AI literacy in a research context

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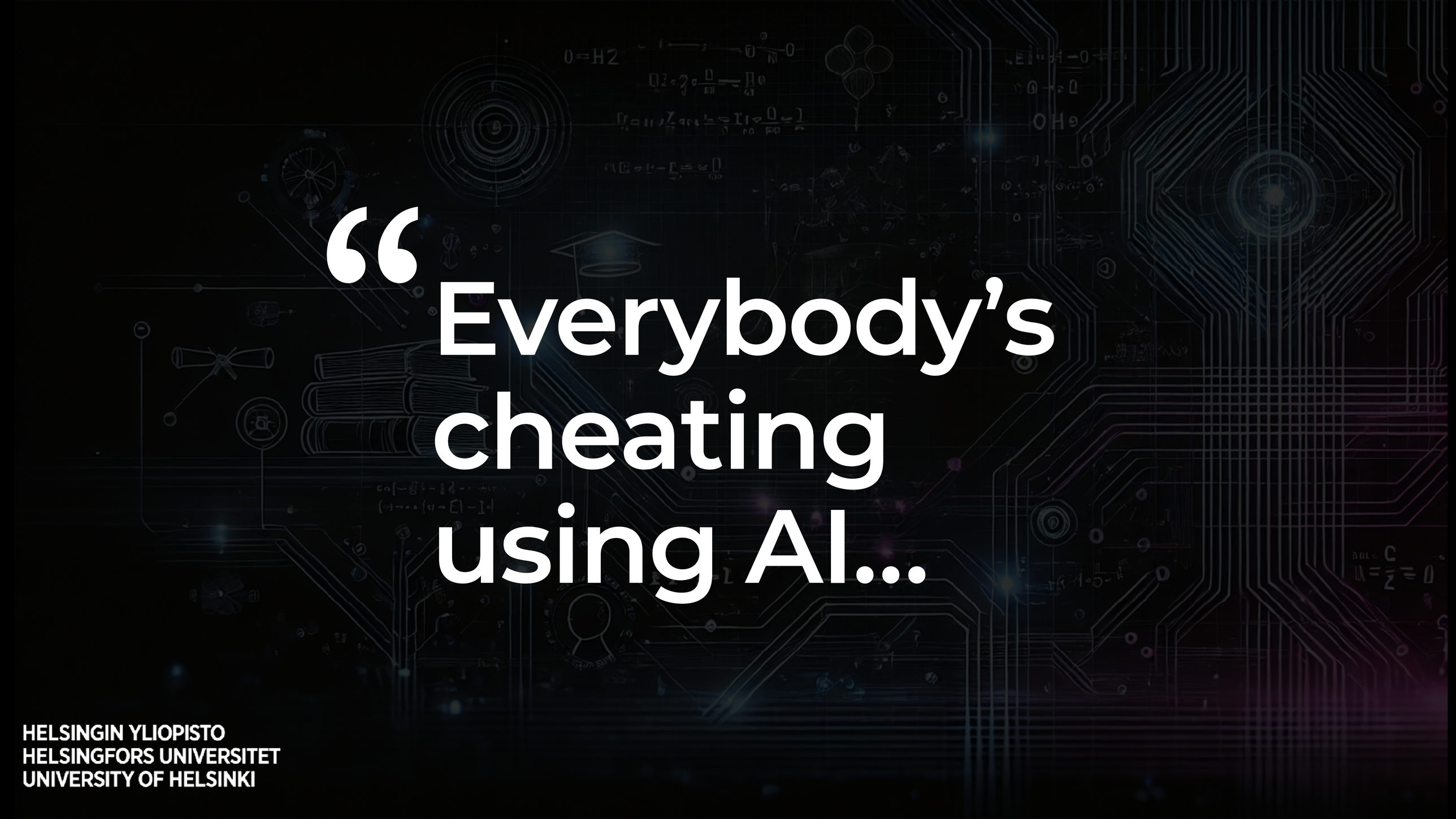

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Amazon ditched AI recruiting tool that favored men for technical jobs

Specialists had been building computer programs since 2014 to review résumés in an effort to automate the search process

Dutch scandal serves as a warning for Europe over risks of using algorithms

New OpenAI 'Deep Research' Agent Turns ChatGPT into a Research Analyst

By John K. Waters | 02/12/25

AI chatbots unable to accurately summarise news, BBC finds

21 hours ago

Share Save

Imran Rahman-Jones
Technology reporter

Student AI cheating cases soar at UK universities

Figures reveal dramatic rise in AI-related misconduct at Russell Group universities, with further questions raised by sector's 'patchy record-keeping' and inconsistent approach to detection

November 1, 2024

Nvidia Stock Crashes 17%, Wiping Out $600 Billion in a Single Day

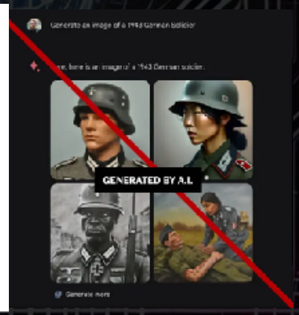
Nauman khan
January 28, 2025 · 1 min read

Taylor Swift AI images prompt US bill to tackle nonconsensual, sexual deepfakes

Bipartisan measure introduced in US Senate will allow victims in 'digital forgeries' to seek civil penalty against perpetrators

Google Chatbot's A.I. Images Put People of Color in Nazi-Era Uniforms

The company has suspended Gemini's ability to generate human images while it vowed to fix the issue.



Scammers can use AI tools to clone the voices of you and your family—how to protect yourself

Published Wed, Jan 24 2024•10:14 AM EST

Cheyenne DeVon

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DeepSeek gives Europe's tech firms a chance to catch up in global AI race

By Supantha Mukherjee

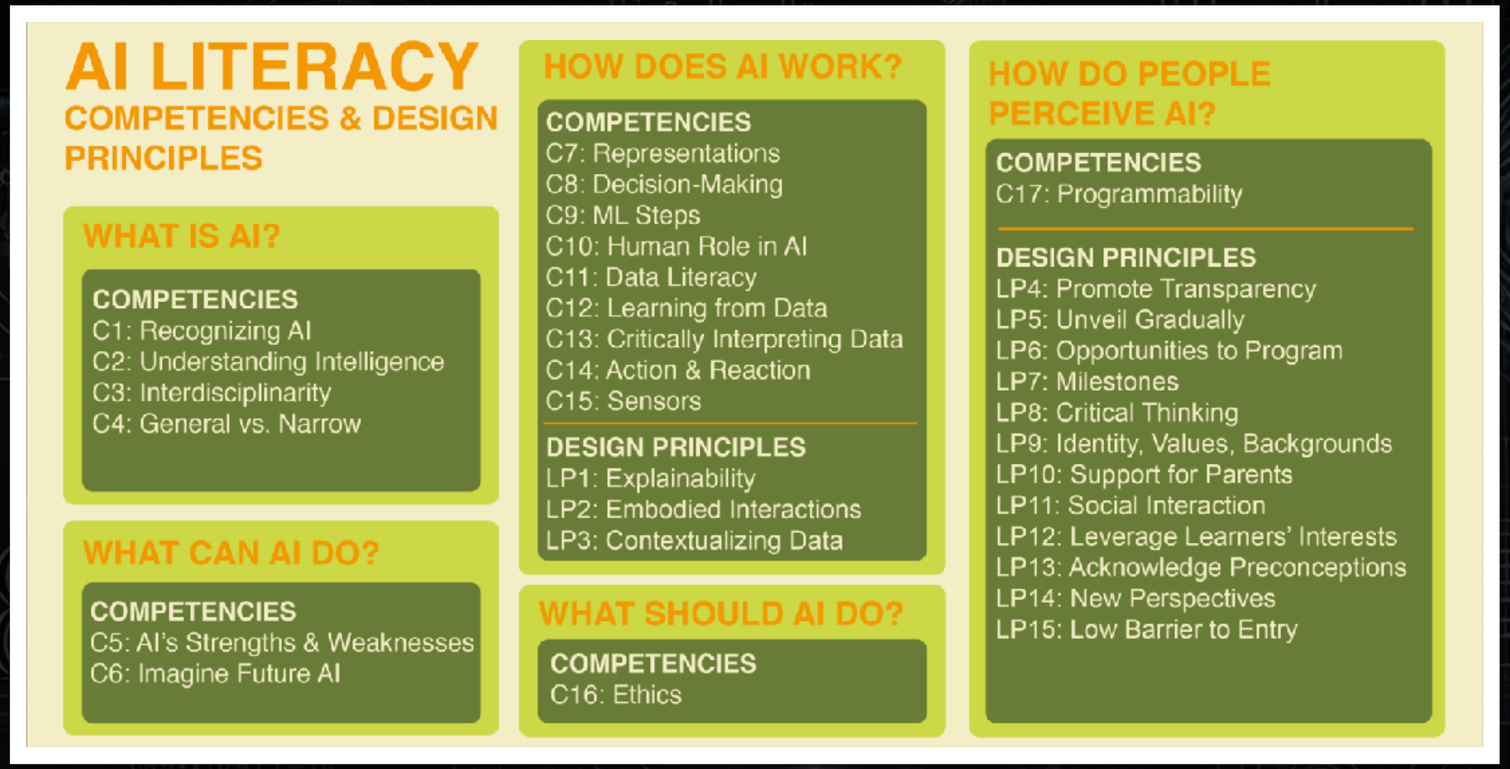
February 3, 2025 8:06 AM GMT+2 · Updated 2 hours ago

Aa

Processing large-scale data, generating predictions and models, optimising processes, accelerating discoveries, boosting productivity, ...

Potential to push back scientific boundaries.

(European Commission, 2023)



> *"... a set of competencies that enables individuals to critically evaluate AI technologies; communicate and collaborate effectively with AI; and use AI as a tool online, at home, and in the workplace.*

(Long & Magerko, 2020)

EU AI Act

Article 4: AI literacy

Date of entry into force: **2 February 2025**

According to: **Article 113(a)**

Inherited from: **Chapter I**

See here for a full implementation timeline.

SUMMARY +

Providers and deployers of AI sy
their best extent, a sufficient lev
persons dealing with the operati
taking into account their techni
training and the context the AI s
the persons or groups of person

Recital 20: AI literacy should equip providers, deployers and affected persons with the necessary notions to make informed decisions regarding AI systems. Those notions may vary with regard to the relevant context and can include

- understanding the correct application of technical elements during the AI system's development phase,
- the measures to be applied during its use,
- the suitable ways in which to interpret the AI system's output, and,
- in the case of affected persons, the knowledge necessary to understand how decisions taken with the assistance of AI will have an impact on them.

Casal-Otero et al.
International Journal of STEM Education (2023) 10:29
https://doi.org/10.1186/s40594-023-00418-7

International Journal of STEM Education

REVIEW Open Access

AI literacy in K-12: a systematic literature review

Lorena Casal-Otero[1], Alejandro Catala[2,3*], Carmen Fernández-Morante[1], Maria Taboada[2], Beatriz Cebreiro[1] and Senén Barro[3]

ELSEVIER

Computers and Education: Artificial Intelligence

Volume 2, 2021, 100041

Conceptualizing AI literacy: An exploratory review

Davy Tsz Kit Ng [a], Jac Ka Lok Leung [b], Samuel Kai Wah Chu [a], Maggie Shen Qiao [a]

INTERACTIVE LEARNING ENVIRONMENTS
https://doi.org/10.1080/10494820.2023.2255228

Routledge Taylor & Francis Group

REVIEW ARTICLE

Artificial intelligence (AI) literacy education in secondary schools: a review

Davy Tsz Kit Ng [a], Jiahong Su [a], Jac Ka Lok Leung[b] and Samuel Kai Wah Chu [a,c]

RESEARCH-ARTICLE

What is AI Literacy? Competencies and Design Considerations

Authors: Duri Long, Brian Magerko | Authors Info & Claims

CHI '20: Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems • Pages 1 - 16
https://doi.org/10.1145/3313831.3376727

RESEARCH-ARTICLE | OPEN ACCESS

Inclusive AI literacy for kids around the world

Authors: Stefania Druga, Sarah T. Vu, Eesh Likhith, Tammy Qiu | Authors Info & Claims

FL2019: Proceedings of FabLearn 2019 • Pages 104 - 111 • https://doi.org/10.1145/3311890.3311904

ELSEVIER

Computers and Education: Artificial Intelligence

Volume 4, 2023, 100124

Artificial Intelligence (AI) Literacy in Early Childhood Education: The Challenges and Opportunities

Jiahong Su, Davy Tsz Kit Ng, Samuel Kai Wah Chu

Casal-Otero et al.
International Journal of STEM Education (2023) 10:29
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International Journal of STEM Education

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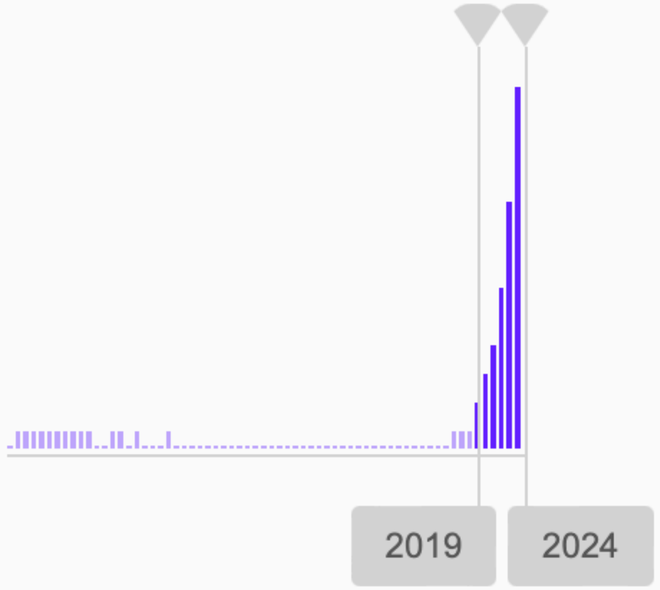
nference on Human Factors in Computing Systems • Pages 1 - 16

27

Publication Date

2,361 Results for: [All: ai literacy] AND [E-Publication Date: (01/01/2019 TO 31/12/2024)]



or kids around the world

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• Pages 104 - 111 • https://doi.org/10.1145/3311890.3311904

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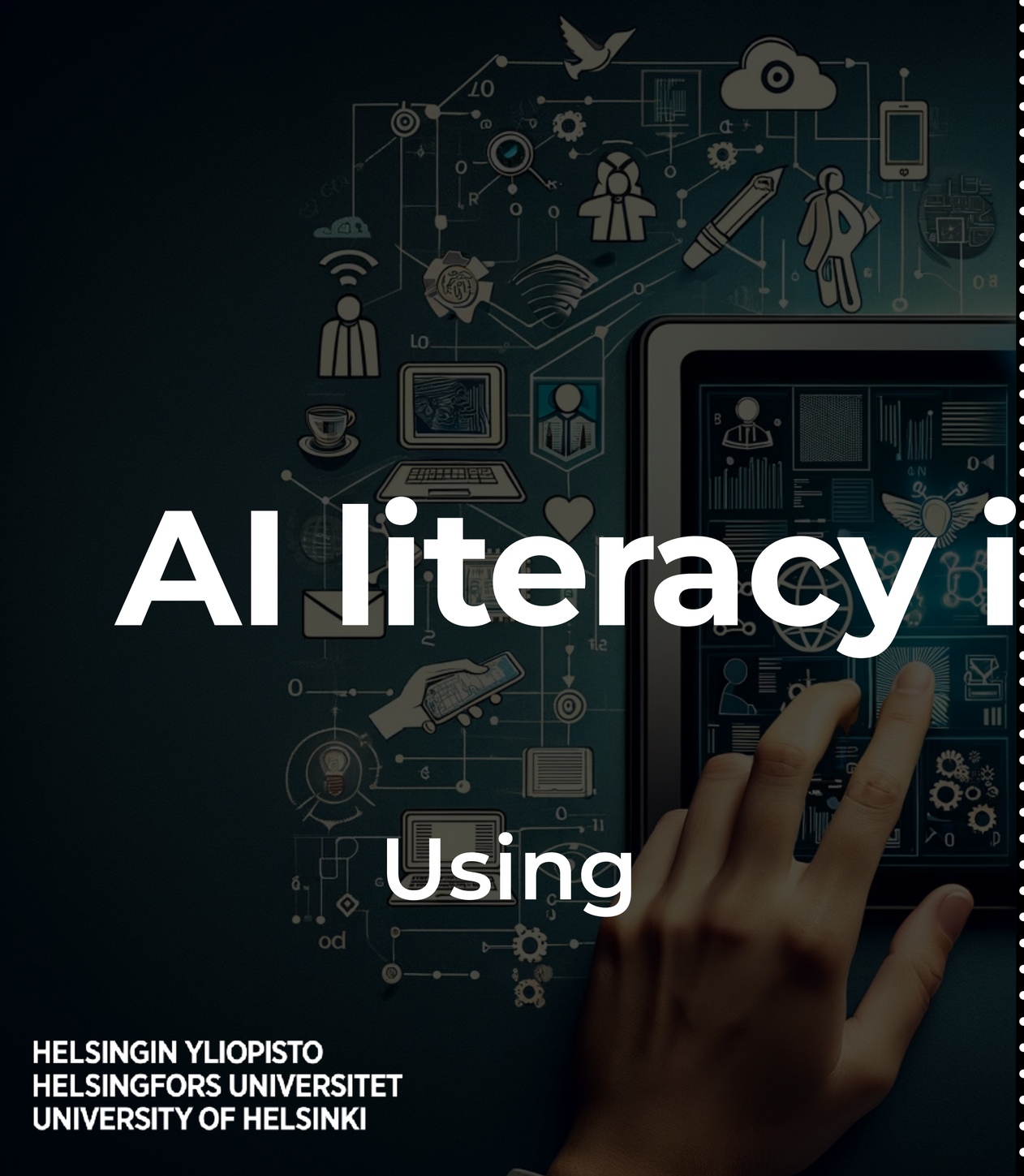

AI literacy in research?

Using

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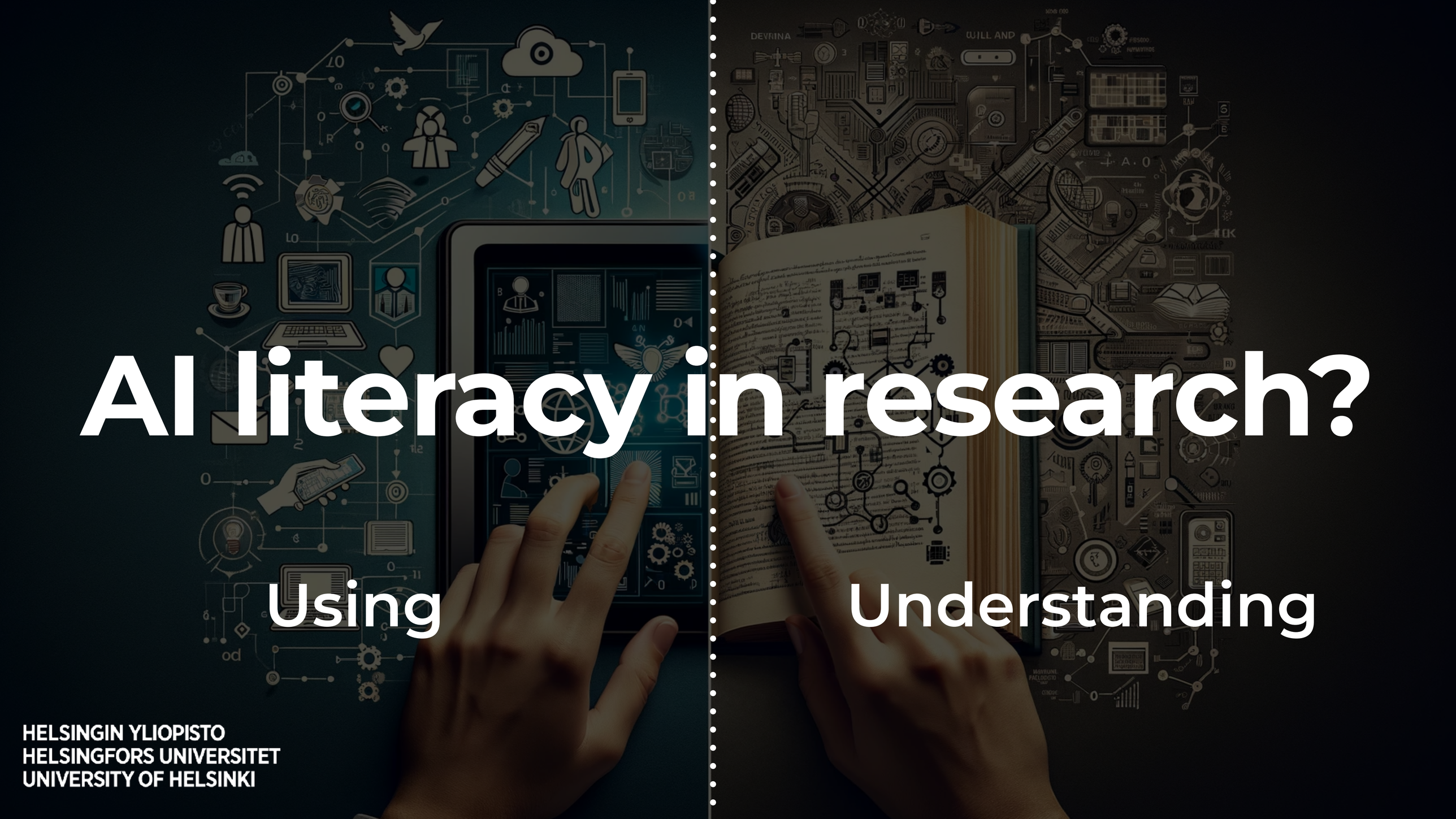

AI literacy in research?

Using

Understanding

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Using
- learning *with*

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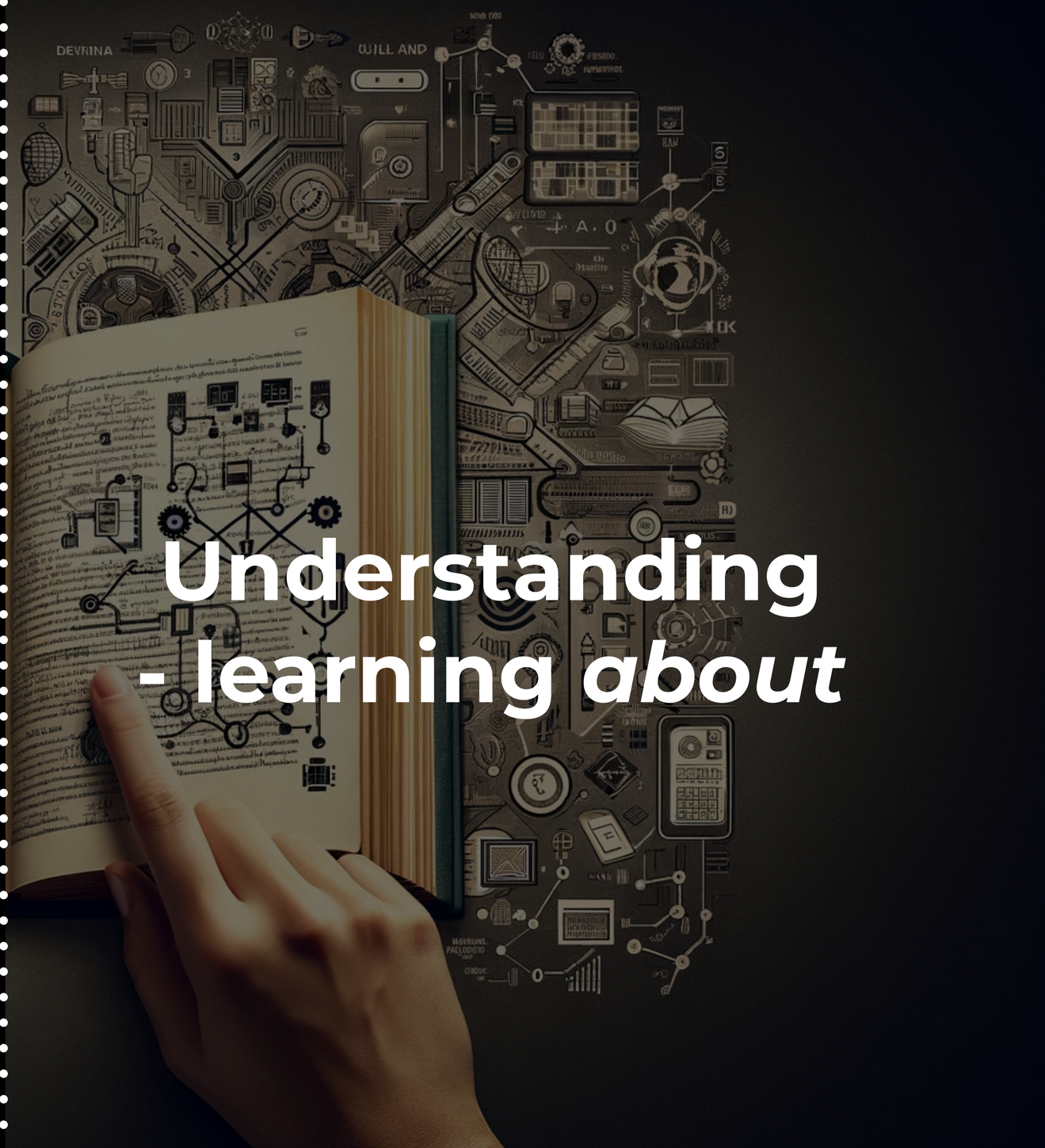
How can AI support us
as researchers?

What do we need to know about AI?



Understanding - learning *about*

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Conceptual understanding and knowledge	Ethical and societal considerations	Critical thinking and reflection	Design and development
Technical understanding: Basic knowledge of how AI works.	**Responsible use:** Ensuring AI is used safely and ethically.	**Critical perspectives:** Evaluating AI critically, questioning its capabilities, limitations, and consequences.	**Specification:** Identifying problems that can be solved using AI and specifying a solution to meet specific goals.
Systems thinking: Viewing AI as part of interconnected systems and processes.	**Societal impact:** Understanding the effects of AI on society, including jobs, equity, and social systems.	**Mindful use:** Being aware of how AI is used and its potential biases or unintended outcomes.	**Design:** Planning and designing AI solutions.
Human-machine interaction: Understanding how AI interacts with humans and the implications of these interactions.		**Reflection:** Engaging in reflective practices when using AI to ensure thoughtful and informed use.	**Refinement:** Iterating and improving existing AI solutions to better meet own needs.
			Development: Building or implementing AI systems in practice.
			Practices: Concrete practices for designing and developing AI solutions, incl. programming, laboratory work, prototyping, collaborative problem-solving and interdisciplinary communication.

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Mannila, Hallström, Nordlöf, Heintz, Sperling, Stenliden (2025). Framing AI literacy for K-12 Education: Insights from Multi-Perspective and International Stakeholders. In Proceedings of the 27th Australasian Computing Education Conference, ACE, Brisbane, Feb. 2025.

Why?
When?
How?

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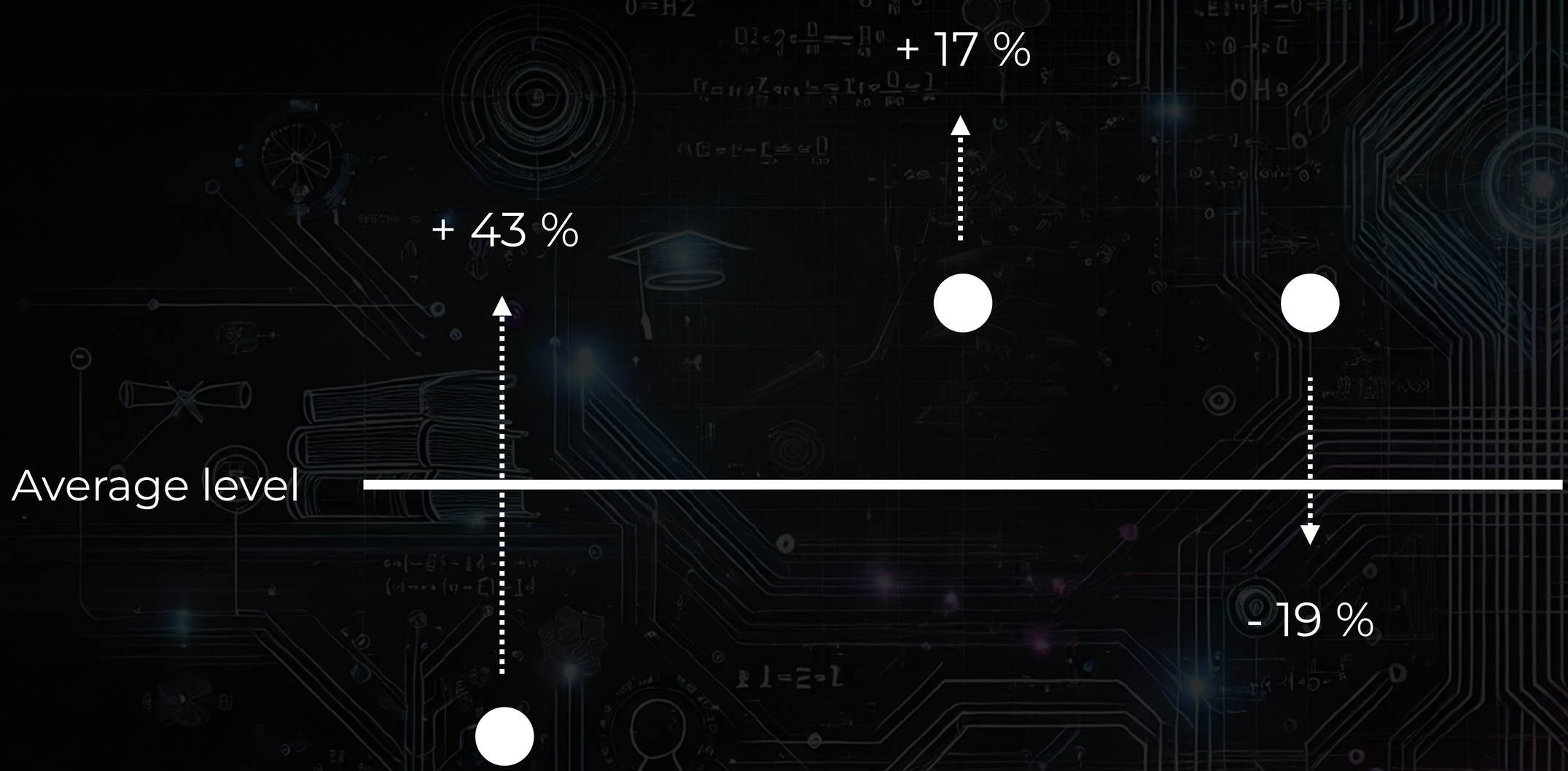

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Dell'Acqua et. al (2023). Navigating the Jagged Technological Frontier: Field Experimental Evidence of the Effects of AI on Knowledge Worker Productivity and Quality. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4573321

The Impact of Generative AI on Critical Thinking: Self-Reported Reductions in Cognitive Effort and Confidence Effects From a Survey of Knowledge Workers

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Research Article

Are Preprints a Threat to the Credibility and Quality of Artificial Intelligence Literature in the ChatGPT Era? A Scoping Review and Qualitative Study

Michael Agyemang Adarkwah, A. Y. M. Atiquil Islam, Käthe Schneider, Rose Luckin, Michael Thomas & Jonathan Michael Spector

4, Accepted 31 May 2024, Published online: 18 Jun 2024

RESEARCH-ARTICLE | OPEN ACCESS |

Evaluating Large Language Models in Generating Synthetic HCI Research Data: a Case Study

Authors: Perttu Hämäläinen, Mikke Tavast, Anton Kunnari | Authors Info & Claims

CHI '23: Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems • Article No.: 433, Pages 1 - 19
https://doi.org/10.1145/3544548.3580688

Published: 19 April 2023 Publication History

ORIGINAL ARTICLE | Full Access

Beware of metacognitive laziness: Effects of generative artificial intelligence on learning motivation, processes, and performance

Yizhou Fan, Luzhen Tang, Huixiao Le, Kejie Shen, Shufang Tan, Yueying Zhao, Yuan Shen, Xinyu Li, Dragan Gašević

First published: 10 December 2024 | https://doi.org/10.1111/bjet.13544

NBER | NATIONAL BUREAU of ECONOMIC RESEARCH

‹ Working Papers

The ABC's of Who Benefits from Working with AI: Ability, Beliefs, and Calibration

Andrew Caplin, David J. Deming, Shangwen Li, Daniel J. Martin, Philip Marx, Ben Weidmann & Kadachi Jiada Ye

JOURNAL ARTICLE

Gender disparities in the impact of generative artificial intelligence: Evidence from academia

Chuang Tang, Shaobo (Kevin) Li, Suming Hu, Fue Zeng, Qianzhou Du Author Notes

PNAS Nexus, Volume 4, Issue 2, February 2025, pgae591,
https://doi.org/10.1093/pnasnexus/pgae591
Published: 11 February 2025 **Article history**

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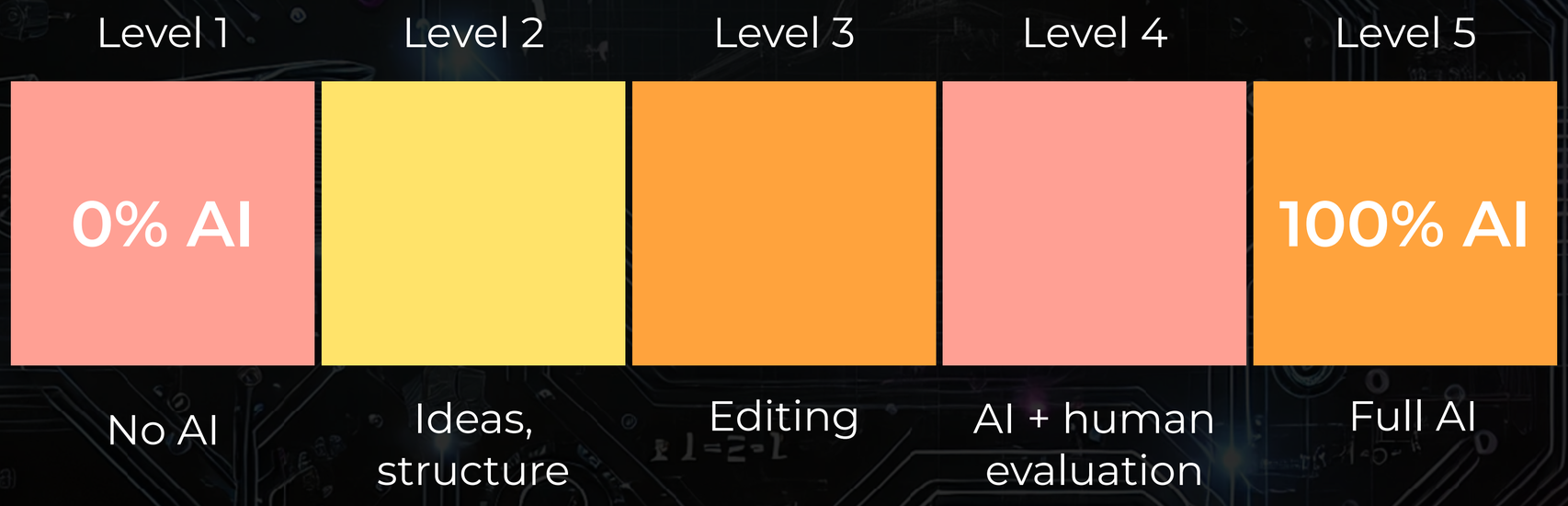
We think it would be useful while reviewing is ongoing to provide further guidance about the use of an AI tool for ITiCSE reviews.

Firstly, papers submitted to ITiCSE are peer reviewed. Reviewers are expected to provide high-quality reviews based on their own reading and assessment of the paper. We would remind you of the instructions on the website: <https://iticse.acm.org/2024/paper-review-process/>

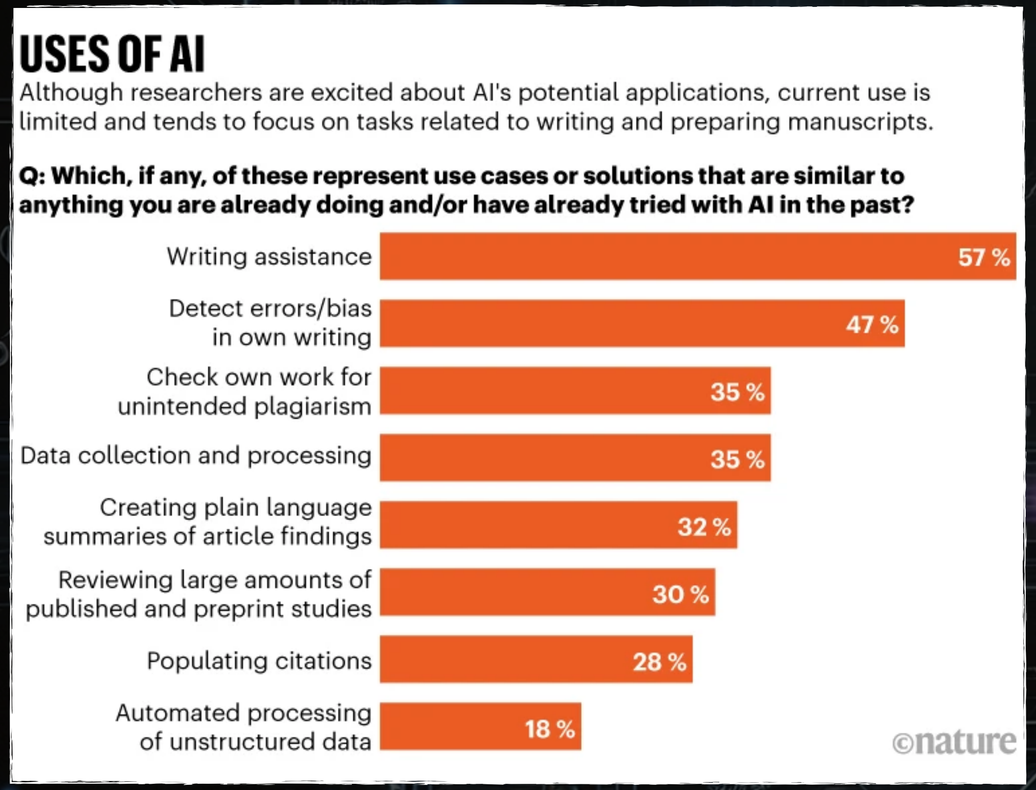
"Your review should be written by you; please do not farm your reviews out to other people."

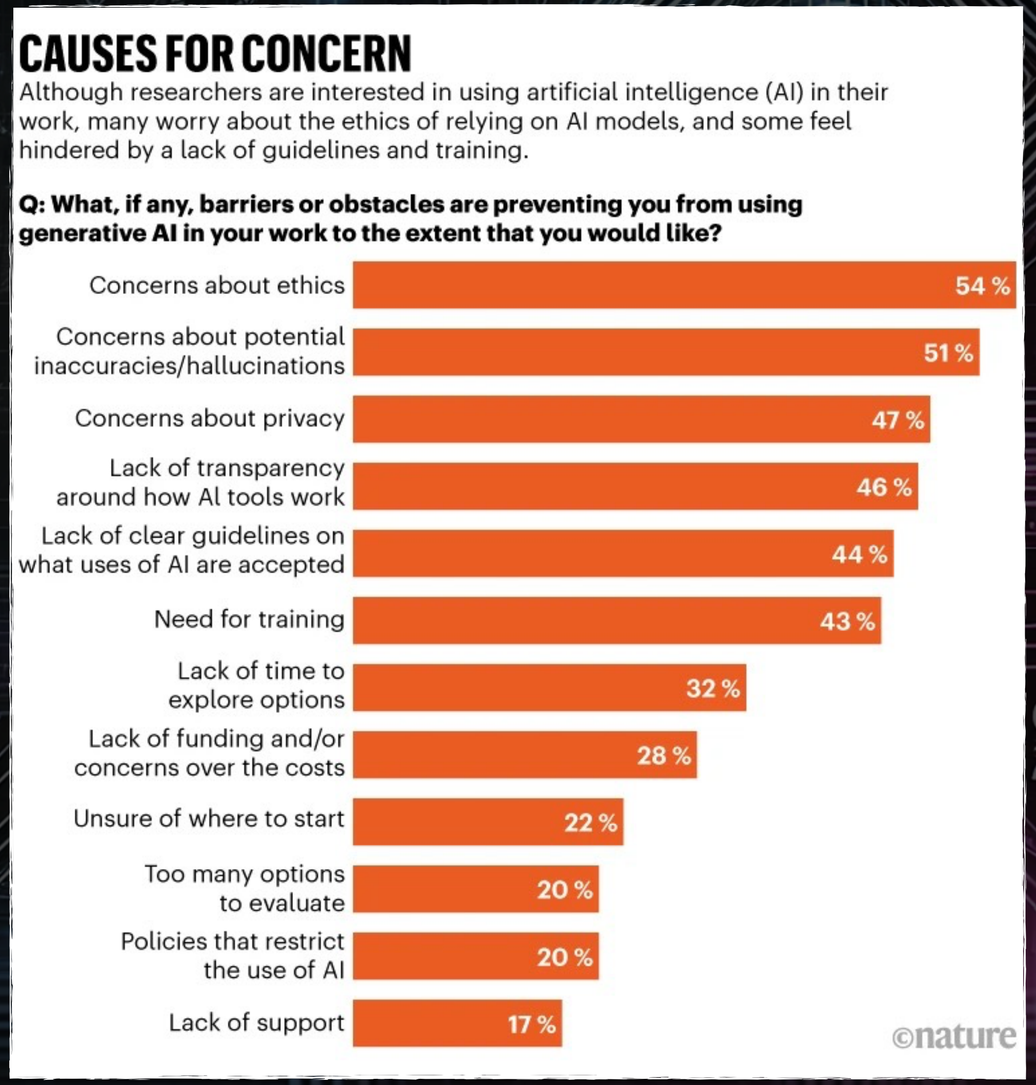
Further, papers submitted to ITiCSE are unpublished works. As such, reviewers are entrusted to maintain confidentiality and not share the papers they are reviewing with others. Submitting works to an AI tool to prepare a review potentially exposes the author's work to the public domain and breaches that confidentiality.



(Furze, L. The AI Assessment Scale)

Wiley survey - how are researchers using AI?





Why not?
When not?
How not?

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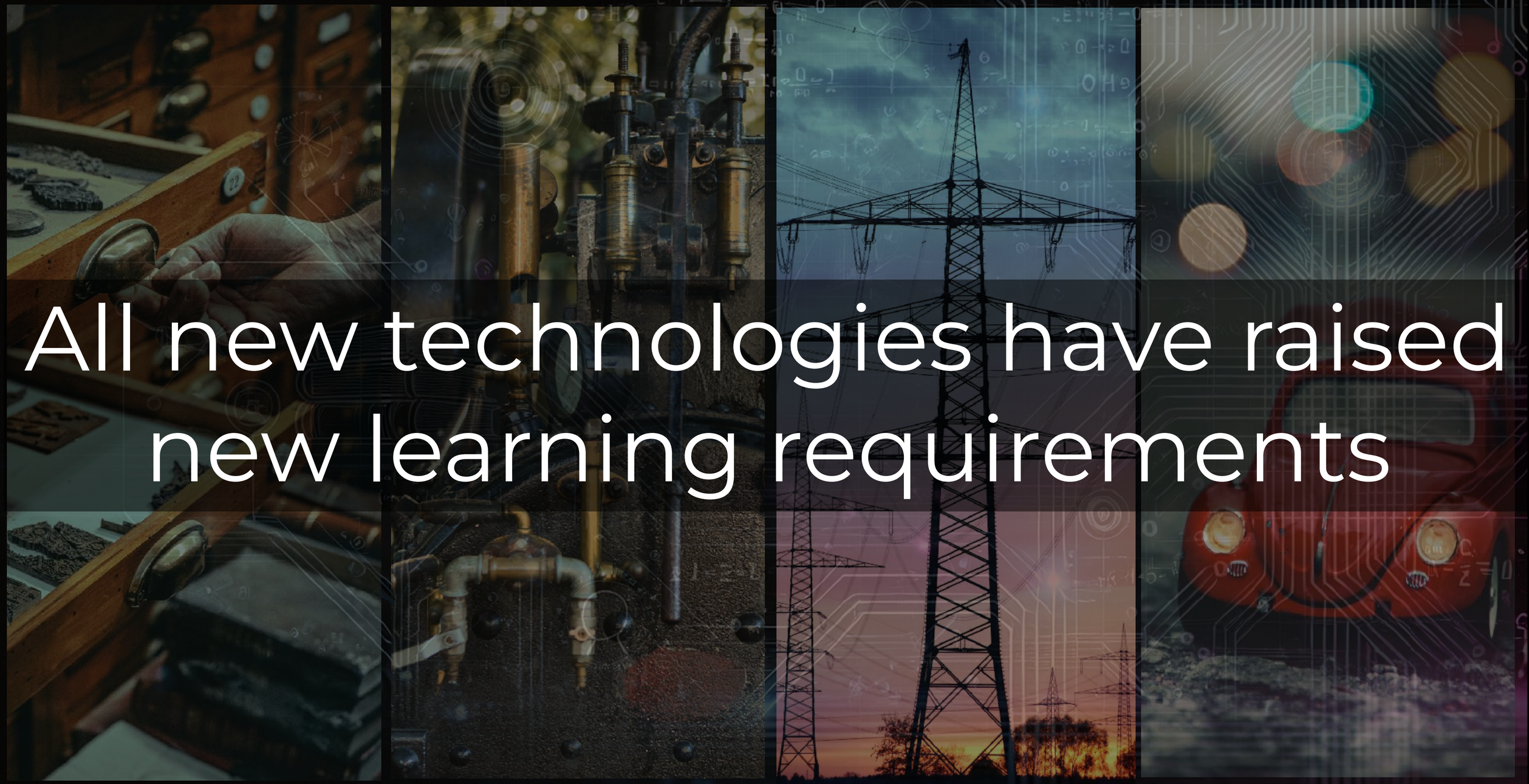
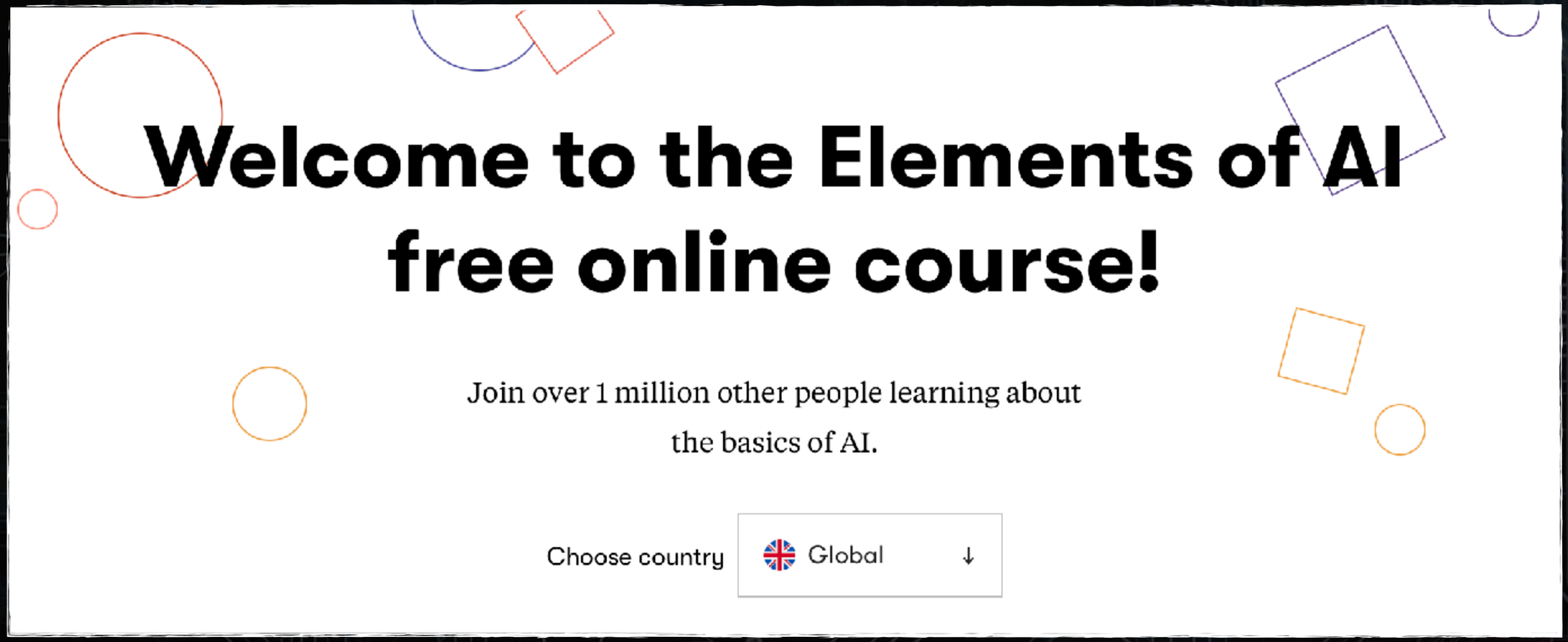

All new technologies have raised new learning requirements



elementsofai.com

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