

# Empowering Records Management and Archives: A Guide to AI Literacy and Responsible AI Practices

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49th SIO Annual Meeting - The Hague, Netherlands

# Contextualization of AI in Records and Archives Management

“

*Artificial intelligence technologies such as machine learning and natural language processing are transforming how we maintain, preserve, and access records and archives..*



# Introduction

The application of AI in various areas is rapidly growing, and records management and archives are no exception. However, there are still many misunderstandings about the uses of AI and AI itself. These misunderstandings tend to decrease with:

- Increased use of AI
- Increased AI literacy
- Critical thinking about AI in various fields of activity



# AI in the news

BBC

Home News Sport Business Innovation Culture Travel Earth Video Live

## What is AI, how does it work and what can it be used for?

2 hours ago  
By Shiona McCallum, Chris Vallance, Tom Gerken & Jennifer Clarke,  
BBC News



Share

Artificial intelligence (AI) technology is developing at high speed, transforming

Latest Newsletters

*The Atlantic*

ATLANTIC INTELLIGENCE

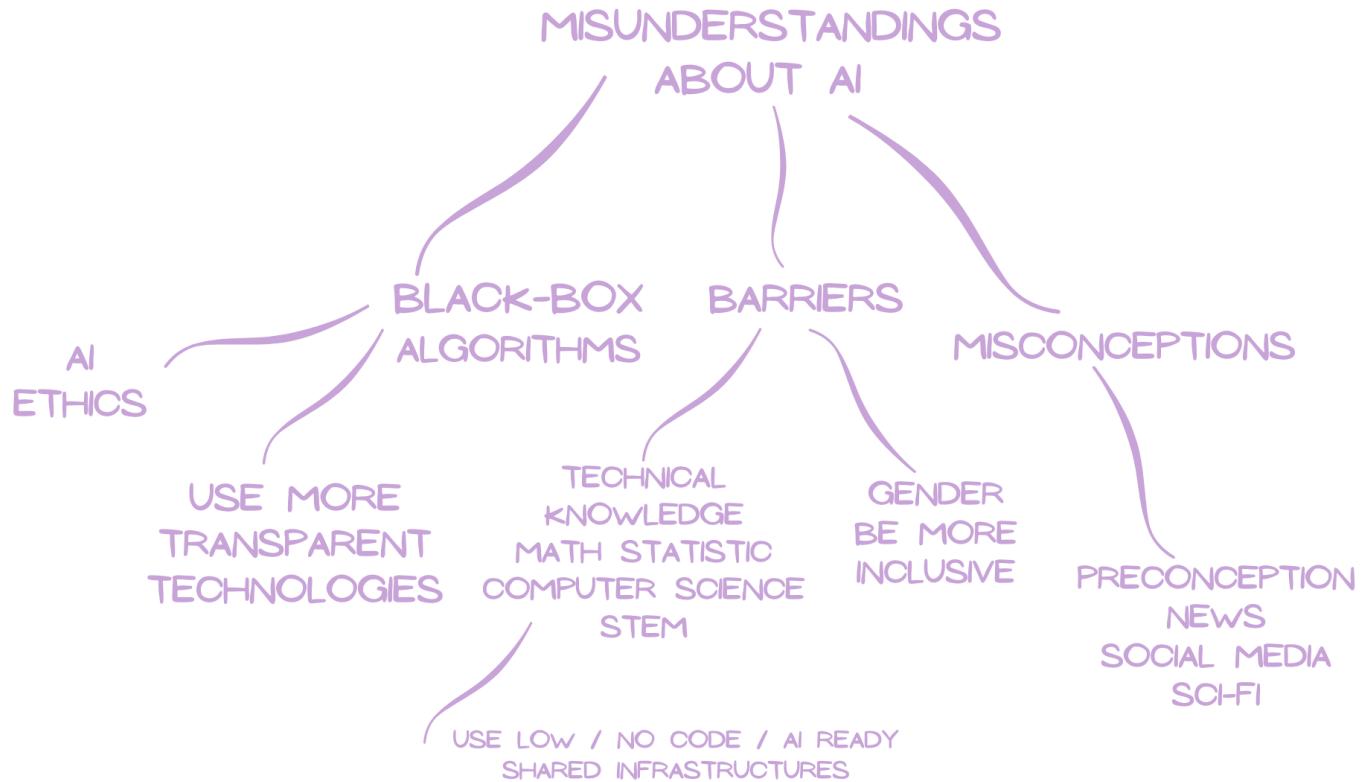
## What Happens When AI Takes Over Science?

AI is fueling a revolution in science that may change our definition of understanding itself.

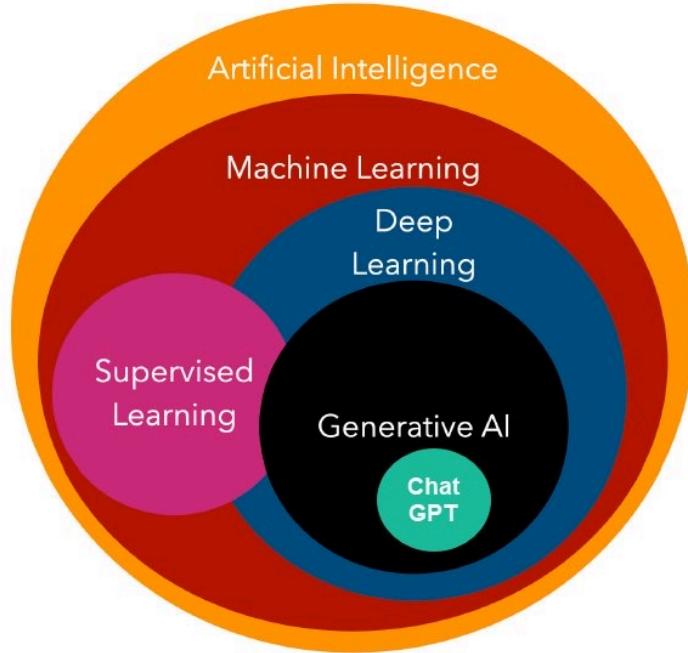


## How the A.I. That Drives ChatGPT Will Move Into the Physical World

Covariant, a robotics start-up, is designing technology that lets robots learn skills much like chatbots do.



# A taxonomy of AI



A taxonomy of GenAI-related disciplines.

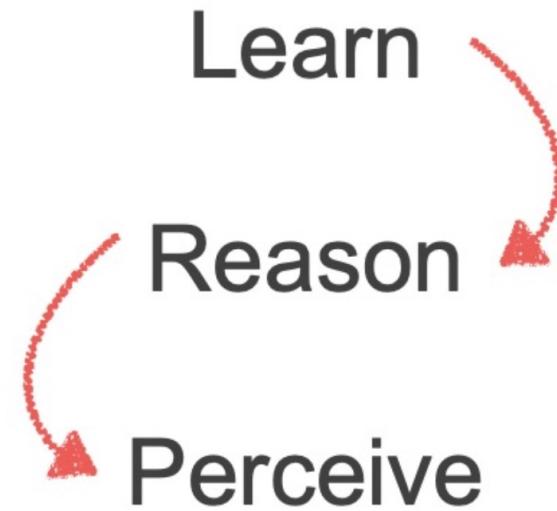
source: Singh, K. (2023)



# Introduction

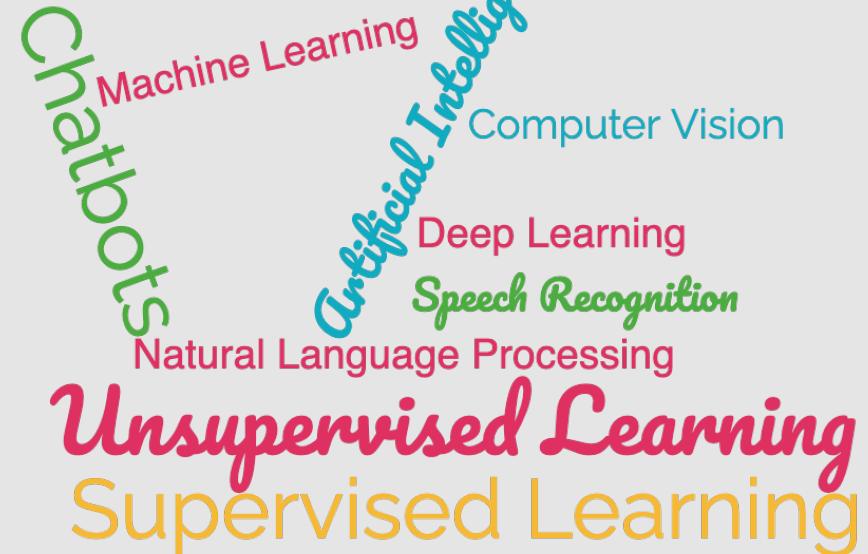


Imitates human  
intelligence in  
machines



Some  
techniques

## Reinforcement Learning



# GPT4o ("o" for omni) - May 2024



Text



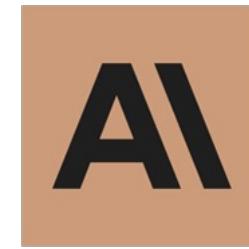
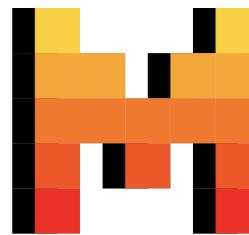
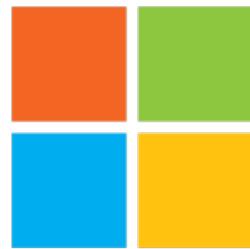
Audio



Vision

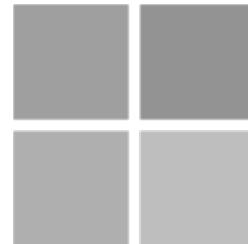
# LLM tools

## Large Language Models

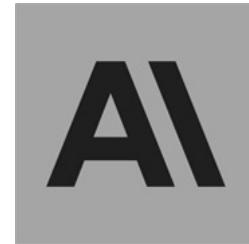
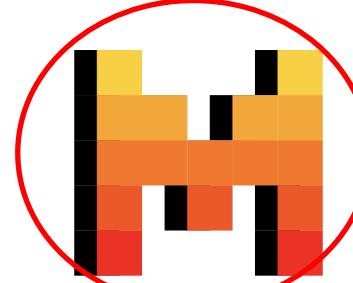


# LLM tools

Some LLM are proprietary



while others are open source





# LLM tools

LLM	Developer	Popular Apps That Use It	Access
GPT	OpenAI	Microsoft, Duolingo, Stripe, Zapier, Dropbox, ChatGPT	API
Gemini	Google	Google apps like Docs and Gmail	API
Llama 3	Meta	AI features in Meta apps, Meta AI chatbot	Open
Claude 3	Anthropic	Slack, Notion, Zoom	API
Mixtral 8x7B and 8x22B	Mistral AI	Brave Browser, Cloudflare, MongoDB	Open
Grok	xAI	Grok Chatbot	Open

# The Role of the InterPARES Project in Advancing AI in Records and Archives



The InterPARES research network 1998-2026

<https://interparestrustai.org/>



Funded by the Social Sciences and Humanities Research Council of Canada (SSHRC).

ITrust AI focuses on:

- Maintaining the trustworthiness of digital records over time and across technological change
- Trustworthy access to and preservation of digital records in all media and forms
- Artificial Intelligence Systems applied to archival functions

# InterPARES Trust®



Social Sciences and Humanities  
Research Council of Canada

Conseil de recherches en  
sciences humaines du Canada

Canada

# InterPARES Trust<sup>®</sup>



- >90 public and private organizational partners in 5 continents: universities, archives, businesses, corporations
- >120 co-applicants (academics)
- >120 collaborators (professionals)
- >60 graduate research assistants

\*numbers as of June 19, 2023

# InterPARES Trust<sup>®</sup>



- Studies are international and interdisciplinary
- Focus on all aspects of archival functions
  - Creation and use of trustworthy records
  - Appraisal and acquisition of archival material
  - Arrangement and description
  - Retention and preservation
  - Management and administration of records and archives
  - Reference and access



## Topics

- Privacy, personal and sensitive information
- Ethical issues about records and about use of AI
- Education, teaching, and AI literacy
- Cultural heritage: digitization, access and retrieval, analysis and data mining
- Records management and metadata
- Municipal, regional, and national digital strategies

# InterPARES Trust<sup>AI</sup>



**InterPARES Trust AI (2021-2026)** is a multi-national interdisciplinary project aiming to design, develop, and leverage Artificial Intelligence to support the ongoing availability and accessibility of trustworthy public records by forming a sustainable, ongoing partnership producing original research, **training** students and other **highly qualified personnel (HQP)**, and generating a virtuous circle between academia, archival institutions, government records professionals, and industry, a feedback loop reinforcing the knowledge and capabilities of each party.

<https://interparestrustai.org/>

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# Challenges and Opportunities in AI Implementation

Records & Archives

# Key points in the relationship between AI RM and Archives

- Differences between general AI and specialized AI
- Control over inputs, outputs, and the black box model.



# RAG (Retrieval-Augmented Generation)



RAG

How to refine  
machine  
learning analysis  
and results?



# Professionals use AI at work but don't want their bosses to know

52% of professionals are  
hesitant to disclose their use of  
AI for important tasks. Around  
the same number fear it could  
make them seem replaceable.

2024 Work Trend Index Annual  
Report from Microsoft and LinkedIn



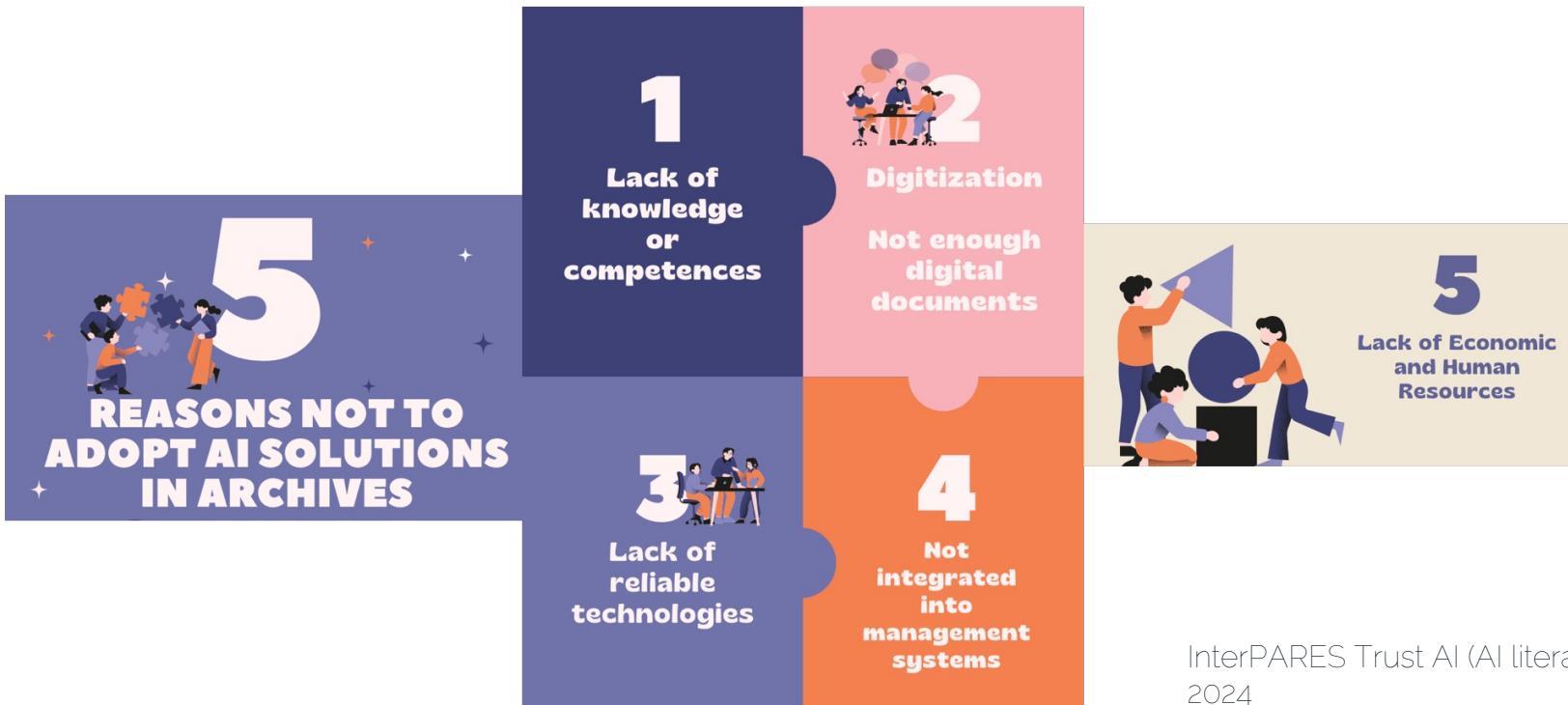
Around 75% of professionals stated that they are using AI at work

BYOAI (Bring Your Own Artificial Intelligence) – They use their own tools instead of the ones provided by the company.

Shadow IT: the use of software, apps, devices, or tech services without the company's or IT department's approval or knowledge

2024 Work Trend Index Annual Report from Microsoft and LinkedIn

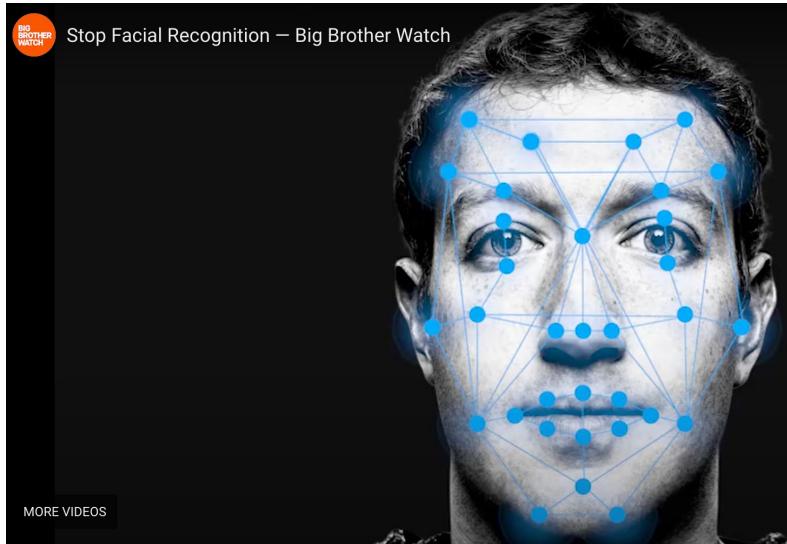
# Survey results



InterPARES Trust AI (AI literacy),  
2024

# AI Ethics and Risk Management

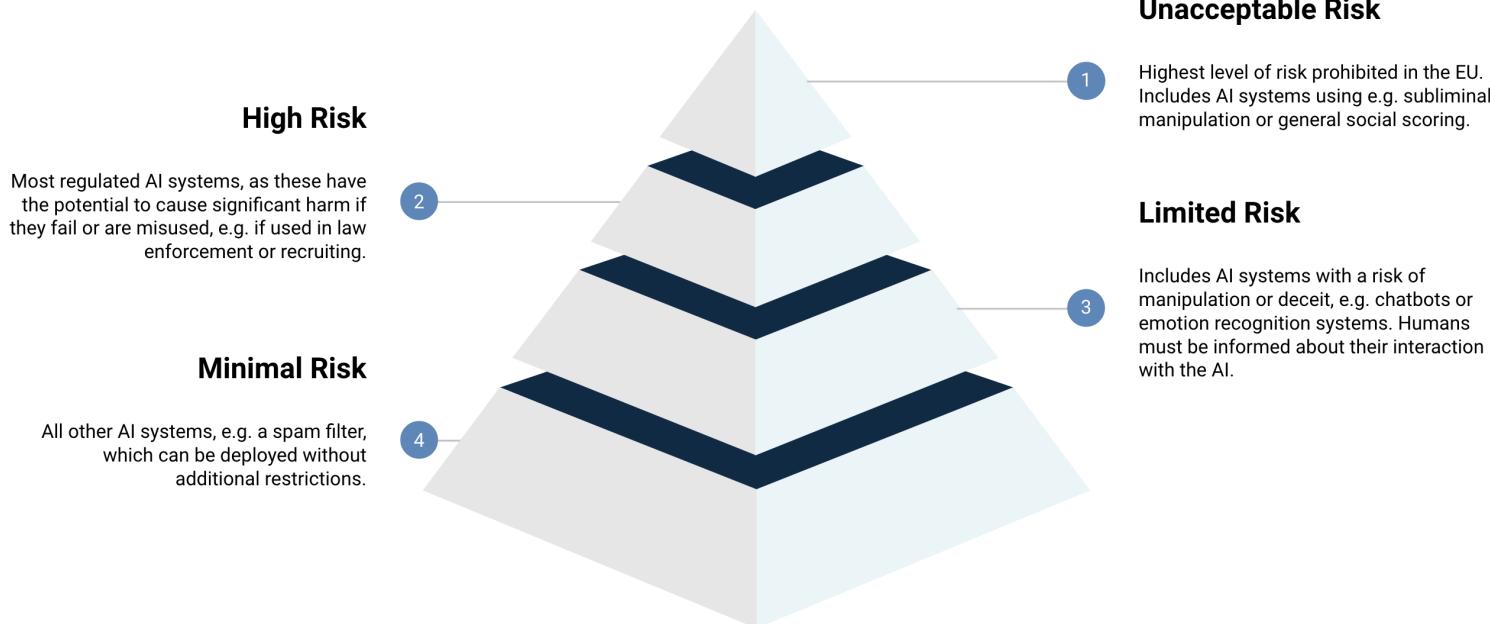
# AI Risks



The large amount of information available online makes algorithms a useful tool for filtering it, but it is crucial to remember that they are not inherently impartial and can be influenced by external factors and biases, which can misrepresent the information presented to users and impact their beliefs.

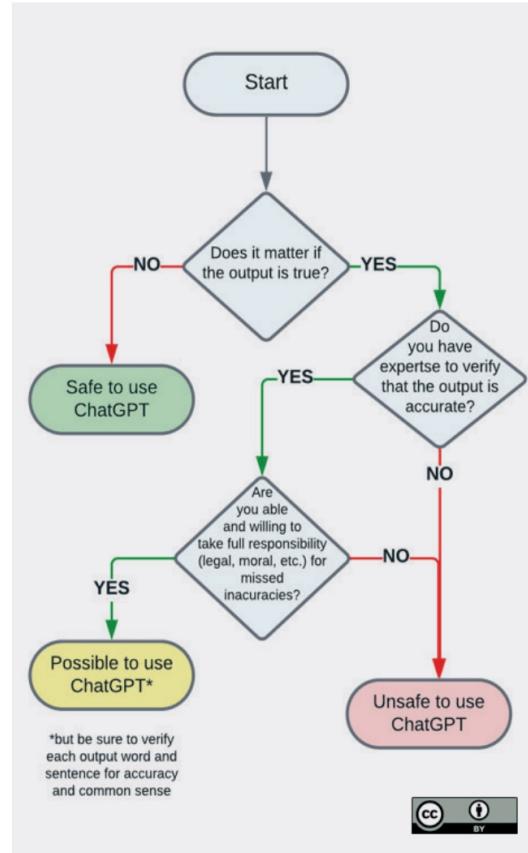


# AI act (European Union)

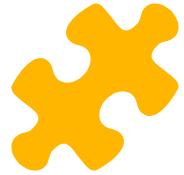


# AI Risks

When is it  
safe  
to use  
ChatGPT?



# Information security issues



## Model improvement

Improve the model for everyone



Default = on

Allow your content to be used to train our models, which makes ChatGPT better for you and everyone who uses it. We take steps to protect your privacy. [Learn more](#)

Done

Likely risks of  
inputting  
sensitive data  
to ChatGPT

# AI Risks

Image  
generator



# AI Risks



Blur



Jesus  
sitting



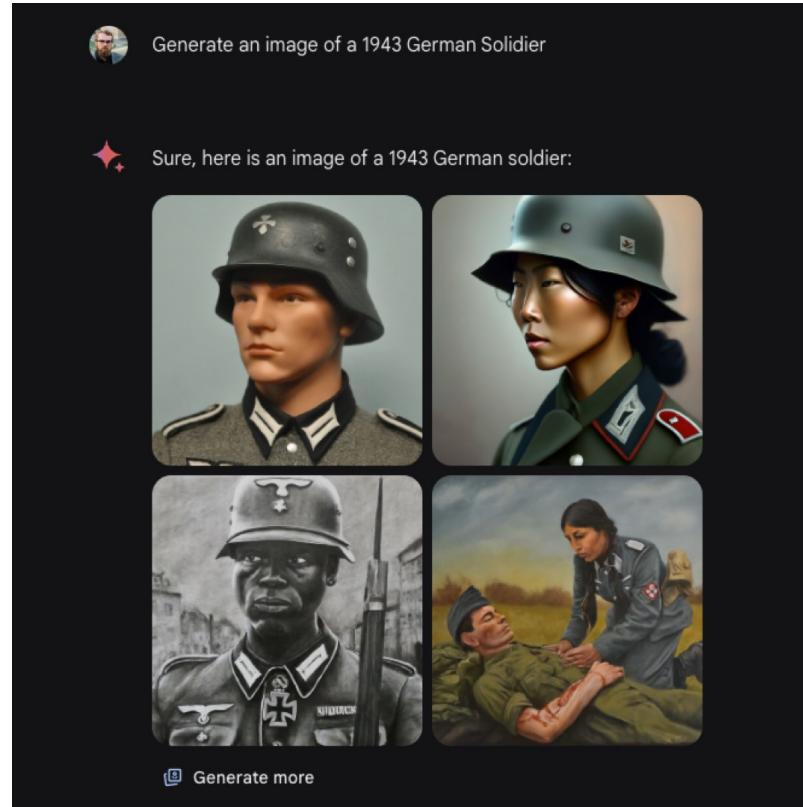
Glasses  
Shade



# AI Risks

## Necessary skills

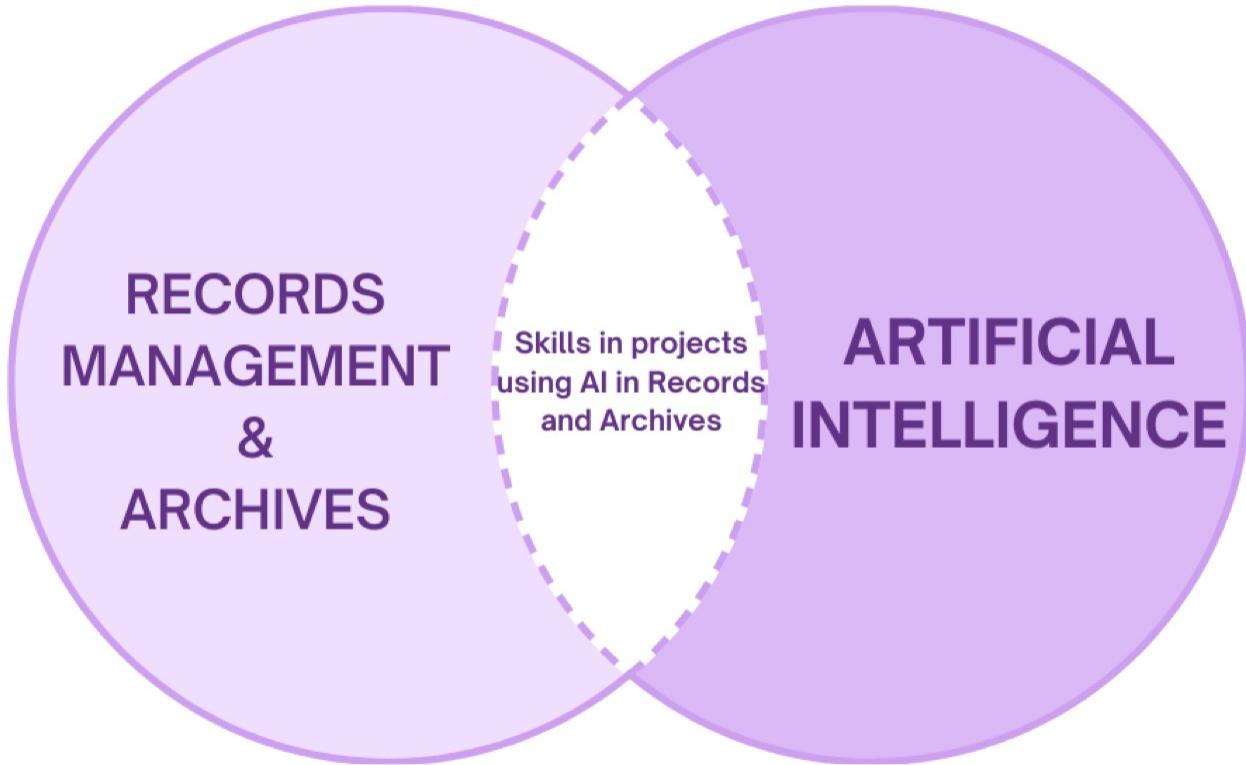
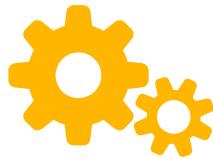
- Evaluation - trained models
- Provenance and Paradata
- Generative AI
- Bias and diversity
- AI adoption and Governance



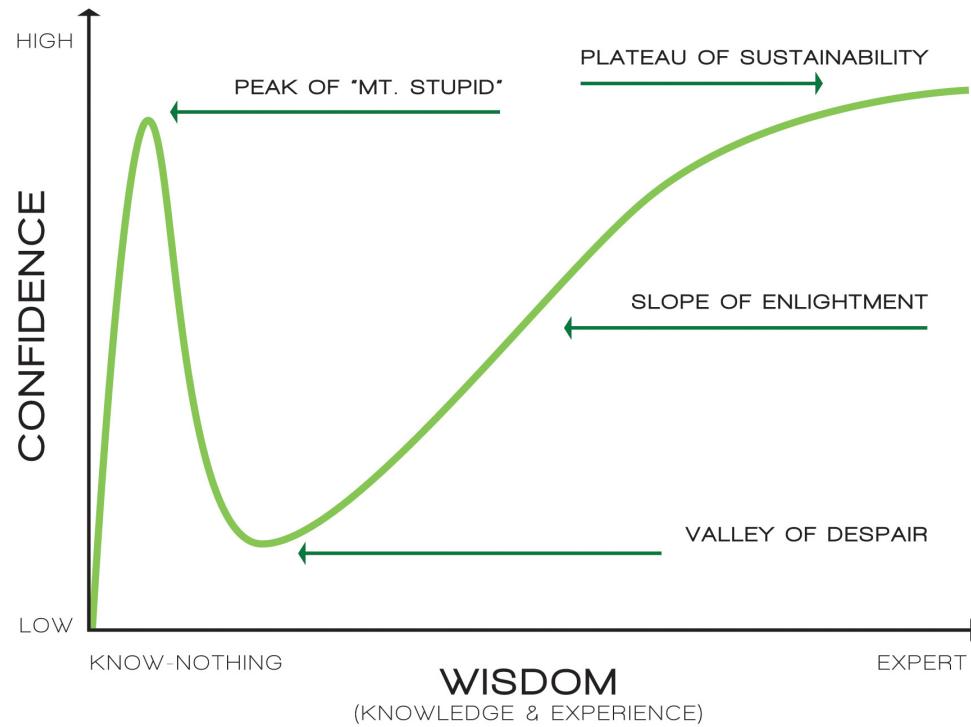
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# Essential AI Skills for Professionals

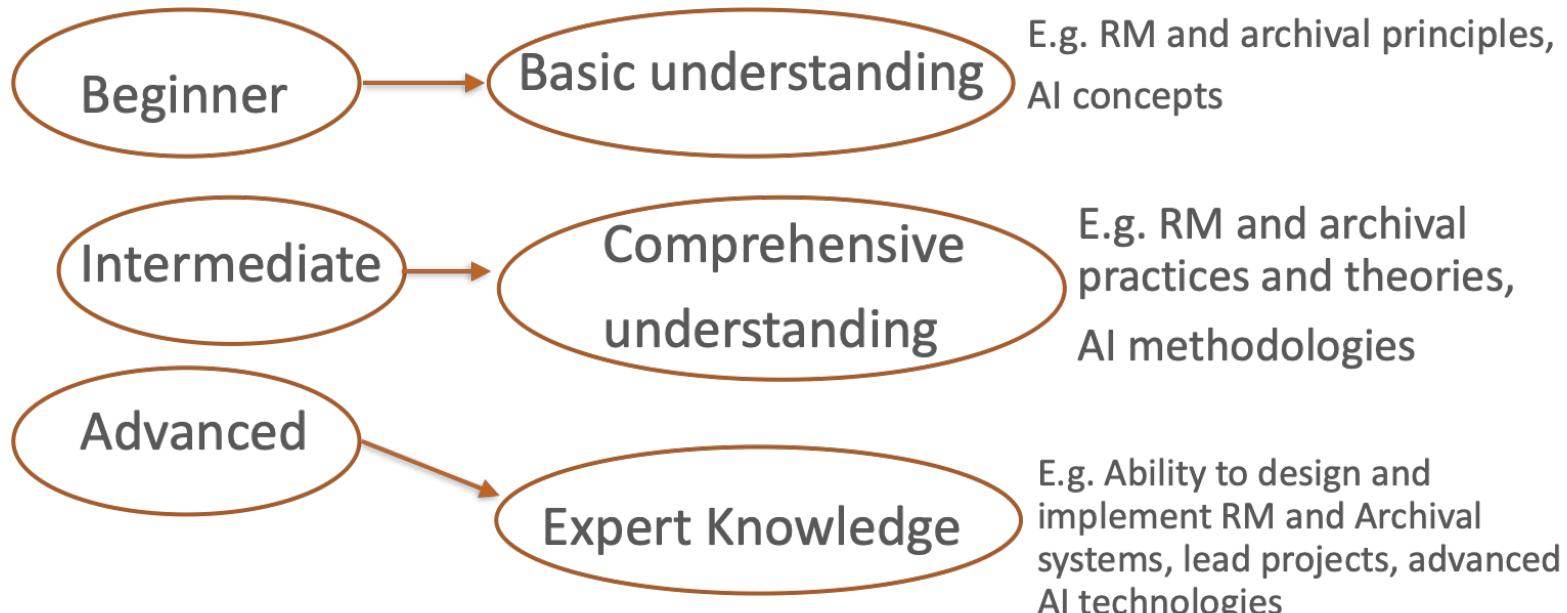
Records management & Archives

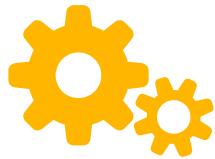


# Dunning-Kruger effect



# Levels of literacy

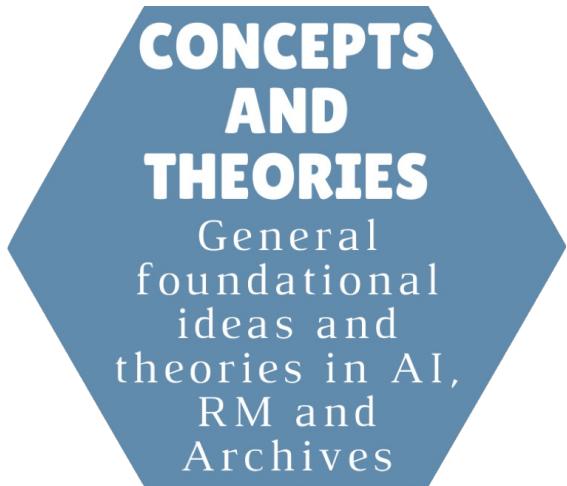




# Essential Skills

- How to lead projects?
- How to develop projects?
- How to be an effective team member?

# Essential Skills



BBC

Home News Sport Business Innovation Culture Travel Earth Video Live

Authentic: Merriam-Webster's word of the year

27 November 2023

Share

Merriam-Webster has picked its word of the year.

"Authentic" is the top word of 2023, according to America's oldest dictionary. Merriam-Webster said it saw a "substantial increase" in online searches for it this year. The interest was "driven by stories and conversations about AI [artificial intelligence], celebrity culture, identity, and social media", the dictionary publisher said. One reason many people search for the word is because it has a number of meanings, including "not false or imitation" and also "true to one's own personality, spirit, or character".



# Essential Skills

## Records & Archives

### DATA LITERACY

Understanding and working with data, recognizing patterns, and interpreting results

### DATAFICATION AND DIGITAL TRANSFORMATION

The process of turning many aspects of society into data-driven ones

### AI-INTEGRATED RECORDS MANAGEMENT LITERACY

RM principles in an AI-driven environment

### AI-ENHANCED ARCHIVAL SCIENCE LITERACY

Integration of AI within the domain of Archival Functions

### PROVENANCE AND PARADATA

Tracking the origin and context of data used in AI



# Data for AI

It is important to approach the Data Lifecycle, which includes:

1. Acquisition
2. Cleansing
3. Modeling
4. Implementation
5. Optimization
6. Analysis
7. Visualization
8. Evaluation
9. Sharing
10. Erasing
11. Archiving



# Essential Skills

## Computing

### MACHINE LEARNING

Supervised,  
semi-supervised,  
unsupervised

### COMPUTER VISION

AI applications  
that involve  
visual  
processing and  
interpretation

### GENERATIVE AI

AI applications  
in natural  
language  
processing and  
content  
generation

### ALGORITHMS

Implementation  
of algorithms  
and contextual  
analysis



# Essential Skills

## Ethics

### BIAS AND DIVERSITY

Addressing biases in AI.  
Promote diversity

### ACCOUNTABILITY AND ETHICS

Ensuring AI systems are accountable and align with ethical standards

### DATA PROTECTION AND SENSITIVITY

Ensuring the security and appropriate handling of sensitive data

### TRANSPARENCY AND EXPLAINABILITY

Making AI operations understandable to the public.

### LEGAL CONCERNs

Regulations and legalities surrounding AI, such as the AI Act



# Essential Skills

User-centric

## **PROBLEM-SOLVING WITH AI**

Using AI to address complex issues and find solutions

## **AI DESIGN AND INTERACTION**

Designing AI systems that are teachable and user-centered.

## **TESTING AND ITERATION**

Methods for evaluating and refining AI systems



# Essential Skills

## Organization

### AI ADOPTION AND GOVERNANCE

Strategies for adopting AI and overseeing its use

### COLLABORATION AND COMMUNICATION

Enhancing collaboration across disciplines and effective communication about AI



# Archives, Records and AI Literacy Framework



InterPARES Trust<sup>RI</sup>



# Thanks!

## Any questions?

You can find me at [www.linkedin.com/in/rockembach](https://www.linkedin.com/in/rockembach) &  
[moises.rockembach@gmail.com](mailto:moises.rockembach@gmail.com)

