

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

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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 Sibona McCallum, Chris Vallance, Tom Gerken & Jennifer Clarke,
BBC News

Share



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

Latest Newsletters

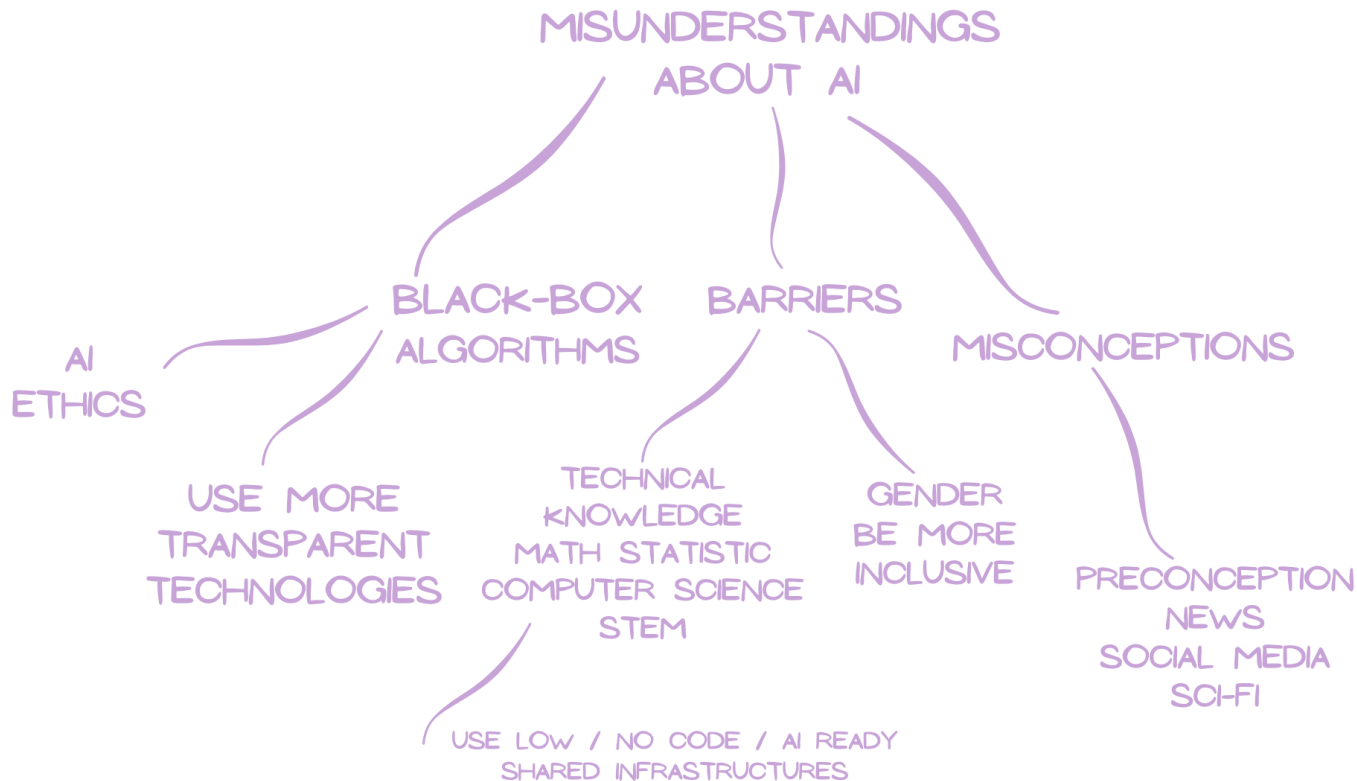
The Atlantic

ATLANTIC INTELLIGENCE

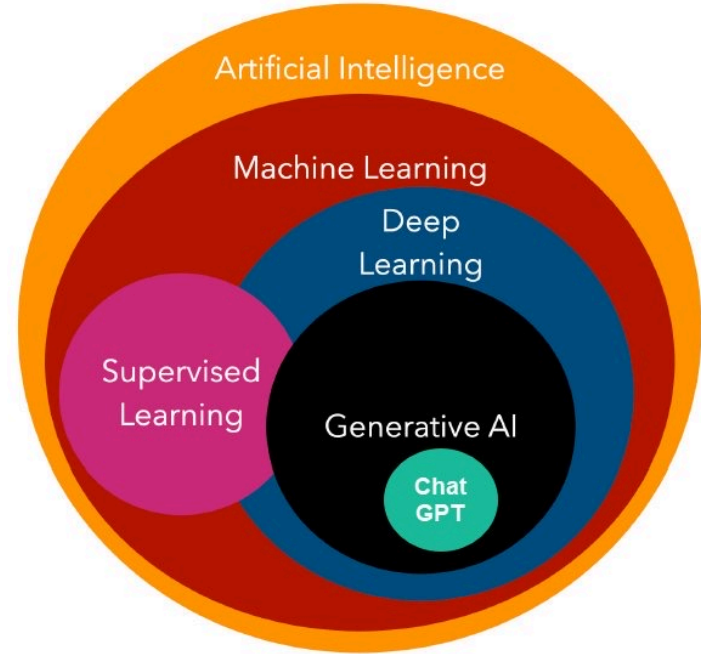
What Happens When AI Takes Over Science?

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





A taxonomy of AI

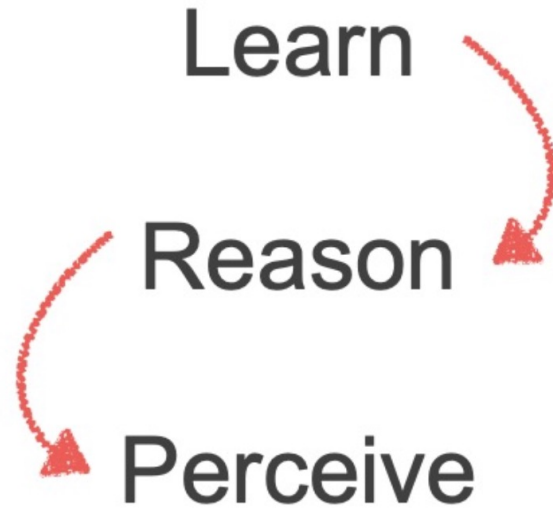


A taxonomy of GenAI-related disciplines.

source: Singh, K. (2023)

Introduction

Imitates human
intelligence in
machines





Some
techniques

Reinforcement Learning

Chatbots

Machine Learning

Artificial Intelligence

Computer Vision

Deep Learning

Speech Recognition

Natural Language Processing

Unsupervised Learning

Supervised Learning

GPT4o ("o" for omni) - May 2024



Text



Audio



Vision



LLM tools

Large Language Models

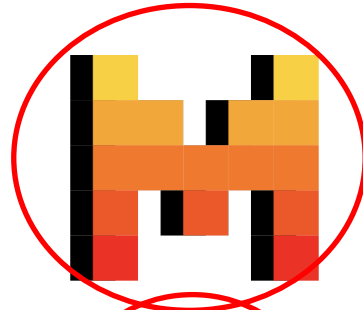




LLM tools

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

InterPARES Trust^{AI}



The InterPARES research network 1998-2026

<https://interparestrustai.org/>

InterPARES Trust^{AI}



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^{RI}



Social Sciences and Humanities
Research Council of Canada

Conseil de recherches en
sciences humaines du Canada

Canada

InterPARES Trust^{RI}



- >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^{RI}



- 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

InterPARES Trust^{AI}



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 AI



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/>

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.

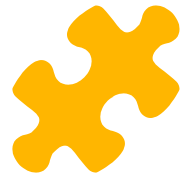


RAG (Retrieval-Augmented Generation)



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.

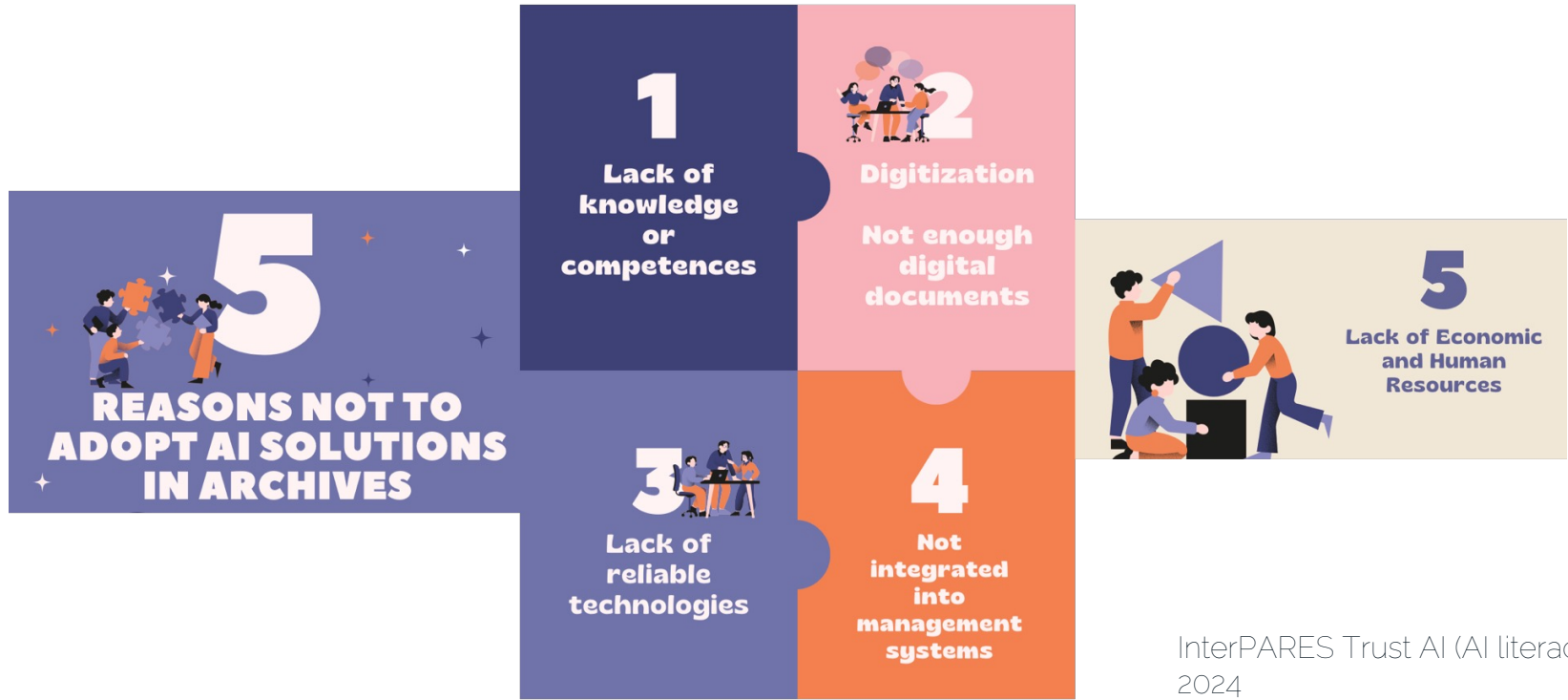


Around 75% of professionals stated that they are using AI at work

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

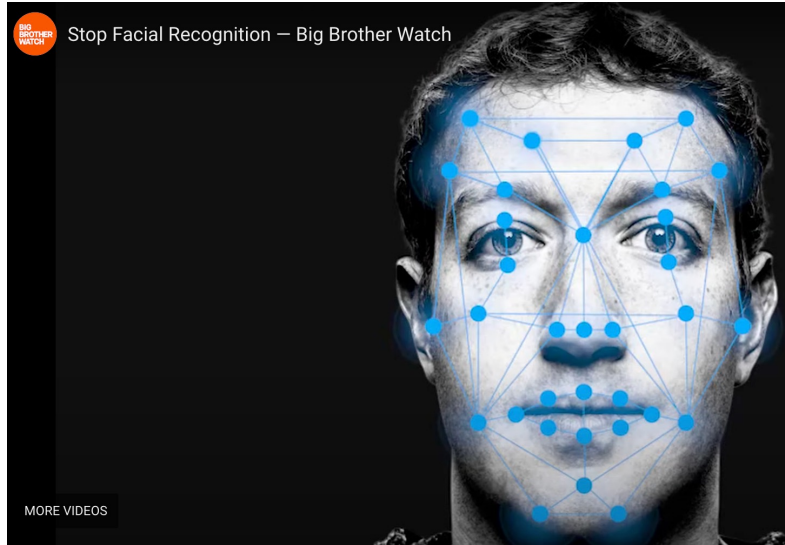
Survey results



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.



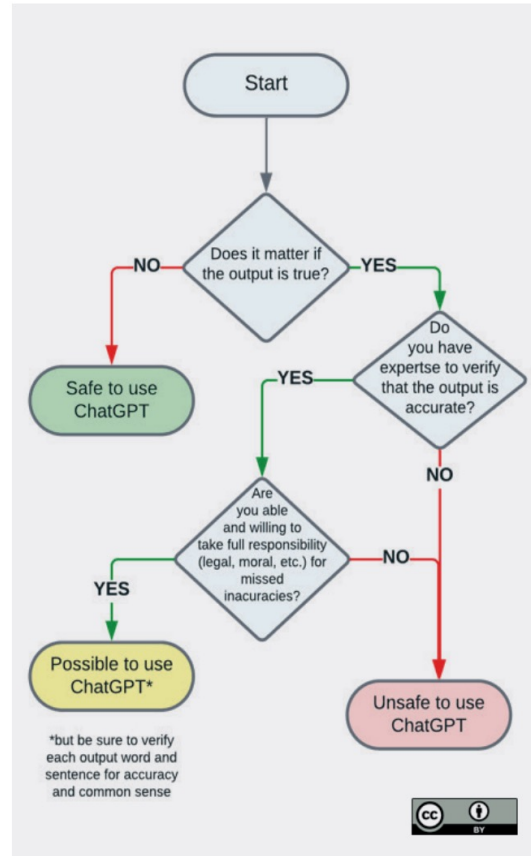
AI act (European Union)



AI Risks



When is it
safe
to use
ChatGPT?



Unesco, 2023

Information security issues



Model improvement

Improve the model for everyone



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

Default = on

Likely risks of inputting sensitive data to ChatGPT

AI Risks



Image
generator





AI Risks



Blur



Jesus
sitting



Glasses
Shade

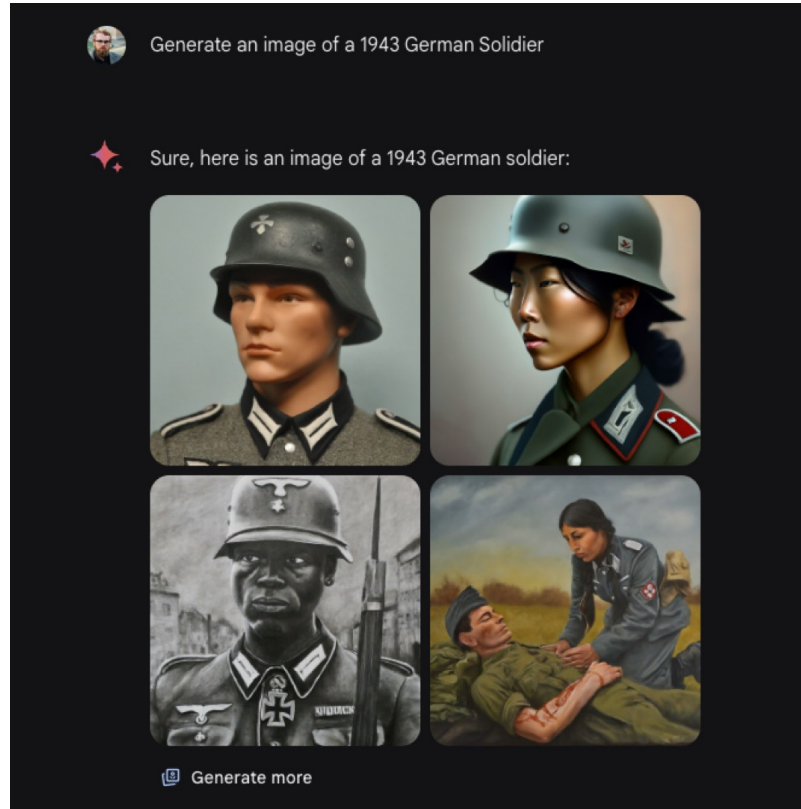


AI Risks



Necessary skills

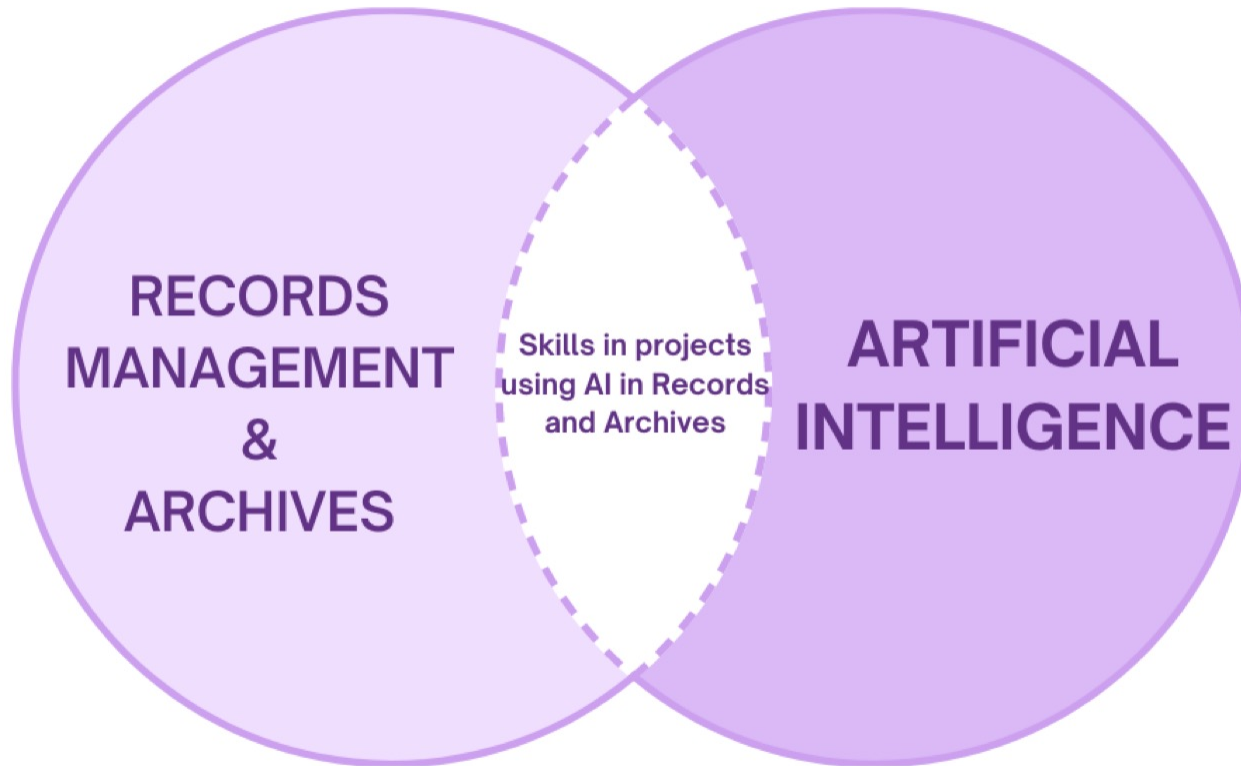
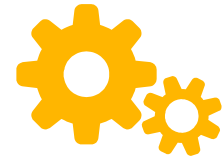
- Evaluation - trained models
- Provenance and Paradata
- Generative AI
- Bias and diversity
- AI adoption and Governance



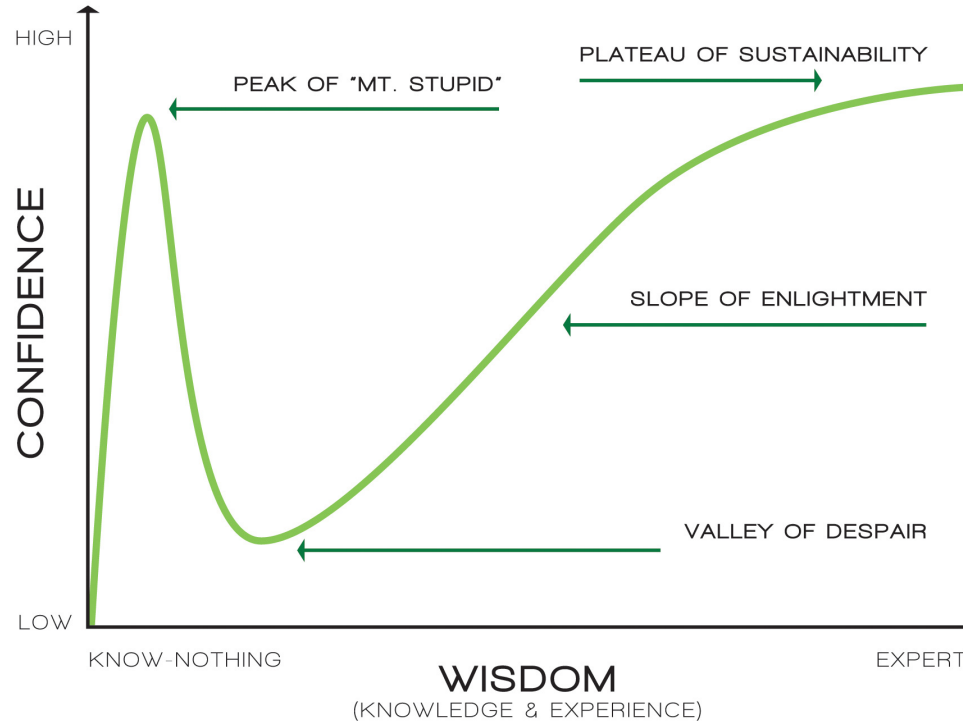
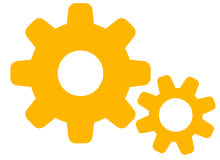
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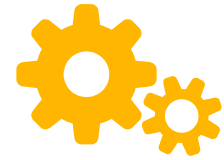
Essential AI Skills for Professionals

Records management & Archives

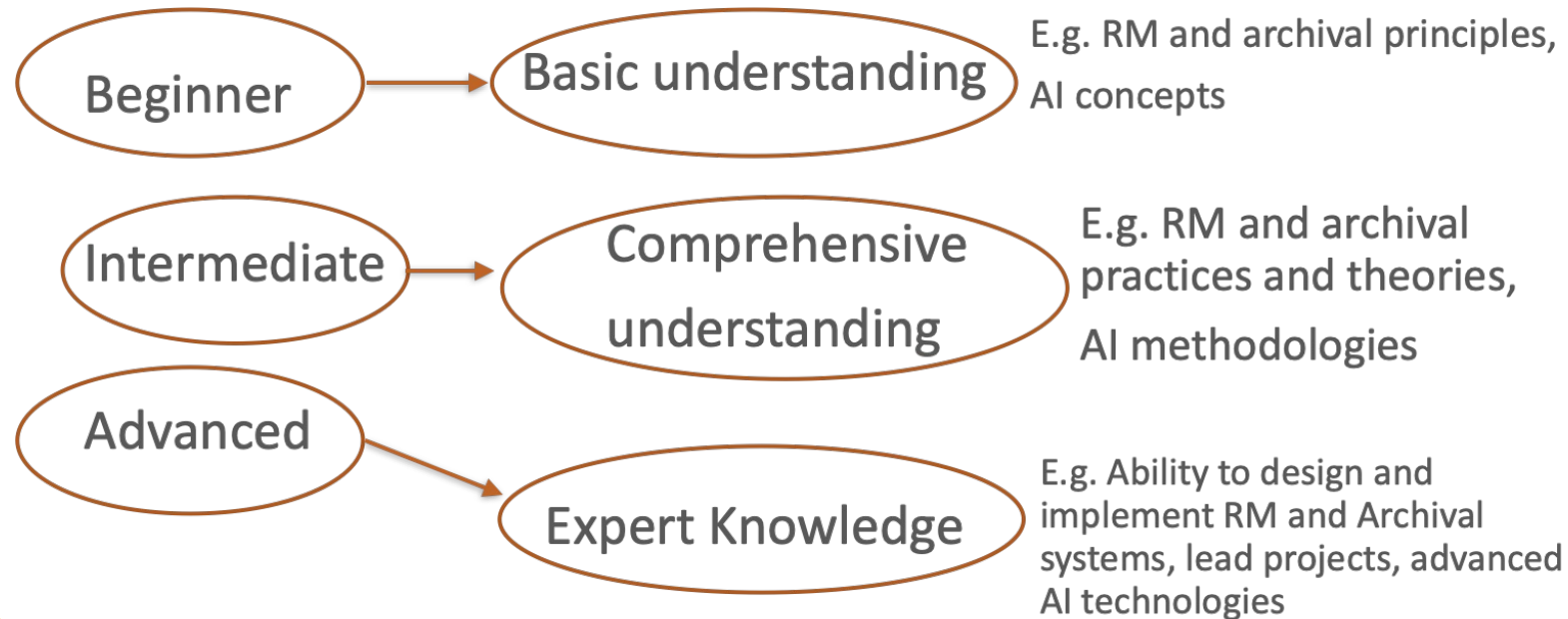


Dunning-Kruger effect

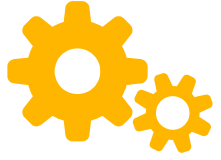




Levels of literacy



Essential Skills



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



Essential Skills

CONCEPTS AND THEORIES

General
foundational
ideas and
theories in AI,
RM and
Archives



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





Thanks!

Any questions?

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