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Information Literacy and its interplay with Artificial Intelligence

A discussion contribution

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Agenda

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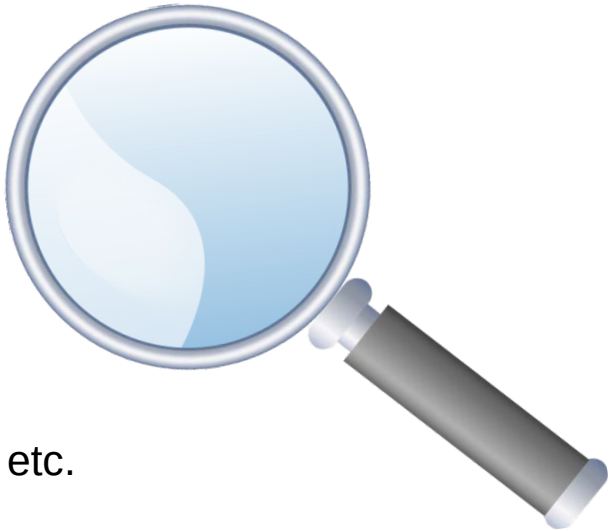
How our discussion started

Our examples and critical aspects

Our questions to the plenum

- On menti.com
  - Prepare to join with your phone, tablet, notebook etc.



We will collect thought, questions etc. online

- Please join us on **https://tinyurl.com/y6m93omr**

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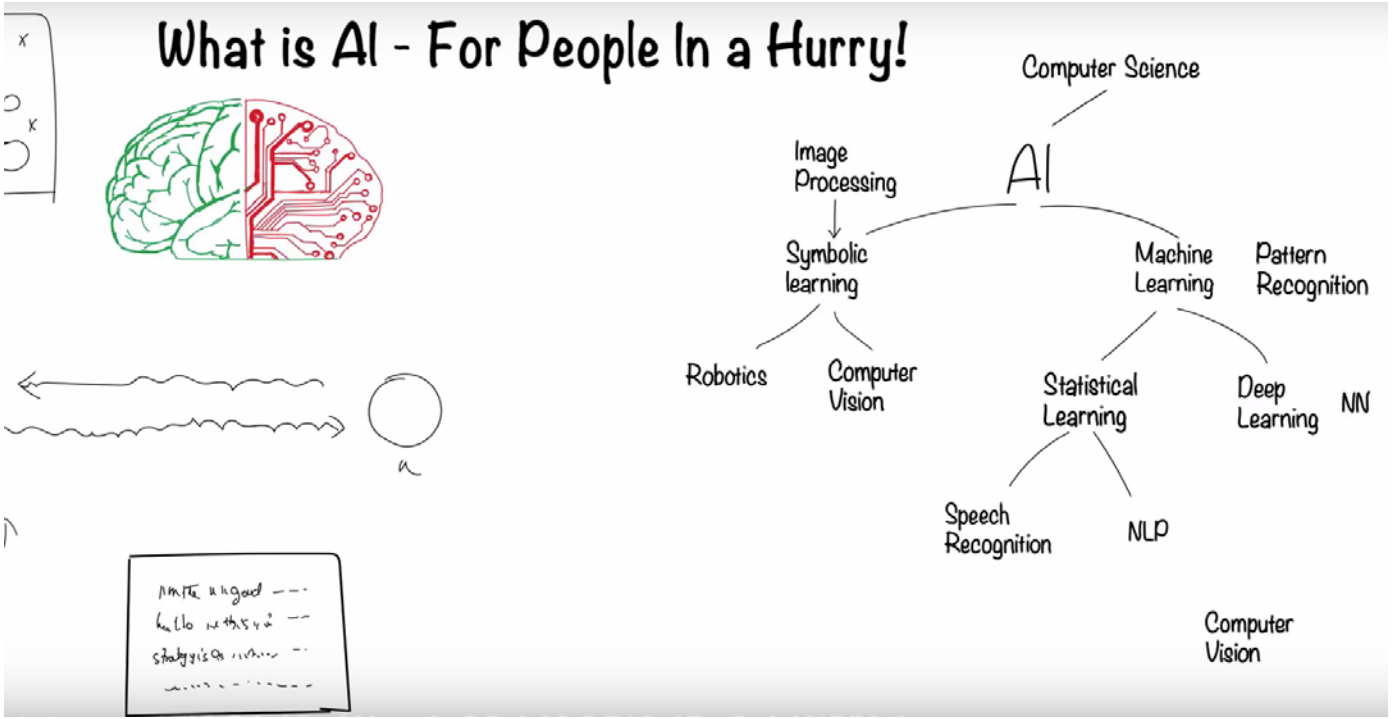
Artificial intelligence: explanation by Ramesh[1]



Artificial intelligence in education (AIEd): focus on improving learning

“[…] more fine-grained understanding of how learning actually happens […]”[2]

- Pedagogical model (e.g. effective teaching)
- Domain model (e.g. topics, exercises, reading skills)
- Learner model (e.g. personality, achievements)
- > AI uses knowledge from these models to support learning and teaching

How our discussion started

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Can artificial intelligence support learning and teaching?

"[…] artificial intelligence will have a heavier hand in course planning by analyzing *student performance* and *recommending materials* for improvement. […] Added functionalities of *AI will prepare students* for the future of work that will require them to have *digital literacy skills* to compete for technology related jobs."[3]

-> Position Paper of Deutsche Gesellschaft für Information und Wissen e.V. (DGI)

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Can information literacy facilitate the meaningful use of artificial intelligence tools?

“Information literacy gives people both a mindset and the tools to live confidently in the midst of contradictory voices.”[4]

“[…] information technology designers must accept that health professionals generally do, in fact, know better and build their best practices into artificial intelligence tools.”[5]

„From now on, it is necessary to massively invest on all levels, in digital education, information literacy and the courage to ones own reasoning and decision-making“[6] [free translation from German text]

An example

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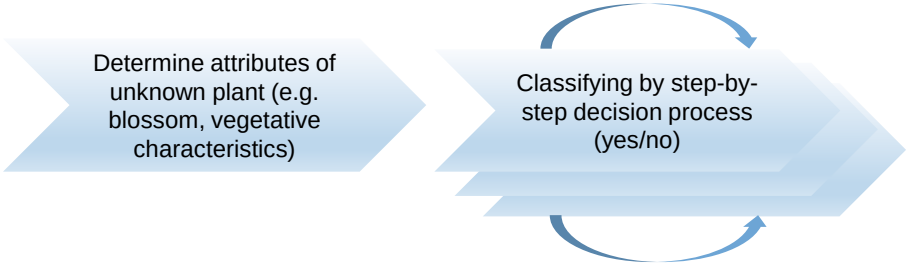
Classifying plants

vs.

traditional approach

Classification based on domain specific literature like Schmeil-Fitschen (Die Flora Deutschlands und angrenzender Länder: Ein Buch zum Bestimmen aller wildwachsenden und häufig kultivierten Gefäßpflanzen)



digital approach

Classification based on image recognition (e.g. using App Pl@ntNet)

Critical aspects - 1

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(Some) Fundamental Questions

- Will (Shall?) AI be the game-changer for IL
  - along the value-chain from data to information, from knowledge and to wisdom,
  - replacing / supporting critical thinking?

- Will (Can?) AI be the trigger
  - to support IL abilities and skills of individuals (teachers, learners, citizens)
  - to speed up the digital transformation in educational institutions
  - to communicate the benefits of IL to decision makers (politicians, funders, admins etc)

Critical aspects - 2

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Study: Assessing IL[9]

- Foundational IL skills (search strategies, familiarity with sources, citation) increased
- IL abilities: difficulties in evaluating variety of source types and source relevance and quality

- AI might enforce the effect of
  - learners feeling insecure in proving source relevance and quality
  - learners that do not mind letting the system doing the work
  - learners trusting the system too much…because they lack understanding and do not have a choice

Our question to the plenum

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To join please go to **menti.com** and use the code **726516**

Do you think we need to fear that applied AI tools will decrease people's critical thinking and relevance judgement?

Literature

(1) Ramesh, R. (2017). What is Artificial Intelligence? In 5 minutes. Youtube video. https://www.youtube.com/watch?v=2ePf9rue1Ao, 2019-05-08

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(6) Bitkom/DFKI. (2017). Künstliche Intelligenz. Wirtschaftliche Bedeutung, gesellschaftliche Herausforderungen, menschliche Verantwortung. Retrieved from https://www.dfki.de/fileadmin/user_upload/import/9744_171012-KI-Gipfelpapier-online.pdf

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