

AI-powered software for literature searching: What is the potential in the context of the University Library?

Perspectives from the study: "Artificial Intelligence and literature seeking"

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**DET KGL.
BIBLIOTEK**

Royal Danish Library

Presentation

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— Royal Danish Library: Denmark's National Library, including the University Libraries at Aarhus, Copenhagen and Roskilde.

— This presentation will give an overview of results from our study "*Artificial Intelligence and Literature Seeking*" (2019-2022)

Project Zenodo-site:

https://zenodo.org/communities/ai_search_royaldanishlibrary/?page=1&size=20

**"AI-POWERED" SØGNING:
RESULTATER AF TÆNKE HØJT-TESTS,
HACKATHON OG EKSPERTVURDERINGER**

LORNA WILDGAARD, JULIE KIERSGAARD LYNGSFELDT,
SOLVEIG JOHNSEN & ANNE VILS
DET KONGELIGE BIBLIOTEK, BIBLIOTEKSSERVICE & PARTNERSKABER

IRIS.AI OG YEWNO.DISCOVER
KAN BIDRAGE TIL INNOVATION
PÅ UNIVERSITETET, DA DE
POTENTIELT KAN UNDERSTØTTE
TVÆRFAGLIGHED OG DANNELSE
AF NYE FORSKNINGSHYPOTESER

SYSTEMERNE ER EFFEKTIVE
I FORHOLD TIL AT
UDFORSKE ET EMNE, MEN
IKKE TRANSPARENTE OG
RELIABLE OG MAN KAN
ANFÆGTE DERES
AKADEMISKE KVALITET

STYRKER:
• TVÆRFAGLIGHED
• HASTIGHED
• VISUEL SØGNING
• SEMANTISKE
RELATIONER
• UDFORSKNING AF
BEGREBER
• UDFORDRER
FORFORSTÅElsen
• SYNLIHED AF OA

SVAGHEDER:
• INGEN TRANSPARENS
• SKJULTE ALGORITMER
• BEGRÆNSET
DOKUMENTATION
• ENDNU IKKE "MODNE"
• USTABILE
• INDEHOLDER STØJ

FYLDESTGØRENDE
DOKUMENTATION ER IKKE MULIG
OG DERFOR ER
REPRODUCERBARHED HELLER IKKE
MULIGT. VI SKAL DISKUTERE OG
FINDE NYE MÅDE AT DOKUMENTERE
EN SØGNING I AI-SYSTEMER

SYSTEMERNE SØGER EN STOR
MÆNGDE AF DATA - HURTIGT,
MEN RELEVANS OG KVALITET
AF RESULTATET KRÆVER
GRUNDIG OVERVEJELSE

AI SYSTEMER KRÆVER AT MAN SLIPPER DE TRADITIONELLE TILGANGE TIL AKADEMISK
SØGNING. VI BEVÆGER OS OVER I ET FAGLIGT PARADIGMESKIFT – DET KAN MEDFØRE NYE
KRAV, NYE FORSTÅELSER OG FORVENTNINGER TIL INFORMATIONSSPECIALISTENS
KOMPETENCER, F.EKS. STØRRE KRAV TIL KILDEKRITIK OG FORSKNINGSMETODE.

DET KGL. BIBLIOTEK
AU Library
KØBENHAVNS UNIVERSITETS BIBLIOTEK

TILSINDTÆNK TIL ALLE EKSPERTER OG TESTPERSONER SOM HAR BIDRAGET TIL
PROJEKTETS HACKATHON, TÆNKEHØJT-TESTS OG
KVALITETSURDERING.

TAK TIL STYRGRUPPEN OG REFERENCERUPPEN FOR DERES SPARRING OG
STØTTE.

LÆS MERE OM PROJEKTET:
[https://zenodo.org/communities/ai_search_royaldanishlibrary/?
page=1&size=20](https://zenodo.org/communities/ai_search_royaldanishlibrary/?page=1&size=20)

Screen-dump of poster presented at DFFU winter-meeting, March 2022



Definition of AI systems

In the o

efined as:

Why AI in relation to University Libraries?

The overall aim of this project is to investigate the extent different artificial intelligence (AI) powered search software support researchers and students in academic literature search. Our findings will inform future services at the university libraries affiliated to the Royal Library in Denmark.

Florez, K (2019, February 15). what is AI powered search? [Blog]
Retrieved from: <https://lucidworks.com/post/what-is-ai-powered-search/>



Perspectives in AI search at University Libraries – our findings

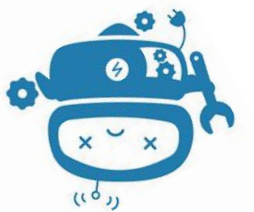
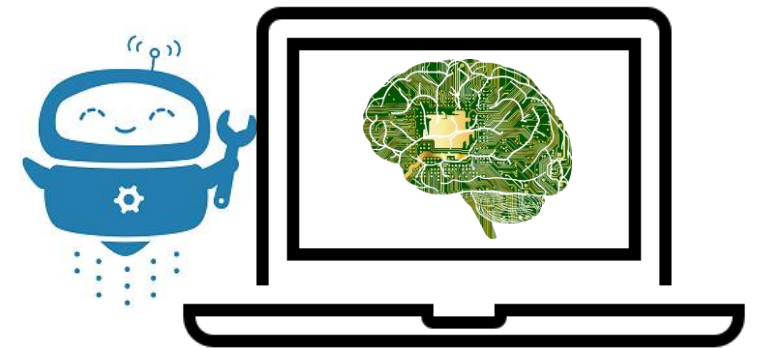


- The AI systems has the potential to support literature searching at the University
- The AI systems examined have the potential to challenge one's preconception of a research area
- The AI systems are good at discovering interdisciplinary areas
- The AI systems are regarded as "discovery systems"



Perspectives in AI search at University Libraries – our findings

- The AI systems work differently than traditional information-systems and challenge our searching skills as information specialists
- The AI systems do not meet traditional requirements regarding documenting a search (research integrity)
- Trust in the search results in AI systems were questioned
- Transparency in the AI systems is not possible

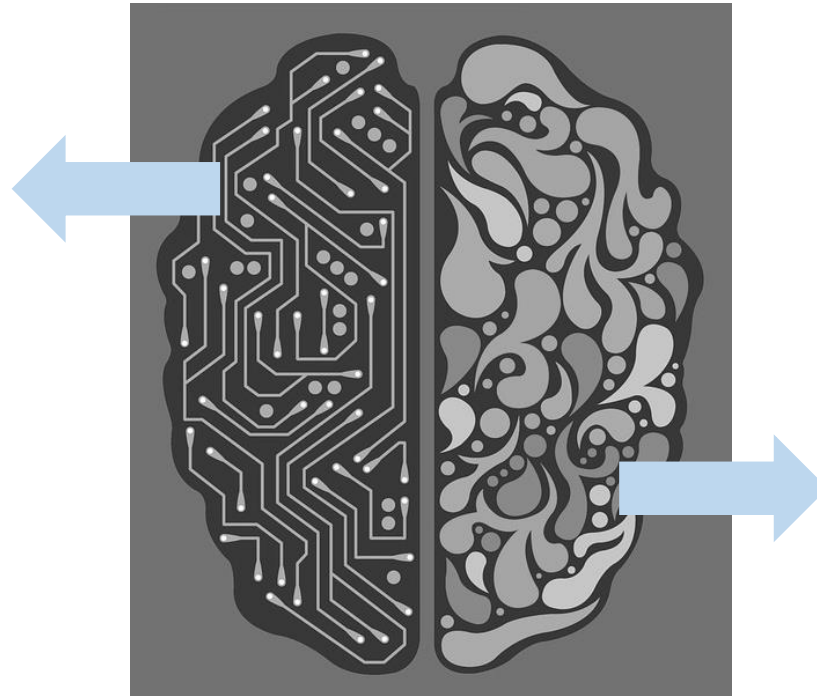


Next steps

AIM

Continue working with AI and literature searching at Universities as:

- an Open Science strategic initiative or,
- as a network



CONSIDERATIONS

- Stay updated on algorithms, systems and methods where AI search is used at Universities
- Be prepared to help students and staff
- Be in dialogue with faculty and library community about documenting academic searches and new methods to searching in AI systems
- Look more at Business related areas



Outline of the project

Summe
Delivery 1: S



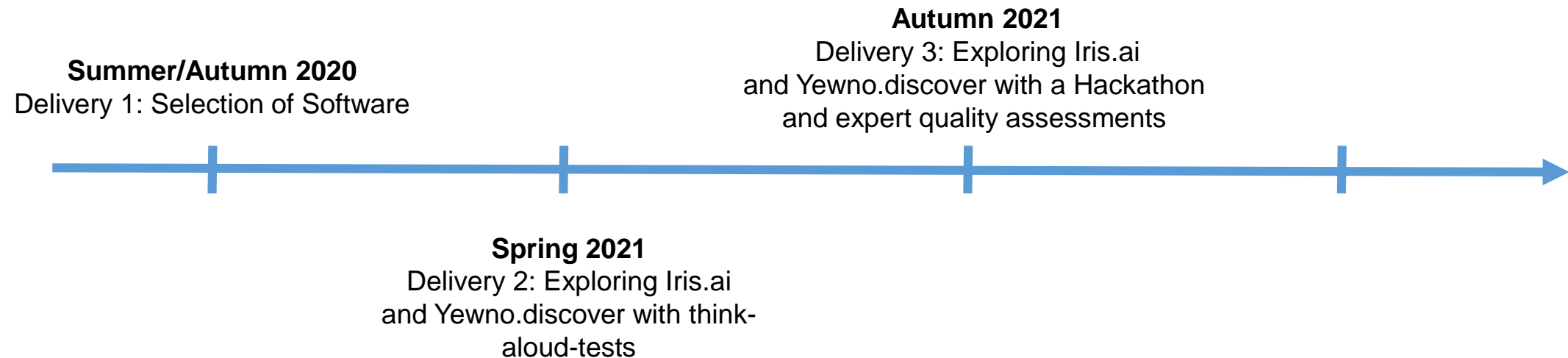
1) use one or more of the building blocks of AI-powered search

7) support responsible conduct of research

s in



Outline of the project



Outline of the project

The Purpose

Function, efficiency, transparency,
documentation and value for the
end users

THINK-ALLOUD

How the user perceives the system:
functionality, errors,
shortcomings and potentials

Test persons: Information
specialists at KUB & AUL

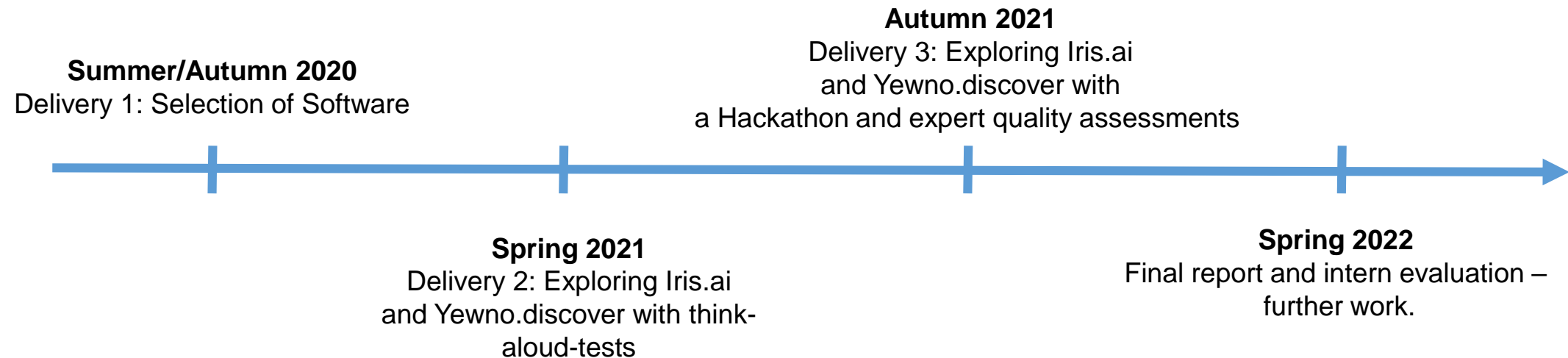
HACKATHON

Observations of user behaviour:
Test persons' own approaches and
search-knowledge to solve a common
case

Test persons: Researchers
and information specialists from KUB
& AUL



Outline of the project



References

Learn more about "*Artificial Intelligence and Literature Seeking*" (2019-2022) at our Zenodo-site:

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Questions



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