

# Critical Evaluation of AI-generated Information

The ROBOT Test and Other Tools

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# Agenda: Our Journey Today

## Warm Up

1. GenAI Basics
2. Evaluation of Information
3. Evaluation of GenAI-generated content
4. Outlook

## Warm Up

### Let's have a look at one example

#### ChatGPT:

What are the ten most endangered animals in Africa?



Here are ten of the most endangered animals in Africa:

1. **Northern White Rhinoceros:** With only two individuals left (both female), the northern white rhino is functionally extinct, with efforts focused on artificial reproduction.
2. **Mountain Gorilla:** Found in the Virunga Mountains and Bwindi Forest, their population has been reduced by habitat loss, poaching, and disease.
3. **African Wild Dog:** With fewer than 6,000 left, African wild dogs face threats from habitat fragmentation, human-wildlife conflict, and disease.
4. **African Forest Elephant:** Smaller than the African savanna elephant, these elephants are critically endangered due to ivory poaching and habitat destruction.
5. **Pangolin:** The world's most trafficked animal, pangolins are hunted for their scales, which are used in traditional medicine.
6. **Ethiopian Wolf:** With fewer than 500 left, it is Africa's rarest carnivore, threatened by habitat loss and disease transmitted by domestic dogs.
7. **Black Rhinoceros:** Poached extensively for their horns, their numbers have drastically fallen, but conservation efforts are helping slowly rebuild populations.
8. **Hawksbill Turtle:** Found in coastal regions of Africa, this sea turtle is critically endangered due to illegal poaching for its shell and habitat degradation.
9. **Addax (White Antelope):** Native to the Sahara, only a few dozen remain due to poaching and habitat encroachment.
10. **Grey Crowned Crane:** This bird species is endangered due to habitat loss, illegal pet trade, and agricultural encroachment.

Conservation efforts are ongoing, but these species face numerous challenges from human activity, climate change, and illegal trade.

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## Warm Up

Let's have a look at one example

**Claude:**

What are the ten most endangered animals in Africa?



Here's a concise list of ten of the most endangered animals in Africa:

1. Mountain Gorilla
2. Black Rhino
3. Ethiopian Wolf
4. African Wild Dog
5. Addax
6. Pangolin
7. Rothschild's Giraffe
8. Cheetah
9. African Penguin
10. Lemur (various species in Madagascar)

Would you like more information about any of these animals or their conservation status?

 Copy  Retry  

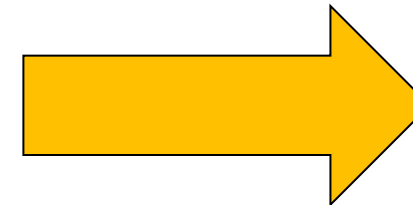


Claude can make mistakes. Please double-check responses.

## Warm Up

Let's compare the answers

ChatGPT		Claude
Addax		Addax
African Forest Elephant		African Penguin
African Wild Dog		African Wild Dog
Black Rhinoceros		Black Rhino
Ethiopian Wolf		Cheetah
Grey Crowned Crane		Ethiopian Wolf
Hawksbill Turtle		Lemur
Mountain Gorilla		Mountain Gorilla
Northern White Rhinoceros		Pangolin
Pangolin		Rothschild's Giraffe



Match = 6

Mismatch = 4

## Warm Up

### Let's share thoughts



Match = 6

Mismatch = 4

Why is there a mismatch between ChatGPT's answers and Claude's?  
**Please share your thoughts in the Zoom chat.**

## Warm Up

### Possible Answers

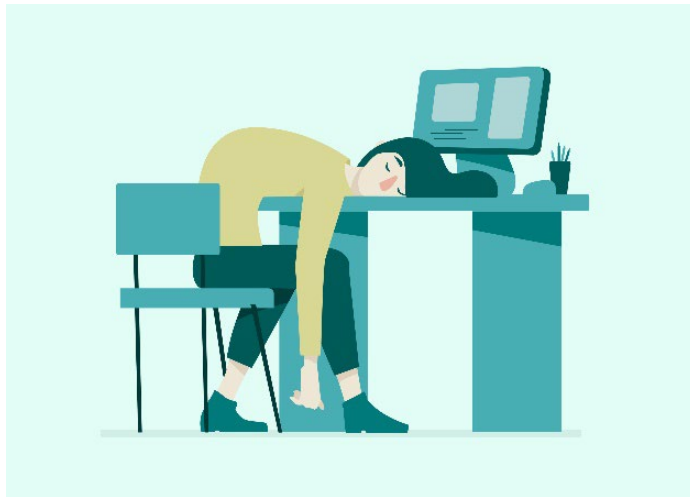


When we use the same input in ChatGPT and Claude, the results are not the same. Why is that? Some possible answers:

- Our input has been translated differently
- Our input was not precise enough
- ChatGPT and Claude use different sources to answer our question
- ChatGPT and Claude use the same source but a different approach
- ChatGPT and Claude are not designed for such tasks
- ...

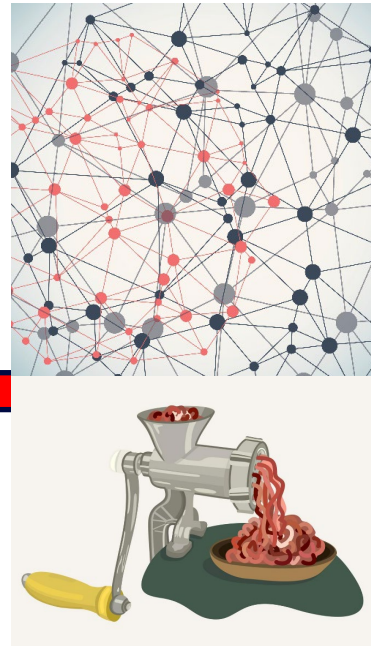
# 1. GenAI Basics

## How Does GenAI Work?



What are the ten most  
endangered animals in Africa?

Prompt / Input



GenAI such as ChatGPT  
or Claude

Statistics / Probability



List of ten animals.

Result / Output / text, image, video ...



# 1. GenAI Basics

## Let's share thoughts

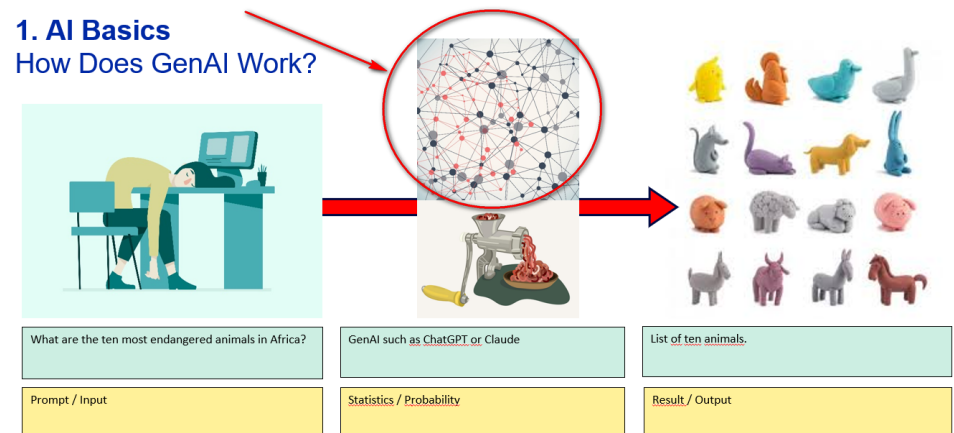


Let's have a second look at our previous example:

What are the implications of knowing that there is a set of data that will be used along with statistics/probabilities to answer my question?

**Please share your thoughts in the Zoom chat.**

### 1. AI Basics How Does GenAI Work?



# 1. GenAI Basics

## Possible Answers

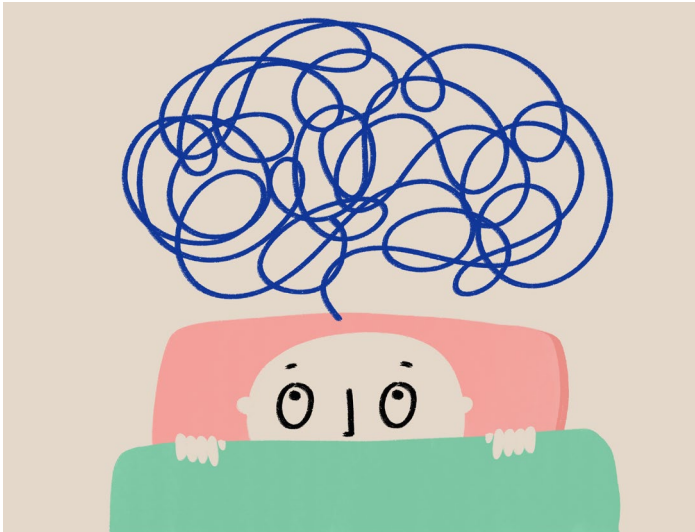


What are the implications of knowing that there is a data set that will be used along with statistics/probabilities to answer my question?

- I don't know what data set ChatGPT and Claude are using
- I don't know if the data contains reliable information
- I don't know what information ChatGPT and Claude base their answers on
- I don't know if there are other AI tools better suited to my topic
- ...

# 1. GenAI Basics

## Temporary Summary



**GenAI is designed to generate text (pictures, videos, etc.).  
It's not designed to tell the truth.**

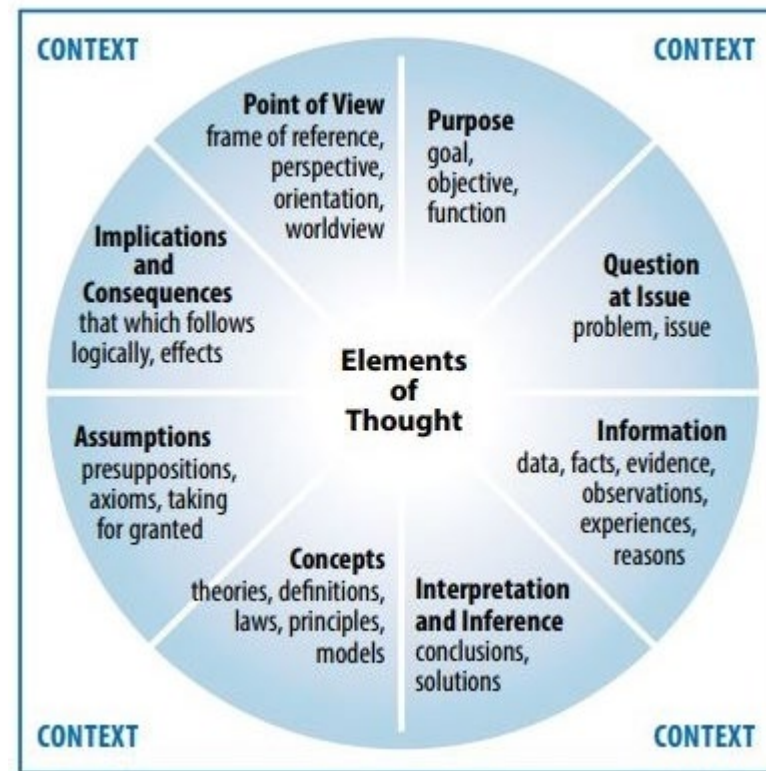
But how do I know if the generated text contains reliable information?

**Let me think first...**

**...maybe I need to critically evaluate the content.**

## 2. Evaluation Of Information

### Context: Paul-Elder Framework for Critical Thinking



Foundation for Critical Thinking (2019). Build a Local Critical Thinking Town Hall. <https://www.criticalthinking.org/pages/critical-thinking-town-hall/1456>

## 3. Evaluation of GenAI-generated content

### What help is out there?

#### Help One: ROBOT Test

Hervieux, S. & Wheatley, A. (2020). The ROBOT test [Evaluation tool]. The LibrAlry.

<https://thelibrary.wordpress.com/2020/03/11/the-robot-test>

#### Help Two: Questions to Ask

UT Southwestern (2024). Generative AI - Issues, Benefits, Reliability and Authority - Questions to Ask.

<https://utsouthwestern.libguides.com/artificial-intelligence/generative-ai-questions>

#### Help Three: How to Critically Evaluate GenAI Output

University College Dublin, (2024). Are You AI Ready? Investigating AI Tools in Higher Education - Student Guide

[https://ucddublin.pressbooks.pub/StudentResourcev1\\_od/chapter/how-to-critically-evaluate-genai-output/](https://ucddublin.pressbooks.pub/StudentResourcev1_od/chapter/how-to-critically-evaluate-genai-output/)

### 3. Evaluation of GenAI-generated content

Let's have a closer look



Choose one of the three links in the chat and have a look at the help on how to evaluate GenAI-generated content.

**Please write down your learning in one sentence in the Zoom chat.**

## 3. Evaluation of GenAI-generated content

### ROBOT test

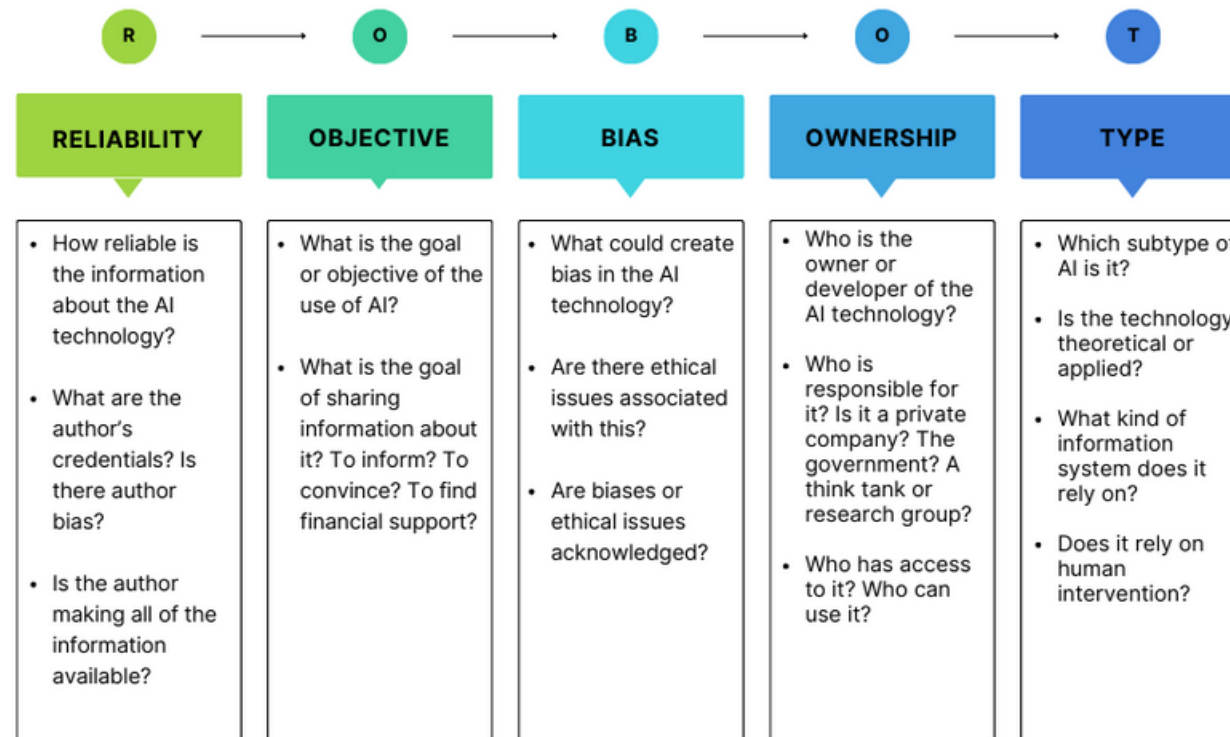


Image adapted from "Separating artificial intelligence from science fiction: Creating an academic library workshop series on AI literacy" by A. Wheatley & S. Hervieux, S, in S. Hervieux & A. Wheatley (Eds.), *The Rise of AI: Implications and Applications of Artificial Intelligence in Academic Libraries* (pp. 65 - 66), 2022, (<https://escholarship.mcgill.ca/concern/books/0r9678471>). Copyright 2022 by Amanda Wheatley and Sandy Hervieux under [CC-BY-NC-SA](#)

### 3. Evaluation of GenAI-generated content

#### ROBOT test

ChatGPT was designed by OpenAI, which is a non profit organisation

ChatGPT uses data from the World Wide Web

ChatGPT can creat hallucinations

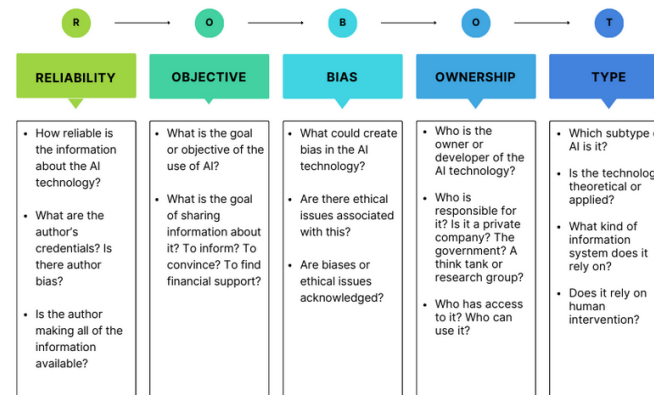
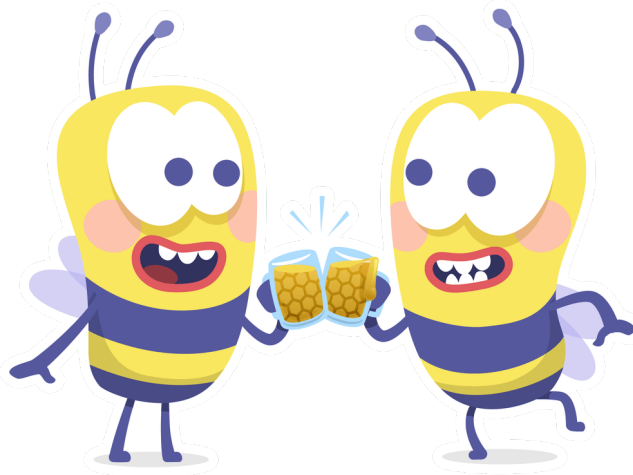


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## 4. Outlook

### Where Do We Go From Here?

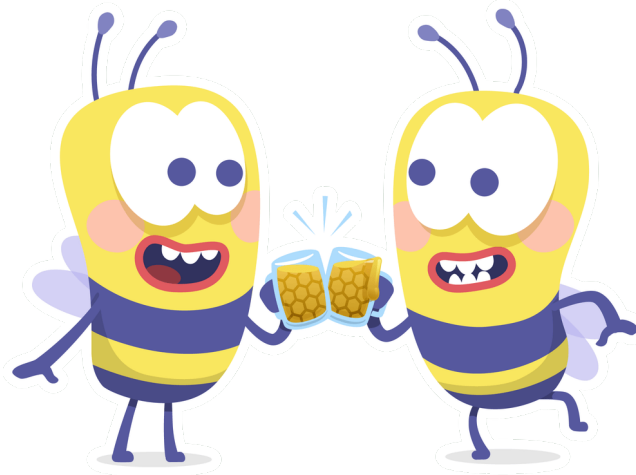


#### Key Points

- GenAI is designed to generate text (pictures, videos, etc.). It's not designed to tell the truth.
- As a result, critical evaluation (e.g. using the ROBOT test) of the content is necessary to avoid misinformation.
- Critical thinking skills are essential for anyone using AI tools.

## 4. Outlook

### Where Do We Go From Here?



What did you learn in today's coffee lecture, that you would like to share with your closest friend?

**Please share your insights in the Zoom chat, or raise your (virtual) hand and turn on your microphone to speak.**

## **Thank You for Your Attention!**

### **Contact us if you have any questions**

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## Additional Quiz

Test your GenAI and critical thinking knowledge!

<https://libguides.scu.edu.au/genAI/evaluation>