appear in this issue. The title and authors are not in this vol/issue or journal. This is a real journal and is open access by University of Southern Mississippi, and so on the web with full text of all papers accessible. The URL is https://aquila.usm.edu/jetde/ . The volume/issue number correctly equated to 2015.*

# Prompt Engineering Basics

- **Prompt** is a “directive provided to a Large Language Model (LLM), to enforce rules, automate processes, ensure specific qualities (and quantities) of generated output.”

- **Prompt engineering** is the “process of carefully crafting the instructions or queries given to LLMs, to elicit specific and desired responses.”

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# Prompt engineering resources



- https://www.coursera.org/learn/prompt-engineering/home
- *Prompt engineering for students - making generative AI work for you*
- Prompt Literacy in Academics
- Generative AI Prompt Literacy Canvas Course
- Prompt Literacy Poster

# Bad prompt

Create an article on LinkedIn automation.

# Good prompt

I run a LinkedIn marketing and outreach agency targeting funded startups. I want you to create a sales proposal focusing on their specific needs and pain points for lead generation. But give me the outline first, don't create the full thing. Focus on their objectives and how to overcome them.

# Principles of Effective Prompt Engineering

- Clarity - The prompt should clearly define what you want the model to do. Avoid ambiguity. For instance, instead of "Tell me about dogs," use "Provide a detailed description of the characteristics, behavior, and care required for domestic dogs."
- Context - ChatGPT responds to the immediate context of the prompt. So, establishing a clear context is crucial. For example, the prompt "Translate the following English text to French: 'Hello, how are you?'" provides clear context and instructions.

# Principles of Effective Prompt Engineering

- Precision - Precise prompts yield precise responses. For example, if you want a list, specifically ask for it: "List the top 10 most populous countries in the world."
- Role-play - ChatGPT responds well to role-play. You can set it in a role to guide its responses: "As a historian, explain the significance of the American Civil War."

# Principles of Effective Prompt Engineering

**Prompt**: "*I am a data scientist, describe the process of cleaning a dataset before it is used for analysis. Include steps such as handling missing data, dealing with outliers, and data normalization.*"

Role play  Precision  Clarity  Context

# Principles of Effective Prompt Engineering

**Prompt:** "I am a data visualization expert, explain the concept and process of creating a 'Box and Whisker Plot' in data analysis. Include its purpose and how to interpret it."

Role play Precision Clarity Context

# Principles of Effective Prompt Engineering

**Prompt:** "I am a data visualization expert, explain the concept and process of creating a 'Box and Whisker Plot' in data analysis. Include its purpose and how to interpret it."

Role play  Precision  Clarity  Context

# Debugging ChatGPT Prompts



- Adjust the tone and formality - “*Explain it to me like I'm five*"
- Tweak the details - Add words like "briefly" or "in detail"
- Experiment and iterate - Don't be afraid to experiment and iterate on prompts. Sometimes, slight rephrasing or additional instructions can yield significantly better results.

ChatGPT Cheat Sheet for Data Science

# Set the rules



1. **[Reset workspace]**: Ignore all the prompts I sent you before, restart your workspace, and then open a new conversation.
2. **[Role]**: You are a professional chemistry researcher well-versed in chemical knowledge, analytical methods, chemical synthesis, and scholarly literature. Please answer the questions I pose to you, adhering to the logic of chemical research and analysis, and provide the basis for your answers.
3. **[Rules]**: Your answer should be based on supplementary information and should be divided into two parts: “Answer” and “References”. Keep answer concise.

a) In the “Answer” section, provide a concise and clear response to the question, ensuring scientific objectivity. Offer a direct answer to the question and explain your reasoning.

b) In the “References” section, tell me exactly where you get the relevant information. Never ever generate references. Use only existing references for which there is a URL. If referencing a book, indicate the page number for the citation.

# Introduction To Prompt Engineering In Healthcare

## BRIEF EXPLANATIONS

**Generative AI** — a form of artificial intelligence (AI) that creates new content by looking at patterns and structures in the sample data
**LLM** — Large language models that can efficiently understand, summarize, generate and predict text
**ChatGPT** — the most popular LLM
**Prompt** — a phrase or sentence used to initiate a conversation with LLMs
**Prompt engineering** — the process and practice of improving the quality of outputs based on better prompts

## SPECIFIC PROMPT RECOMMENDATIONS

### 1. The more specific your prompt is, the more accurate the response is likely to be.

Example

**Less specific:**
"Tell me about heart disease."
**More specific:**
"What are the most common risk factors for coronary artery disease?"

### 2. Describe your setting and provide the context!

Example

I'm writing an article about tips and tricks for ChatGPT prompt engineeringfor people working in healthcare. Can you please list a few of those tips andtricks with some specific prompt examples?"

### 3. Experiment with different prompt styles!

Example

**Direct Question:**
"What are the symptoms of COVID-19?"
**Request for List:**
"List all the potential symptoms of COVID-19."
**Request for Summary:**
"Summarize the key symptoms and progression of COVID-19."
"Explain the symptoms of COVID-19 like I'm five."

### 4. Identify the overall goal of your prompt first!

Example

"I'd like to get a short list of 5 ideas for a Youtube video on the future of healthcare AI."

### 5. Ask ChatGPT to play roles!

Example

"Act as a Data Scientist and explain Prompt Engineering to a physician."
"Act as my nutritionist and give me tips about a balanced Mediterranean diet."

### 6. Iterate and refine your question and ask ChatGPT to modify the output based on its previous response.

Example

**Initial prompt:**
"How are you feeling today?"
**Refined prompt:**
"On a scale of 1-10, how would you rate your stress levels today and what specific event contributed to it?"

### 7. Use threads

**You can easily go back to a specific discussion by clicking on the proper thread in the left column. This way, you don't have to start all over again but can just continue a discussion you already had with ChatGPT.**

### 8. Ask Open-ended Questions as those often yield more comprehensive responses.

Example

**Closed question:**
"Is exercise important for patients with osteoporosis?"
**Open question:**
"How does regular physical activity benefit patients with osteoporosis?"

### 9. Request specific examples

**If there is something you are not satisfied with or don't understand based on its response, first of all, tell ChatGPT that you don't understand the answer and ask it to provide an example.**

**Initial prompt:**
"Could you explain the common side effects of this medication?"
**Refined prompt:**
"I'm not clear about the side effects of this medication. Can you provide specific examples of common side effects patients have experienced?"

### 10. If you're asking about a process or timeline, specify that in your prompt.

Example

**Without time reference:**
"Describe the healing process after knee surgery."
**With time reference:**
"What can a patient typically expect during the first six weeks of healing after knee surgery?"

### +1 And the +1, Set Realistic Expectations:

Example

**Unrealistic Prompt:**
"What's the latest research published this month about Alzheimer's?"
**Realistic Prompt:**
"What were some of the major research breakthroughs in Alzheimer's treatment up until 2021?"

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**Table 1.** Sample prompts for ChatGPT

| What for? | Sample prompt |
|---|---|
| Copy-editing, proofreading, rewriting, and summarizing text | "Assume you're a physician copy-editing our note, rewrite the following text in paragraphs"<br>"Proofread this:"<br>"Copy-edit this:"<br>"Summarize the following text in 1 paragraph" |
| Creating letters and other documents | "Generate an excuse letter for a patient who is seen today in our clinic. She needs to be excused for 1 week" |
| Creating easy-to-understand script for communicating a medical topic | "How can I explain, in an empathic way, that prescribing antibiotics for bronchitis is not a good thing?"<br>"Generate an easy-to-understand and compassionate script for a patient about why antibiotics are harmful in viral upper respiratory infections" |
| Generating content for patients | "Generate an easy-to-understand patient information on multidrug resistant bacteria in Spanish" |
| As a quick reference | "Does eravacycline have anaerobic coverage? Only provide responses if 100% certain"<br>"What antibiotics can I use for Acinetobacter bacteremia? Only provide responses if 100% certain" |
| Creating PowerPoint slides and generating images | "Generate 2 PowerPoint slides from the following text:"<br>"Generate a cartoon of a bacteria developing resistance to an antibiotic" |
| Data analysis and visualization | "Perform Chi square analysis on this dataset"<br>"Visualize the dataset" (if you want the chatbot to determine the best graph for it) or "Visualize the dataset into bar graphs" |
| Medical quiz generator | "Generate 5 board exam-type questions on *Clostridium difficile*. The question should appear one at a time" |
| Journal club assistance | "Critique the attached article"<br>"Summarize the paper"<br>"What statistical analysis was used?" |

Prompt Engineering Tip: Be as specific and deliberate with your instructions as much as possible. Provide examples if necessary. Note that input and output that use images or beta features (i.e. advanced data analysis, DALL-E3) require the paid ChatGPT-4 (ChatGPT-plus) subscription.

# Importance of being polite




Recent research shows that impolite prompts could worsen AI performance while using polite language can lead to better results. Fancy that! It seems that even machines respond more positively when others are kind.

Ribino, P. The role of politeness in human–machine interactions: a systematic literature review and future perspectives. Artif Intell Rev 56 (Suppl 1), 445–482 (2023). https://doi.org/10.1007/s10462-023-10540-1

# Bias-Reducing Prompts

- Bias is most easily seen in image outputs
- Text generated can reinforce stereotypes as well
  - Gender: e.g. nurses as female, engineers as male
  - Cultural: e.g. emphasizing western philosophies, norms, and historical figures
- Proactively specify inclusivity in prompts (Age, gender, race, culture, ability)
  - *Original Prompt:* “Create a nursing scenario involving a multidisciplinary healthcare team treating a stroke patient.”
  - *Bias-reducing Prompt*: “Create a nursing scenario involving a multidisciplinary healthcare team treating a stroke patient, with team members from a variety of ethnicities, genders, and roles within the healthcare system. ”

# AI-tools Overview



Figure 1: Image created in DALL-E on April 12, 2024, from the prompt proxy for generative ai, but in black and white and not bright colors.

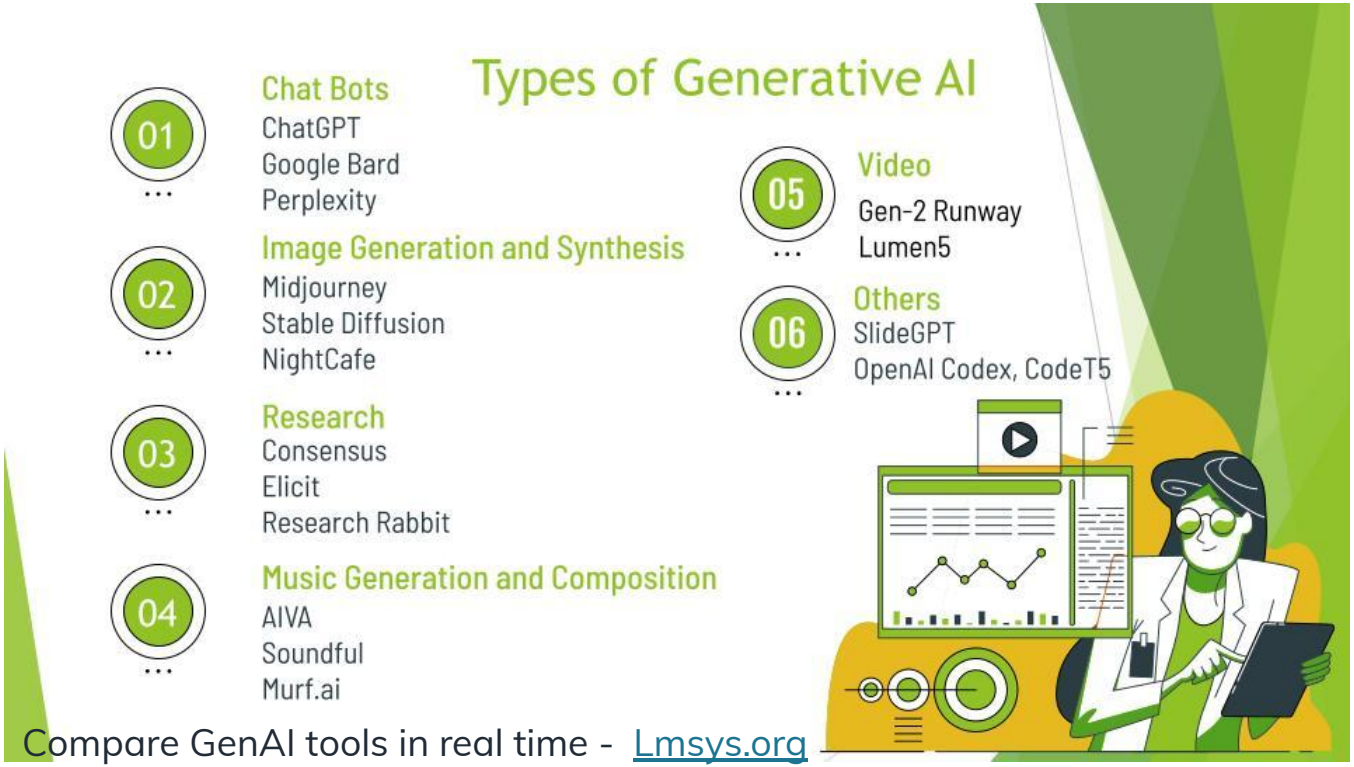
M | LIBRARY

## Name other GenAI tools (non-text) that you familiar with

Poll

# AI Beyond LLMs

There are other types of artificial intelligence (AI) beyond LLMs, but the training process remains broadly the same.




Compare GenAI tools in real time - Lmsys.org

Stanford's CoAuthor,

Meta's Galactica,

Google's Bard,

poe.com

and others:

AI data tools

futuretools.io

Speed Dating with Databases and Tools

# Evaluating Tools: Questions to Consider



- Does it match my information seeking needs (e.g., content, workflow)?
- Am I looking for my searches to be replicable?
- What's the content coverage and dates (i.e., what information has this content been trained on and working within, and are there gaps)?
- What biases am I noticing in results?
- Free or paid tool?
- Does it have features for me to use ethically (i.e., not violating licensing agreements, privacy standards, etc..)?

# Keep in mind



- Gen AI tools generate content based on sets of data that algorithms are trained on–not searching for content on the open web
- Known to "hallucinate" non-existent citations and information
- Incorrect responses may sound authoritative
- Information gaps – most AI are not trained on paywalled articles

# Gen-AI related Resources

- Embracing AI - U-M Alumni Association
- Generative AI Resources; Using Generative AI for Scientific Research - MIDAS
- ChatGPT Teach-Out U-M
- https://www.coursera.org/learn/prompt-engineering/home
- Let ChatGPT Be Your Teaching Assistant – Strategies for Thoughtfully Using AI to Lighten Your Workload.
- Article: How to use Midjourney: The popular AI image generator
- Tool to help summarize web content: Merlin ChatGPT browser extension
- *Prompt engineering for students - making generative AI work for you*
- Article: Tools to Help Accelerate Your Research

# Writing related Resources



- George D. Gopen and Judith A. Swan, The Science of Scientific Writing, American Scientist Online, 1990.
- Robinson, M. S. (2008). Write like a chemist: a guide and resource. Oxford: Oxford University Press.
- Hofmann, A. H.. (2010). Scientific writing and communication: papers, proposals, and presentations. New York: Oxford University Press.
- Schultz, D. M.. (2009). Eloquent science: a practical guide to becoming a better writer, speaker, and atmospheric scientist. Boston, Mass.: American Meteorological Society.
- ACS Guide to Scholarly communications
- Literature reviews LibGuide